Olympic
Broadcasting
Services

Olympic Games Paris 2024

OBS BROADCAST REVIEW

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TOP 10 FIRSTS

1 UNPRECEDENTED COVERAGE

OBS delivered a record-breaking 11,000 hours of content from Paris 2024, enabling Media Rights-Holders (MRHs) to achieve unparalleled coverage and unprecedented engagement across the globe.

2 CINEMATIC LENSES

OBS introduced a new, intimate cinematic style of coverage, using cinematic lenses that provide a shallow depth of field. This innovation brings viewers closer to the action and vividly conveys the emotions of athletes and spectators.

3 AI-POWERED MULTI-CAMERA REPLAY SYSTEMS (WITH ALIBABA)

OBS doubled the number of multi-camera replay systems to 17, significantly enhancing the analysis and replay capabilities for broadcasters and viewers across 21 sports and disciplines.

4 NEW LEVELS OF VIRTUALISATION (WITH INTEL)

Three virtualised OB vans using commercial off-the-shelf (COTS) Intel hardware, delivered live coverage in native UHD HDR for four sports. This marks a major leap forward in achieveing more agile and efficient remote production.

5 FIRST PERSON VIEW (FPV) DRONES

FPV drones used for live coverage and behind-the-scenes provided an incredibly immersive experience, offering new angles never seen before in the history of the Olympic Games.

6 REVOLUTIONARY AI-DRIVEN ENHANCEMENTS

Paris 2024 witnessed a rapid advancement in AI technologies used in broadcasting. These innovations enabled new athlete and object tracking, intelligent stroboscopic analysis, enhanced data graphics, automatic highlights generation, and real-time commentary and interview transcription, greatly enriching the viewing and analytical experience.

7 TESTING 8K LIVE STREAMING TECHNOLOGY (WITH INTEL)

Paris 2024 marked the first Olympic Games to showcase end-to-end 8K livestreaming, using Intel's cutting-edge processors and advanced compression techniques to ensure high-resolution, low-latency streaming to global destinations. It paved the way for Olympic fans worldwide to enjoy events in ultra-high resolution with broadcast-grade quality.

8 ADVANCING GENDER EQUALITY IN BROADCASTING

Two-thirds of the OBS Broadcast Venue Managers and Deputy Managers, as well as the Broadcast Operations Centre (BOC) staff in the IBC, were women, in an effort to further promote gender equality in leadership roles. In addition, 57 per cent of students selected for the BTP were female, while a new camera training programme offered new opportunities for female operators.

9 OUTSIDE THE BOX OPENING CEREMONY COVERAGE

Breaking all Olympic standards, the Paris 2024 Opening Ceremony took place in the heart of the city, with OBS using the largest number of cameras and specialty equipment ever used for a single Olympic event. Four custom-built stabilised boats, equipped with cameras on gyrostabilised mounts, were used to capture the athletes' boat parade on the Seine River and the creative show.

10 A MORE SUSTAINABLE IBC DESIGN

Featuring the smallest net broadcast area for a Summer Olympic Games, the International Broadcast Centre (IBC) achieved a 10 per cent reduction from Tokyo 2020 and a 25 per cent reduction from Rio 2016, aligning with OBS's sustainability goals. Power requirements were drastically reduced and the layout was optimised for efficiency.

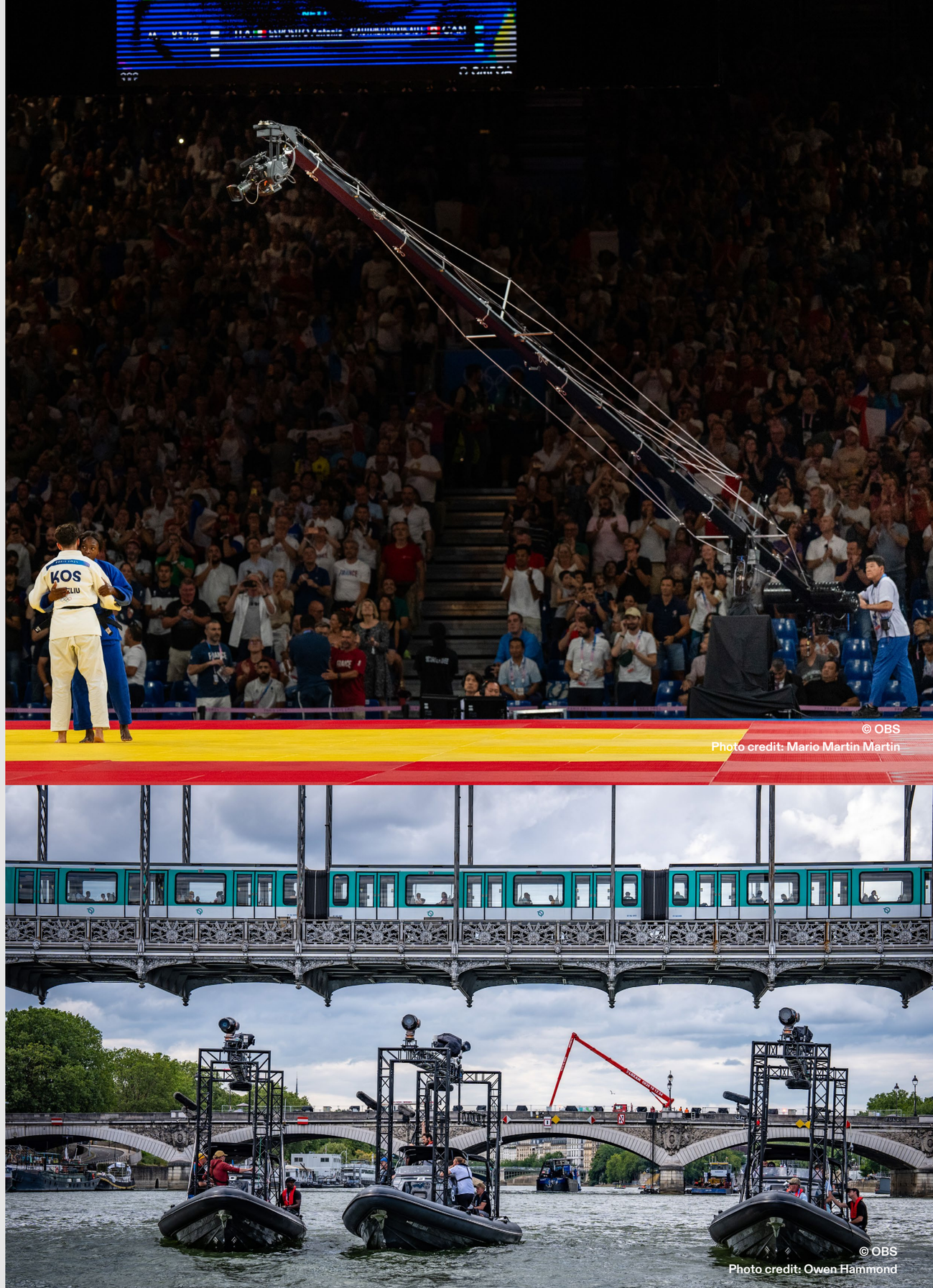

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Photo credit: Mario Martin Martin

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KEY FIGURES

Broadcast Hours

11,000+

HOURS OF CONTENT PRODUCED BY OBS

3,575

HOURS OF LIVE COVERAGE (SPORTS, CEREMONIES & CHAMPIONS PARK)

Media Rights-Holders (MRHs)

36

MEDIA RIGHTS-HOLDERS

182

BROADCAST ORGANISATIONS DELIVERING THE GAMES

10,000+

ACCREDITED MRH PERSONNEL

Cameras

1,265

CAMERA SYSTEMS

17

MULTI-CAMERA REPLAY SYSTEMS

358

MINI CAMERAS

243

ROBOTIC CAMERAS

51

JIBS AND CAMERA CRANES

24

RAILCAM SYSTEMS

21

CABLECAM SYSTEMS

Microphones

3,680

MICROPHONES

32

MODELS

Production Units/Teams

47

PRODUCTION UNITS SUPPORTING

70

PRODUCTION GALLERIES

32

VENUE PRODUCTION TEAMS

Video and Audio Feeds

72 UHD

CONTRIBUTION MULTILATERAL FEEDS

82 HD 81 UHD

DISTRIBUTION FEEDS

3,698

FEEDS PROCESSED AND DISTRIBUTED AT IBC

1,159

FEEDS PROCESSED AND DISTRIBUTED OUTSIDE OF IBC

Radio Feeds

48

STEREO FEEDS

Connectivity

100 GBPS

INTERNET CAPACITY FOR BROADCASTING

290%

INCREASE IN REMOTE SERVICE CONNECTIVITY FROM THE VENUES

OBS Games-time Workforce

8,300+

PERSONNEL INCLUDING

1,300+

BTP STUDENTS

110+

COUNTRIES REPRESENTED

84% = 5 BILLION

OF THE POTENTIAL AUDIENCE FOLLOWED THE OLYMPIC GAMES PARIS 2024

PEOPLE FOLLOWED THE OLYMPIC GAMES PARIS 2024

OBS
BEHIND THE SCREEN

Discover how OBS, as the host broadcaster, brought the Olympic Games Paris 2024 to life. This short documentary delves into the innovative technology and seamless coordination that ensured a spectacular viewing experience for audiences worldwide. Witness the behind-the-scenes efforts that made the magic of the Games possible.

WATCH OBS BEHIND THE SCREEN DOCUMENTARY ON OLYMPICS.COM

SCAN ME

"The Olympic Games Paris 2024 were a monumental success, showcasing the power of sport to engage and unite people globally. With full stadia and a vibrant atmosphere, we witnessed the true spirit of the Olympics.

The record-breaking viewership on MRH platforms and Olympics.com is a testament to our commitment to delivering an unparalleled viewing experience.

Our innovative broadcasting strategies not only set new benchmarks in media metrics but also redefined efficiency and optimisation in the broadcast operations. Despite the challenging geopolitical climate, we are proud to have brought the world together for 19 unforgettable days through the magic of the Olympics."

Yiannis Exarchos
OBS CEO

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Photo credit: Owen Hammond

© OBS
Photo credit: Owen Hammond

PARIS 2024'S UNIQUE OPENING CEREMONY

The Opening Ceremony of the Olympic Games Paris 2024 was destined to be historic, not just for the athletes, but for the way the world experienced the event.

For the first time, the Ceremony was not confined to a traditional stadium. Instead, athletes embarked on a 6-km trip along the Seine River, from the Austerlitz Bridge to the Trocadero. A burst of blue, white and red smoke kicked off the theatrics as Olympians began their journey down the Seine River.

The Ceremony highlighted historic Paris landmarks, including the Notre-Dame de Paris cathedral and the Louvre, turning the entire city into a grand stage for the world's greatest athletes.

The broadcast production for this unique Opening Ceremony was the largest ever undertaken in Olympic history. Thousands of cameras and advanced technical infrastructure were deployed across the city and along the Seine River, ensuring ambitious 360-degree live coverage.

The sheer scale of the equipment and resources used was unprecedented.

Despite heavy rain during part of the Opening Ceremony, the broadcast team worked tirelessly to bring the magic of the Paris 2024 Opening Ceremony to life. Their dedication ensured that viewers around the world could experience the grandeur and excitement of this history-making event.

Capturing history

For the first time in Olympic history, the Paris 2024 Opening Ceremony broke tradition by stepping out of the stadium and into the heart of the city. This spectacular event unfolded along a stunning 6km stretch of the iconic Seine River, culminating at Trocadero.

110+

camera systems, including robotic cameras, cranes and cable cams (approximately three times more cameras than previous Opening Ceremonies)

4 custom-made stabilised boats, fitted with a total of **10 gyrostabilised mounted cameras**

Aerial coverage with 3 helicopters (due to adverse weather conditions, the helicopters were grounded for part of the Ceremony, and drones were not permitted to fly)

200+

Samsung mobile phones deployed on the bow and sides of each of the 85 athlete vessels to provide complementary live streams to MRHs (in 16:9 and 9:16 formats)

17

MRHs booked the live streaming service

10+

5G antennae strategically placed along the river (in collaboration with Orange), establishing France's first-ever standalone 5G network to transmit the signals back to the IBC

Red carpet at Trocadero

79

celebrities, including Olympic champions, musicians and actors

19

MRHs in the Red Carpet interview zone

500+

OBS staff working during the Ceremony

RECORD AUDIENCE

FRANCE

France TV: **Average of 24.4 million viewers** (the highest audience in the history of French television)

USA

NBCUniversal: **Average of 28.6 million viewers** (the most-watched Opening ceremony since London 2012)

GERMANY

ARD ZDF: **Average of 10.44 million viewers** on Das Erste (the most-watched Olympic broadcast in 20 years)

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Photo credit: Owen Hammond

© OBS
Photo credit: Owen Hammond

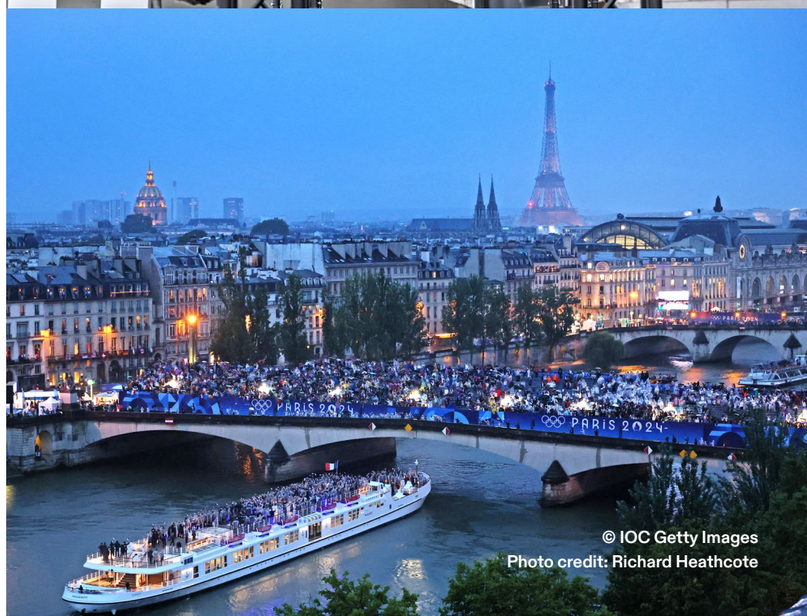

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Photo credit: Richard Heathcote

The complex technical infrastructure behind the Opening Ceremony

“From the moment we first heard about the Paris 2024 Organising Committee's innovative idea and the tradition-breaking concept of the Opening Ceremony, we were both excited and a bit apprehensive about how we would bring it to life. To tackle these challenges, a special technical task force was assembled, comprising experts in wireless telecommunications and high-quality production systems. This team collaborated closely with our production teams and the Organising Committee from the outset to design the optimal possible systems for the Ceremony, which was natively produced in UHD HDR to ensure the highest quality broadcast.

The technical infrastructure behind the Opening Ceremony of the Games was a groundbreaking and highly complex project. This ambitious endeavour involved several challenging dimensions, each contributing to the overall complexity of the operation.

Firstly, the sheer number of video and audio signals required was unprecedented. With more than 110 standard broadcast cameras, plus additional sources such as mobile phones from Samsung and cameras on boats, the total number of input signals exceeded 300. This vast array of sources presented a significant technical challenge in managing and integrating them all. Each source had its own unique set of requirements and specifications, necessitating a highly coordinated effort to ensure seamless integration.

We developed sophisticated systems and protocols to handle the diverse data streams, ensuring that all inputs were synchronised and processed efficiently.

Secondly, the deployment of these systems was not confined to a single arena but spread across the entire downtown area of Paris. This widespread deployment required robust interconnection and transmission systems to ensure all captured content was delivered seamlessly and in real-time, which was crucial for live production.

Another critical dimension was the need for resilience and stability. The technology had to handle the large volume of sources and the geographical spread, including moving sources such as boats on the river and helicopters. Ensuring consistent and stable delivery of content under these conditions was vital.

When rain invited itself to the Ceremony, we had to face another level of complexity. The unexpected weather conditions required us to quickly adapt our plans and implement additional measures to protect the equipment and ensure the safety of everyone involved. This added a new layer of logistical and technical challenges, but our team rose to the occasion, demonstrating remarkable resilience and problem-solving skills to keep the event running smoothly despite the downpour.

Reflecting on our achievements, this extraordinary project undeniably marks a significant breakthrough in the context of the Olympic Games. It blended cutting-edge technology with innovative production techniques and out-of-the-box solutions, showcasing the team’s expertise and dedication.”

Sotiris Salamouris
OBS Chief Technical Officer

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Photo credit: Owen Hammond

© OBS
Photo credit: Owen Hammond

La Grande Seine

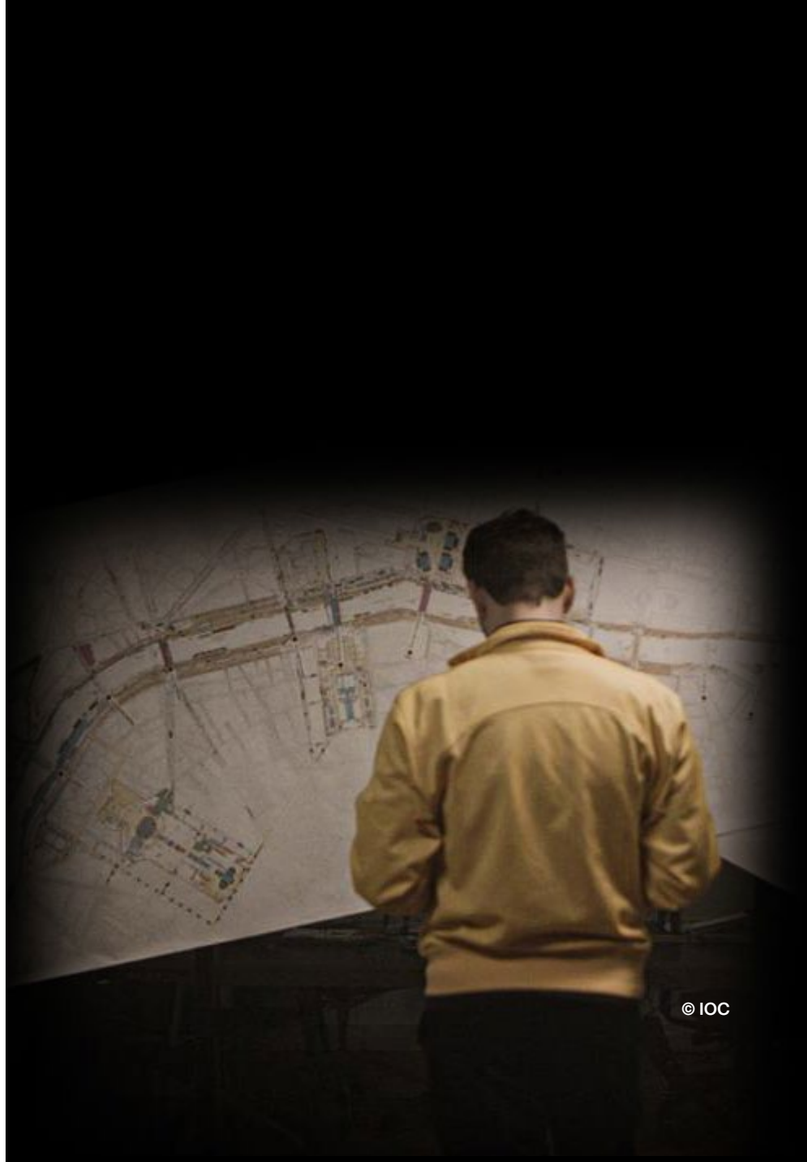
The Olympic Channel produced an exclusive behind-the-scenes documentary of the Paris 2024 Opening Ceremony, capturing the monumental efforts behind this groundbreaking event. Granted unprecedented access, the Olympic Channel provided an in-depth look at the sensitive discussions and intricate planning involved.

Despite the confidentiality surrounding the preparations, Paris 2024 leadership, including President Tony Estanguet, Director of Ceremonies Thierry Reboul, Creative Director Thomas Jolly, and their dedicated teams, along with OBS, opened their doors to the Olympic Channel's cameras. This access allowed for a detailed portrayal of the event's planning and execution.

Leading the ambitious docuseries was the talented French director Manuel Herrero, known for his creative approach and unique filming style. Herrero's established trust with participants enabled him to capture intimate portraits and behind-the-scenes moments while maintaining the discretion required for such a massive undertaking. His vision brought a fresh and compelling narrative to this extraordinary event.

This behind-the-scenes look provided a fascinating perspective on the magnitude and complexity of the preparations. The Olympic Channel's in-depth coverage highlighted the dedication and hard work of everyone involved, giving viewers a newfound appreciation for the immense efforts that made such a grand spectacle possible.

Media Right-Holders (MRHs) recognised the project's significance and offered unwavering support from the start. Broadcast partners such as NBCUniversal's Peacock, Warner Bros. Discovery, France Televisions, TV Globo, NHK, CBC/ Radio-Canada, and CMG wholeheartedly embraced the vision, broadcasting it across their territories. This collective effort highlighted the collaborative spirit that defines the Olympic Games.



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WHERE TO WATCH IT

Canada: CBC and Radio-Canada

China: CMG

Europe (49 territories except France): Warner Bros. Discovery

France: France Televisions

Japan: NHK

USA: NBCUniversal's Peacock

Other regions: Olympics.com

"This documentary chronicles an extraordinary two-year adventure, following the dedicated team behind the Paris 2024 Opening Ceremony. Amidst mounting pressure and sky-high expectations, our cameras captured every pivotal moment of their meticulous crafting and relentless pursuit of a groundbreaking vision. From inception to execution, their ambitious endeavour pushes the boundaries of creativity and scale. We delved deep into their triumphs and challenges, revealing a profound testament to human ingenuity and unwavering perseverance."

Manuel Herrero
Director

"What Manuel Herrero and the Olympic Channel team have accomplished with 'La Grande Seine' transcends the typical documentary format. This documentary stands as a testament to the power of the human spirit and the collective effort that goes into creating something truly extraordinary. It is a vibrant celebration of innovation, passion, and the unwavering spirit that defines the essence of the Games. From its inception to fruition, the Paris 2024 Organising Committee has remained steadfast in its visionary commitment, deserving our utmost admiration."

Yiannis Exarchos
OBS CEO

Insights from Stefanos Kourelas

“Heading finance and logistics for OBS, my role is to ensure the seamless delivery of the host broadcast operation while maintaining financial discipline. For Paris 2024, this was particularly intense. We had one year less to prepare because of the Olympic Games Tokyo 2020, held in 2021, which meant compressing a four-year process into just three years. Despite these challenges, we succeeded.

We follow a bottom-up approach to budgeting. Each Games is unique; you can’t just copy and paste from the previous edition. For Paris, we started by considering Europe’s efficiency as a broadcast market, which simplified some logistics and reduced costs. However, factors such as global inflation created new challenges, especially in negotiating contracts for equipment and services.

Speaking of contracts, for this operation, we negotiated and executed over 150 major agreements – similar to Tokyo 2020 but done in a shorter timeframe. We also conducted 52 large requests for proposals (RFPs). This process ensures transparency and allows vendors worldwide to participate. However, it also makes the timeline tighter, especially in a specialised industry such as broadcasting, where resources are limited and competition is fierce.

To give you an idea of the logistics involved, we moved 60 tons of air freight compared to 300 tons in Tokyo, thanks to Europe’s broadcast infrastructure. We used approximately 300 containers for the fit-out of the International Broadcast Centre (IBC), which are now being relocated to Italy for the upcoming Olympic Winter Games.

Additionally, 80 truckloads of OBS equipment were transported from Madrid to Paris, and another 250 truckloads of equipment were moved from across Europe.

The Paris 2024 Opening Ceremony presented unique challenges. Unlike previous ceremonies held in confined venues, this one spanned over 6km along the Seine, creating a much larger setup. From the outset, it was clear that this would require significantly higher investment. It became what I call an ‘evolving monster,’ growing in complexity and cost as we approached the Games. Despite this, we never compromised. The Ceremony was highly anticipated by broadcasters and audiences worldwide, and we delivered – adapting boats for broadcasting and developing other solutions specifically for this event. The final cost was more than double that of a traditional ceremony, but the results justified every cent.

From a financial perspective, I’m proud to say we delivered these Games within budget despite inflationary pressures. Logistics were an invisible hero this time. There were no incidents, no delays, and every last-minute request was handled smoothly. The lessons learned from Tokyo 2020 and Beijing 2022, combined with the dedication of our team, paid off. To deliver a global broadcast operation of this scale, on time, within budget, and to the satisfaction of all stakeholders, is an achievement we can all be proud of.”

Stefanos Kourelas
OBS Chief Financial Officer

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Photo credit: Owen Hammond

© OBS
Photo credit: Owen Hammond

THE HEARTBEAT OF THE GAMES: STORIES THAT INSPIRE

Every four years, the world comes together to celebrate the Olympic Games, the most-watched sporting event on television worldwide. While the dazzling displays of physical prowess captivate us, it is the athletes' stories that truly steal the show, adding depth and emotion to the Games.

The personal journeys of Olympic athletes resonate deeply with audiences around the world. Their tales of struggle, perseverance, and triumph inspire viewers to pursue their own dreams.

Whether it is a runner overcoming injury or a swimmer breaking barriers, these narratives bring a relatable human element to the grand stage.

The Olympics are a celebration of global diversity, and athletes' stories highlight this beautifully. Each athlete brings a unique background, culture, and personal journey to the Games, creating a rich tapestry of human experience.

Through the athletes' stories, we are reminded that excellence knows no borders. Their journeys of perseverance and triumph resonate universally, proving that no matter where we come from, we all share the same human spirit.

This celebration of global diversity is what makes the Olympics not just a sporting event, but a powerful symbol of unity and hope for a better world.

OBS as Host Broadcaster and the Olympic Media Rights-Holders (MRHs) know the power of a good story. They craft compelling features and broadcasts around athletes' journeys. Memorable narratives contribute to the rich history of the Games. Icons such as Usain Bolt, Michael Phelps and Simone Biles have become legends not just for their medals but for their extraordinary stories, inspiring generations to come.

"Athletes' stories are the heart and soul of the Olympic Games, transforming it into a celebration of the human spirit – connecting people, celebrating diversity, and leaving an indelible mark on history."

Yiannis Exarchos
OBS CEO

Athletes' stories in focus

The power of compelling storytelling

© OBS
Photo credit: Owen Hammond

A total of 10,500 athletes competed in the Olympic Games Paris 2024, each with a unique and inspiring story to share. While the sports and Ceremony coverage accounted for more than 3,500 hours, by the time the cauldron was extinguished, OBS produced an additional 7,500 hours of content.

Beyond the intense moments of competition and the grandeur of the Ceremonies, OBS coverage brought the athletes' stories to the forefront. Dedicated to delving deeper, OBS offered an in-depth look at their journeys, presenting a rich mosaic of content that showcased their unwavering commitment and the pivotal moments and emotions of their Olympic experience in Paris. This coverage was not just about the competition; it was a celebration of the human spirit.

In Paris, the mission of OBS was to break down barriers, making the Games more accessible and engaging than ever before. Through intimate athlete profiles, behind-the-scenes insights, in-depth interviews, and special features, OBS bridged the gap between the athletes and viewers around the world, fostering a profound connection with the heroes of the Games. Through a variety of content, the coverage provided an all-access pass to the heart of the Olympic action.

Additionally, OBS expanded its offering of services, equipping Media Rights-Holders (MRHs) with the tools to convey compelling stories with unparalleled depth, bringing home audiences closer to the pulse of the Games. By enhancing the storytelling capabilities of MRHs, OBS ensured that each athlete's narrative was told with the richness and nuance it deserved, allowing fans worldwide to engage with the Games on a deeper level.

Throughout the Games, OBS remained committed to enriching the Olympic experience with engaging, insightful, and inspirational content that reflected the true spirit of the Games and resonated with audiences globally. This dedication to comprehensive and heartfelt storytelling underscored OBS's mission to not only broadcast the events but to celebrate the perseverance, dedication, and triumph of the athletes who defined the Olympic spirit.

Through its expanded services and innovative coverage, OBS transformed the Olympic Games Paris 2024 into an unforgettable spectacle for all who watched.

"OBS was committed to enhancing the viewer experience through innovative coverage that not only captured the essence of Olympic excellence, but also immersed global audiences in the triumphs and personal stories of their favourite athletes."

Yiannis Exarchos
OBS CEO

Elevating athlete-centric coverage to new heights

In today's sports landscape, viewers demand more than just watching the action – they seek an intimate understanding of the athletes and their journey to the Olympic stage. Viewers want to delve into every aspect of the action, gaining insights into the athletes they cheer for.

By providing access to athletes' pre-competition routines and capturing athlete and coach reactions, both before competition and during crucial moments such as halftime, OBS helped broadcasters not only to deepen viewers' understanding of the sport but also foster greater viewer engagement. The integration of more Point-of-View (POV) and first-person view (FPV) cameras, including FPV drones, added a fresh perspective, immersing viewers in the athletes' experiences as they compete. These innovative camera angles offered unique insights into the challenges and decisions athletes face in real-time, enhancing the overall viewing experience. This comprehensive and immersive approach to coverage ensured that fans felt intimately connected to the intensity and drama of every Olympic moment. It not only satisfied viewers' thirst for more insightful perspective but also elevated the Olympic experience to new heights of engagement and excitement.

OBS offered unprecedented access, allowing audiences to truly grasp the journey of an Olympian. Beyond showcasing athletes in action, the coverage provided glimpses into various aspects of the Olympic experience. Viewers not only witnessed the intensity of competition but also experienced the behind-the-scenes action.

The coverage aimed to capture, where feasible, athletes' meticulous warm-up routines, shedding light on the preparation and focus required at the highest level of competition.

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Photo credit: Owen Hammond

© OBS
Photo credit: Mario Martin Martin

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Photo credit: Owen Hammond

Crucially, OBS upheld the integrity of sport and respected athletes' personal space throughout these more intimate moments. By presenting a balanced and respectful portrayal, OBS ensured that viewers connected deeply with the dedication, emotion, and commitment that define the journey of every Olympian.

Building on the success of athlete-focused initiatives in the two previous Olympics, OBS continued the Athlete Moment initiative, which featured emotional family reunions in post-competition coverage. These moments brought audiences worldwide closer to the adrenaline, emotion, and spirit of the occasion after the athletes competed.

Through these heartfelt connections, OBS ensured that the Games were not just a spectacle of athletic prowess but also a celebration of personal triumphs and emotional milestones.

Additionally, for the first time, OBS, in collaboration with Intel, established an Augmented Reality (AR) studio in the residential area of the Olympic Village. This innovation allowed MRHs to conduct live interviews with athletes and virtually transport them to studios anywhere in the world. Furthermore, Olympians also had the opportunity to create personalised videos for their fans, accessible on smartphones and computers.

Closer than ever: Enhanced MRH access for Paris 2024

In an era where content is king, the appetite for comprehensive, behind-the-scenes Olympic coverage has never been greater. Recognising this, MRHs advocated for unparalleled access to the athletes, their stories, and the electric atmosphere of the Games in Paris. This access was not just about quantity; it was about the quality and depth of the content that can be shared with their home audiences.

MRHs are the conduits through which the global audience's craving for connection and content is satisfied, bringing the Olympic spirit into homes and hearts, offering a window into the dedication, dreams, and triumphs of the world's most exceptional athletes.

To help them deliver an unprecedented level of coverage, ensuring that every moment was captured with vibrancy and shared with an eager international audience, OBS expanded its offering of services and created new opportunities for MRHs to customise their coverage and generate exclusive content from various areas inside the venues.

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Photo credit: Owen Hammond

HALF-TIME INTERVIEW POSITIONS

BASKETBALL, FOOTBALL, HOCKEY

MRHs were provided with a unique opportunity to conduct brief, yet insightful interviews during the half-time period of several matches. These real-time interviews provided a valuable window into the strategies, emotions, and perspectives of athletes or coaches at crucial moments in the competition. This access allowed MRHs to capture real-time reactions and insights, offering viewers an enriched understanding of the game dynamics as they unfolded.

"It was a window into the minds of athletes and coaches at the most critical juncture, offering fans a raw, unfiltered glimpse into the strategy and spirit that define the heart of competition."

Raquel Rozados
OBS Head of Broadcaster Services

FIELD OF PLAY REPORTER POSITIONS

BASKETBALL, FOOTBALL, HOCKEY, VOLLEYBALL

OBS offered MRHs exclusive spots, strategically located at the Field of Play (FOP) level and within the athlete tunnel, to commentate on live events as they unfolded. This service was more than just reporting – it was about immersing viewers in the very heart of the Games, where every play and emotion resonates with the audience.

"It was more than a front-row seat; it was an invitation to step into the arena, where the energy was tangible and every moment was a story waiting to be told. This was where the essence of the Olympics came alive, and we put the MRHs right next to the action to narrate the excitement of the Games as it unfolded."

Daniela Buckley
OBS Broadcaster Services Manager

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Photo credit: Lily Guilmart

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Photo credit: Owen Hammond

INFLUENCER POSITIONS

ALL SPORTS

With the introduction of influencer positions at all competition venues, OBS offered MRHs a golden opportunity to position their social media teams at the centre of the Olympic action. These strategically selected spots provided the perfect stage for capturing and sharing the most compelling moments of the Games. MRHs could produce a wide range of exclusive content, from behind-the-scenes glimpses into athletes' preparations to the vibrant atmosphere within the venues. This service was designed to amplify the Olympic narrative, allowing MRHs to deliver dynamic, engaging perspectives directly to their social media audiences.

"This unique service empowered MRHs' social media teams to craft stories from the epicentre of the excitement, offering perspectives that transform viewers into virtual insiders. It was not just about watching the Games; it was about experiencing them through a mosaic of exclusive content that captured the essence of the Olympic Games."

Miguel Fernandez Buhigas
OBS Broadcaster Services Manager

Insights from Mark Wallace

Bringing Paris to life: Key pillars of coverage

“Our coverage for the Olympic Games Paris 2024 was built around several key pillars.

The first pillar centred on the return of spectators after Tokyo 2020 and Beijing 2022. Paris 2024 featured full stadia, and it was essential to showcase the vibrant atmosphere to viewers worldwide. Highlighting the joy and excitement of children, families, and fans with painted faces was a major focus in our discussions with the production teams.

The second pillar focused on the unique location of the Games. Situated in the heart of Paris, events were held at iconic landmarks. Archery was hosted at Invalides, triathlon at Pont Alexandre III, taekwondo and fencing at Grand Palais, and beach volleyball at the foot of the Eiffel Tower, among others. Our goal was to constantly remind viewers that they were witnessing events in one of the world’s most beautiful cities. To achieve this, we incorporated numerous wide shots of the venues. For example, we placed a camera at the Petit Palais to capture the Grand Palais and set up a cable camera from the Grand Palais to Invalides, providing stunning views across the Seine River. In total, we deployed 13 beauty cameras, ensuring that the breathtaking scenery of Paris was always in view.

The third pillar was enhancing the actual coverage through advanced technology. We implemented multi-camera replay systems, also known as the ‘Matrix’ replay, across various sports. This system used multiple cameras mounted either on a truss or floor mounted, all recording simultaneously. When replayed, it allowed the action to be frozen and viewed from different angles. We partnered with Alibaba to provide these systems. This technology significantly improved production quality, offering viewers a more immersive experience.

Overall, these pillars – engaging spectators, showcasing iconic locations, and using advanced technology to enhance storytelling – were central to our coverage strategy for the Games. They enabled us to deliver a dynamic and unforgettable viewing experience, capturing the unique charm of Paris and the excitement of the Games.”

Mark Wallace
OBS Chief Content Officer

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Photo credit: Owen Hammond

Athlete Moment: ‘The most public private time’

First launched during the Olympic Games Tokyo 2020, the OBS ‘Athlete Moment’ initiative was expanded on an unprecedented scale in Paris. Three venues out of four had a connected station, allowing athletes to share their raw emotions with loved ones remotely and creating a unique and intimate experience for viewers worldwide.

Amidst the COVID-19 global pandemic, innovative solutions emerged to engage with fans remotely, and OBS had to be particularly creative to ensure that athletes, families, and fans could connect with the incredible emotions of Olympic victories despite the travel ban restrictions.

The Athlete Moment initiative embodied OBS's spark of imagination and willpower to enhance the Olympic viewing experience, while providing support and comfort to the athletes in a difficult time.

In less than three months, OBS used their expertise to integrate new technology into delivering one of the most heartfelt moments of the Games, both for athletes and audiences. The magic of the Athlete Moment happened at stations strategically positioned as athletes exit the field of play, offering them the opportunity to interact with their close ones immediately after competition.

It is aptly described as the ‘most public private moment’. Family members or friends who cannot attend the Games in person due to distance or physical limitations can still share in the unique experience of the athlete's moment.

Building on the success of the Athlete Moment in Tokyo 2020 and Beijing 2022, the initiative was pursued in Paris, with up to five simultaneous video connections from anywhere in the world and entirely produced remotely over the cloud from the Brussels control room.

In addition to connecting with their family and friends, athletes were also able to connect with their local sports club and shared the excitement as they received support from afar.

“These images were included as part of the spectators' venue experience, but beyond that, OBS also isolated these interactions, enabling MRHs to incorporate this unique, emotion-filled footage into their narratives,” shared OBS CEO Yiannis Exarchos. “This allowed broadcasters to share moments that truly highlighted the invaluable contributions of the athletes' entourage in their pursuit of an Olympic gold medal. The Athlete Moment stories put a spotlight on the collective effort and teamwork required for an athlete to reach the pinnacle of their sport, making the achievements even more meaningful and inspiring for the audience.”

With fans back in the stands, the Athlete Moment initiative doubled the joy and emotions during the Games, as these moments were watched on big screens in the venues.

For Paris 2024, OBS expanded this initiative to include more sports, allowing a greater number of athletes to connect with their loved ones immediately after leaving the field of play. With stations installed at 26 venues across 35 sports and disciplines, the initiative engaged more than 70 National Olympic Committees (NOCs).

This resulted in almost 500 Athlete Moments, surpassing the total from the Olympic Games Tokyo 2020 by more than double.

Among the many memorable moments was a unique highlight at La Chapelle Arena, when a surprise proposal was made to China’s badminton gold medallist, Huang Yaqiong, during an Athlete Moment. Just after being honoured in the Victory Ceremony, Huang was surprised as her teammate and men’s doubles player, Liu Yuchen, got down on one knee to propose.

Canadian swimmer and three-time Olympic champion Summer McIntosh also shared her gratitude, stating, “It has been awesome to share the moment with everyone that has supported me to be here today.”

The Athlete Moment's real-time, personal interactions allowed audiences to witness the genuine, unfiltered emotions of the athletes, making every victory, defeat, and heartfelt exchange a shared human experience. This blending of technology and human connection made the Games a truly unforgettable celebration of athletic achievement and communal joy.

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Photo credit: Owen Hammond

SO HOW DOES IT WORK?

1. OBS's cloud system ingests each of the callers and, in real-time, creates a composite view delivered to the OBS Technical Operations Centre (TOC) in HD HDR format with ultra-low latency.
2. All moments are produced remotely in a control room in Brussels, Belgium, staffed with schedulers, moderators, producers, and clip editors.
3. They work hand in hand with OBS producers deployed in each venue to ensure success connections.
4. On some days, up to 17 stations were active simultaneously.

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Photo credit: Mario Martin Martin

Breaking new ground with the inaugural Olympic AR studio

Insight into the future of sports viewing with Augmented Reality (AR) technology, debuted at the Olympic Games Paris 2024.

© OBS
Photo credit: Mario Martin Martin

Augmented Reality (AR) studios are at the cutting edge of sports coverage, reshaping how content is presented and consumed by audiences around the world. These state-of-the-art studios deliver immersive, interactive, and visually captivating broadcasts that elevate storytelling and viewer engagement to new heights.

In a groundbreaking collaboration with Intel, OBS installed an AR studio in the heart of the Olympic Village for Paris 2024. This cutting-edge facility allowed broadcasters to conduct live interviews with athletes and virtually transport them back to their studios in their home country or at the International Broadcast Centre (IBC). By enabling these remote live interviews, OBS provided them with unprecedented access and flexibility, while offering viewers a more engaging and immersive experience. Additionally, athletes could create personalised videos to share with their fans, accessible on smartphones and computers.

Two options were provided to the MRHs for live broadcast: 3D or 2D. The 3D live volumetric virtual production is a game changer, capturing athletes in three dimensions and allowing their holographic representations to be broadcast live.

This technology adds depth and realism, offering multiple angles and perspectives that were previously unattainable. For MRHs opting for the traditional 2D format, the 2D green screen live stream was utilised. This method overlays live footage of athletes onto virtual backgrounds, combining the familiarity of 2D broadcasting with the innovative elements of AR. Both formats aim to enrich the viewing experience, making it more vivid and interactive.

“The majority of broadcasters are still in the testing phase with this feature, but it has the potential to become a crucial production tool in the future,” explained Matt Millington, OBS Director of Digital Content. “When venues are geographically spread out, it would allow us to provide instant access to athletes for an MRH that cannot deploy crews to every location.”

In addition to live interviews, AR was used to create a variety of short-form content. These bite-sized videos were designed to capture 20-90 seconds of original content, perfect for sharing on social media platforms and engaging a broader audience. The use of AR in these clips added an extra layer of excitement, making the content more visually appealing and shareable.

The AR studio was equipped with 29 cameras in a circle to capture the actions of an athlete in the middle of the circle. The signals from the cameras were then processed, and CPUs synthesised all the angles with audio. The end clip was a high-quality digital representation of the athlete viewers could spin around and view from any direction.

In total, during the Olympics, almost 1,000 AR videos were created by more than 1,100 athletes, representing 127 National Olympic Committees (NOCs) and 36 sports and disciplines.

The introduction of AR at Paris 2024 signifies a major milestone in Olympic broadcasting. By merging the physical and digital worlds, AR offers a unique and immersive way to experience the Games. This technological advancement is expected to set a new standard for how the Olympics are covered, offering fans an unprecedented level of interaction and engagement. From live interviews with free viewpoint control to 3D volumetric broadcasts and engaging short-form content, AR is set to transform Olympic broadcasting into a more interactive and immersive experience. Looking forward, one thing is certain: the future of sports coverage is here, and it’s augmented.

Introducing a first in content delivery: The 3D AR spatial video library

For Paris 2024, OBS unveiled an innovative content delivery platform designed to offer cutting-edge AR content generated from the AR Studio located in the Olympic Village: The 3D AR Spatial Video Library of Olympic athletes. For the first time ever, MRHs had access to high-definition, 3D AR videos that brought personal stories to life as athletes shared their journeys and insights into their sports.

What set this library apart was its continuous expansion. Continuously capturing new content before and during the Games ensures that MRHs always had access to the freshest and most dynamic representations of their favourite athletes. This unprecedented resource not only enriched storytelling and coverage but also forged a closer connection between fans and the vibrant spirit of the Olympic Games.

By delivering an unparalleled, immersive experience, the 3D AR Spatial Video Library marks a significant leap forward in content delivery for MRHs, setting a new benchmark for how we experience and engage with the inspiring stories of athletes.

© OBS
Photo credit: Mario Martin Martin

Key features of the AR Studio in the Olympic village

- **Multi-camera integration**
  The AR studio integrated a multi-camera setup, allowing for seamless transitions between different angles and perspectives. This capability was crucial for creating a dynamic viewing experience.

- **Virtual environments**
  The AR studio used sophisticated software to generate virtual environments that could replace or enhance physical studio sets. These environments included dynamic backgrounds, 3D animations, and interactive graphics that respond to live data, creating a more engaging and visually appealing broadcast.

- **Holographic presentations**
  One of the most exciting features of AR studios is the ability to create holographic representations of athletes. This technology allows for life-like 3D models to be inserted into the studio environment, providing a unique way to showcase athlete movements or conduct virtual interviews.

- **Interactive graphics and data visualisation**
  AR studios can display real-time data and statistics in an interactive manner. For example, during a live broadcast, data can be overlaid on the screen, providing deeper insights.

Key benefits for MRHs

- **Enhanced accessibility and convenience**
  The AR studio integrates a multi-camera setup, allowing for seamless transitions between different angles and perspectives. This capability is crucial for creating a dynamic viewing experience.

- **Compelling storytelling**
  The AR studio empowers broadcasters to tell more compelling stories by visualising data and creating immersive experiences that transcend traditional 2D broadcasts. Through the use of advanced AR technology, viewers can gain unique insights and a deeper connection to the Olympic Games, uncovering the incredible stories behind each Olympian.

- **Increased viewer engagement**
  Interactive graphics and holographic presentations create a dynamic and immersive experience, accessible on laptops and smartphones, that captures viewer attention and enhances the overall enjoyment of the broadcast.

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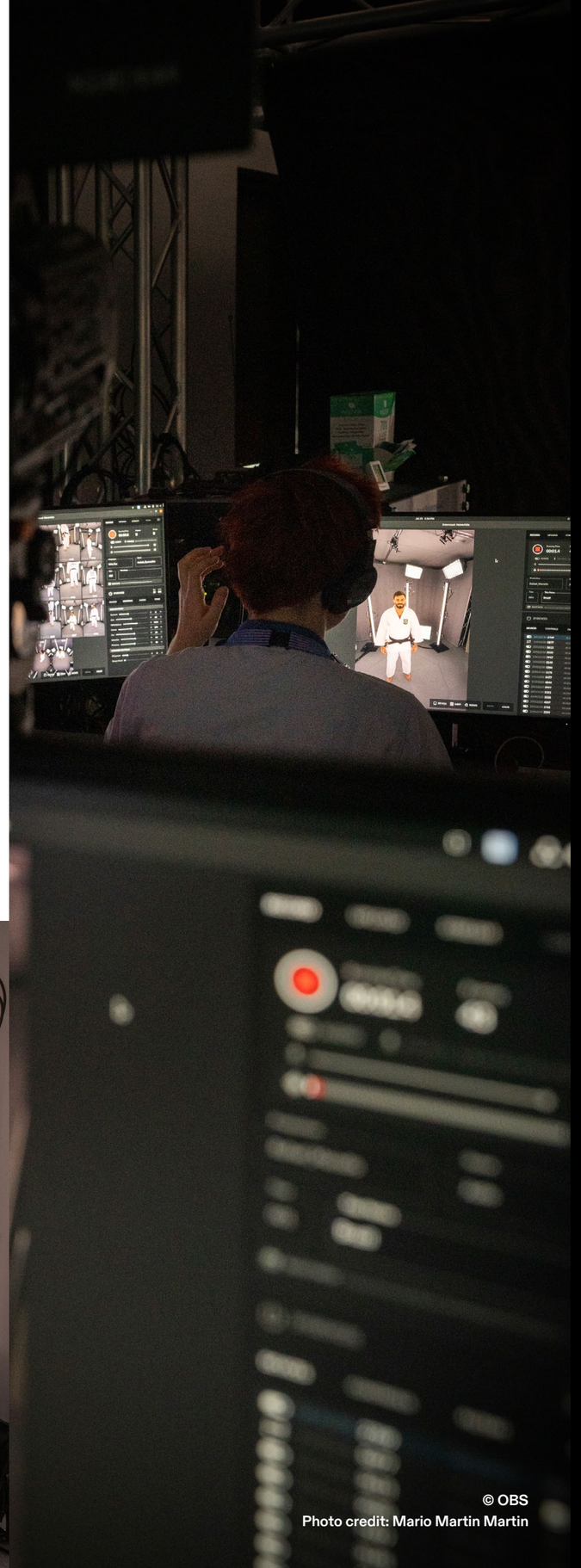
Photo credit: Mario Martin Martin



© OBS
Photo credit: Mario Martin Martin

MATT MILLINGTON

“As we pushed the boundaries of immersive storytelling at Paris 2024, the AR studio in the Olympic Village aimed to redefine how viewers experienced the Olympic Games, bringing athletes' stories to life like never before. Our AR studio in the Olympic Village was not just revolutionising storytelling; it was empowering MRHs' remote operations with unparalleled flexibility, granting unprecedented access to athletes and their journeys.”

OBS Director of Digital Content

A MORE IMMERSIVE, CINEMATIC STYLE

As the birthplace of cinema, Paris holds a special place in the history of visual storytelling. The Lumière brothers' pioneering work in the late 19th century laid the foundation for modern filmmaking, turning the city into an enduring symbol of cinematic innovation. A century after hosting the 1924 Olympic Games, the city welcomed the world again for the celebrations of the 2024 Olympics. This momentous occasion not only represented a historical milestone but also heralded a new era in Olympic broadcasting with a new cinematic approach to the Olympic coverage. By incorporating cinematic lenses for the first time, the 2024 Olympics blended the artistry of cinema with the excitement of live sports, offering viewers an unprecedented immersive experience that paid homage to Paris' rich cinematic heritage while celebrating the pinnacle of athletic achievement.

The introduction of cinematic lenses to OBS's coverage represented a significant shift in how Olympic sports were presented to audiences. Imagine a close-up shot, isolated from its background, capturing the steely determination on rugby sevens players' faces as they walked onto the pitch or the unrestrained jubilation of fans erupting in the stands after a decisive score. By adding depth and focus to these images, cinematic lenses created an immersive experience, drawing viewers deeper into the heart of the action.

With their shallower depth of field compared to traditional broadcast lenses, cinematic lenses provided a striking separation between subject and background. **This effect produced visually striking images, where the blurred backdrop emphasised the focal point with unparalleled clarity.** Their ability to convey raw emotions was unmatched, capturing moments ranging from an athlete's triumphant celebration to the intense tension of a match's critical turning point. These emotional nuances enriched the storytelling, transforming events into a more engaging and aesthetically captivating experience for viewers.

OBS seamlessly integrated cinematic coverage across all sports where it was editorially relevant. Key moments, such as athletes in the pre-match tunnel, scenes of euphoric victory or heartrending defeat, and periods of intense concentration, were brought to life through these lenses. The resulting intimate shots delivered deeply moving narratives that resonated with audiences worldwide.

By blending the immediacy of live sports broadcasting with the emotional resonance of cinematic storytelling, Paris 2024 set a new benchmark for how global audiences experienced and connected with the Olympic Games. This innovative approach not only elevated the visual experience but also deepened the emotional connection, delivering a richer, more profound narrative that united viewers around the world.

MARK WALLACE

"Striking the right balance between cinematic aesthetics and live event coverage is essential to delivering a captivating and comprehensive viewing experience.

When used judiciously, the shift towards a more cinematic approach helps to draw the viewer deeper and closer into the event, setting milestone moments apart from traditional coverage."

OBS Chief Content Officer

Cinematic lenses provide a shallower depth of field, creating a visually immersive experience by focusing sharply on the subject while artfully blurring the background. This technique used for the first time in Olympic broadcasting drew Olympic viewers into the heart of the action, making them feel as though they were part of the scene, enhancing the overall viewing experience like never before.

Photo credit: Owen Hammond

MOBILE COVERAGE AND 5G CONNECTIVITY

Since the Olympic Winter Games PyeongChang 2018, OBS has been on an exhilarating 5G journey, pioneering the use of next-generation mobile technology to support the broadcast operations at the Olympic Games.

Fresh views: Mobile phones in the spotlight

© IOC Getty Images
Photo credit: Buda Mendes

It all began six years ago with field tests during the Olympic Winter Games PyeongChang 2018, where OBS explored the potential of 5G networks. These initial trials demonstrated the promise of 5G, achieving remarkable picture quality and efficient content transmission from ENG cameras back to the International Broadcast Centre (IBC).

Building on these early successes, OBS continued to push the boundaries of what was possible with 5G technology during the Olympic Games Tokyo 2020. The innovative use of 5G networks during the Opening and Closing Ceremonies allowed for seamless, high-definition broadcasting that brought the grandeur and excitement of these events to audiences around the globe. The journey progressed further at the Olympic Winter Games Beijing 2022, where OBS implemented a robust network architecture to transmit live content via 5G across all competition venues.

This comprehensive 5G coverage not only ensured real-time broadcasting but also enhanced the overall viewing experience, providing audiences with unprecedented access to the Games' action.

The Paris 2024 Games marked the culmination of years of innovation and development, promising to revolutionise the way audiences engage with the Olympics. Through advanced mobile technology, OBS offered immersive coverage of events such as the unique Opening Ceremony on the Seine River and the thrilling sailing competitions, capturing the magic and spirit of the Olympics from every conceivable angle.

The 5G journey embarked upon by OBS since PyeongChang 2018 is not just about technological advancement; it's about transforming the way the world experiences the Olympics, making every moment more accessible, engaging, and unforgettable for millions of fans worldwide.

For the Olympic Games Paris 2024, Orange, the Organising Committee's telecommunications partner, established private 5G networks exclusively for OBS and the MRHs. These networks ensured high-quality, reliable footage and secure signal transmission to the IBC, covering key areas along the Seine and allowing the signals to be transmitted seamlessly.

Giving viewers a front row seat to the Opening Ceremony

For the Opening Ceremony, OBS and Samsung partnered to bring fans closer to the Olympic Games than ever before by relying on advanced 5G technology and fibre systems. Samsung's mobile technology helped broadcast live streaming from athletes' boats as they travelled along the Seine. More than 200 mobile phones served as Point-of-View (POV) cameras on the athletes' boats, increasing the complexity and integration cost but enhancing the broadcast with unique angles and perspectives.

> "Samsung is one of the leading players in the field of mobile technology. OBS and Samsung identified opportunities to use mobile technology and actual mobile phones to enhance Olympic coverage."
>
> Yiannis Exarchos,
> OBS CEO

OBS and Samsung installed more than 200 Galaxy S24 Ultra smartphones on the bow and sides of each of the 85 athlete vessels. The footage captured and shared using Samsung smartphones provided an intimate view of the athletes' reactions during this unique Opening Ceremony being held outside a stadium. To ensure sufficient bandwidth, the 5G network transmited signals from the boats to nearby receivers. More than 10 5G antennas were strategically placed along the river, establishing France's first-ever standalone 5G network.

These mobile phone shots complemented the primary broadcast coverage, which utilised more than 100 camera systems.

OBS aimed to provide viewers with a sense of proximity and intimacy that mobile phone footage can uniquely capture and allow them to follow their favourite athletes in real-time and with new proximity.

> "This high-quality footage was made available as individual streams to the MRHs, providing them with unique content for their second screens."
>
> Mark Wallace
> OBS Chief Content Officer

The integration of 5G technology into the Paris 2024 Opening Ceremony production plan represented a monumental endeavour, setting a new benchmark for future events by demonstrating how cutting-edge connectivity can redefine live broadcasting standards.

© OBS
Photo credit: Owen Hammond

From the Opening Ceremony to the sea: enhancing sailing coverage

OBS extended the use of 5G-connected cameras to the sailing competitions in Marseille, enhancing the viewer experience by placing Samsung mobile phones on athletes' boats.

This innovation allowed fans to immerse themselves in the race, witnessing Olympians navigate the winds and waves first-hand. All hands-on deck!

OBS and Samsung deployed the same technology used for the Opening Ceremony in Marseille by installing a Galaxy S24 Ultra smartphone on selected competition boats, allowing fans to experience the thrill of the race up close, and truly immerse themselves in the action.

Samsung implemented optimised software and technology to support filming and transmitting this first-of-its-kind footage in collaboration with OBS and other Olympic partners. In kite, athletes wore helmets equipped with mobile phones fitted with pan sensors, delivering live action footage directly from the sailing boats. Given the dynamic and often turbulent nature of sailing environments, the mobile phones used feature advanced image stabilisation technology. This ensured that the footage remained clear and steady, even in rough waters, providing viewers with a smooth viewing experience.

Some phones were also installed on buoys in the water to provide new angles as kiteboarders raced around them.

Mobile coverage of the sailing races significantly enriched viewer engagement by delivering a more intimate and dynamic perspective of the sport.

This immersive experience brought viewers closer to the athletes, enabling them to gain a deeper appreciation for the challenges and skills inherent in competitive sailing.

© IOC Getty Images
Photo credit: Phil Walter

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5G's Olympic journey

5G provides a wireless contribution solution with sufficient bandwidth to handle high-demand UHD signals, enabling IP video from broadcast cameras to be transported with ultra-low latency and high reliability.

It also offers alternatives to traditional wireless equipment, allowing for new camera positions and reducing the need for frequency coordination with authorities.

Olympic Winter Games PyeongChang 2018
- **February 2018:** Initial field tests of 5G networks during the Opening and Closing Ceremonies
- Content Delivery: OBS conducted field tests of network performance and quality from the end-user perspective on 5G networks.
- Outcome: Excellent results in terms of picture quality.

Olympic Games Tokyo 2020
- **July 2021:** Continued field tests of 5G networks
- Content Delivery: OBS continued to test 5G network performance and quality, further verifying the technology's capability.
- Outcome: Consistently high picture quality was observed.

Olympic Winter Games Beijing 2022
- **February 2022**: First full-scale use of 5G for live content transmission
- Content Delivery: OBS used Beijing 2022's solid network architecture to transmit live content via 5G.
  More than 30 live and near-live cameras, including those on snowmobiles at cross-country skiing and in the start and finish areas at alpine skiing, utilised 5G. 5G-connected cameras were integrated into the virtualised OB van project to capture curling action.
- Outcome: Enhanced flexibility in camera positioning and reduced need for frequency coordination with authorities. Successful implementation of 5G in a high-demand live broadcast environment.

Olympic Games Paris 2024
- **July 2024**: Advanced use of 5G UHD cameras and new 5G offering to the MRHs
- Content Delivery: 5G UHD cameras with remote control capabilities (a new development) were successfully used at Bercy Arena (Artistic gymnastics and basketball finals) and Stade de France (Rugby sevens, athletics track & field and Closing Ceremony).
- 5G bonding service: OBS offered MRHs several solutions for broadcast transmission over 5G network at the venues, using Quality of Service (QoS) priority techniques.
- Outcome: Successful deployment and operation that showcased the full potential of 5G in live sports broadcasting, delivering better quality pictures than standard RF cameras.

Photo credit: Owen Hammond

REDEFINING OLYMPIC BROADCASTING WITH AI

As Artificial Intelligence (AI) continues to revolutionise various industries, its impact on sports broadcasting has been nothing short of transformative. In the ever-evolving world of sports broadcasting, AI has set new benchmarks in Olympic broadcasting.

Kicking off at the Olympic Winter Games PyeongChang 2018 and continuing through Tokyo 2020 and Beijing 2022, AI applications have transformed how broadcasters deliver the Games. Partnering with TOP partners, OBS has harnessed cutting-edge AI technologies to push the boundaries of Olympic broadcasting. Tokyo 2020 marked a pivotal moment where AI's prowess in visual interpretation and analysis took centre stage, significantly advancing data analytics and content creation. This technological leap didn't just streamline workflows; it redefined viewer engagement and storytelling, offering a glimpse into the future of immersive sports experiences.

IOC AI agenda launch

On 19 April 2024, the IOC launched The Olympic AI Agenda, a strategic initiative with a key pillar dedicated to the ethical use of AI to protect athletes and the integrity of sport. This agenda is the third in a series of strategic documents under the leadership of IOC President Thomas Bach, following Olympic Agenda 2020 (launched in December 2014) and Olympic Agenda 2020+5 (launched in March 2021).

With every opportunity comes inherent risks. Throughout OBS's experimental years with AI, a primary focus has been ensuring that AI usage faithfully reflects reality and remains unbiased. This commitment upholds OBS's guiding principle of providing neutral coverage and avoiding favouritism towards any country. This is particularly significant given the stark contrast between AI's technological nature and the deeply human context of Olympism. The Olympic AI Agenda acknowledges these concerns, addressing the myriad of risks and ethical questions associated with AI, including data privacy, security, accountability, fairness, job displacement and environmental impact.

"AI's journey of 70 years has catalysed innovation across countless industries, though its potential in broadcasting has only recently come into full view. At OBS, we've dedicated the past six to seven years to pioneering AI-driven solutions.

Paris 2024 marked a transformative milestone, showcasing mature technological solutions that illustrated how AI can revolutionise Olympic broadcast workflows and elevate content generation. AI's unparalleled capability to analyse live data at speeds beyond human capacity redefined how we capture, interpret, and present the Olympic experience to global audiences."

Yiannis Exarchos
OBS CEO

On 19 April, the IOC launched the Olympic AI Agenda, a pioneering initiative aimed at harnessing the power of AI to enhance the Olympic experience and shape the future of sport.
© IOC. Photo credit: Greg Martin

The Olympic AI Agenda is the culmination of efforts by the IOC AI Working Group – a high-level panel of global experts including AI pioneers, academics, athletes and representatives from technology companies. This comprehensive agenda outlines the transformative potential of AI in sports and details how the IOC, as the leader of the Olympic Movement, plans to guide the global implementation of AI within the sporting world. It sets forth the IOC's ambitious vision and guiding principles, identifies high-impact areas for AI application, and explores the necessary framework and governance mechanisms to mitigate risk and promote the responsible use of AI. Through this agenda, the IOC aims to lead by example, ensuring that AI enhances the Olympic experience while upholding the values of fairness, transparency, and human dignity.

The AI revolution at Paris 2024

In Paris, OBS produced more than 11,000 hours of content, a remarkable 15 per cent more than what was delivered three years before in Tokyo. To put this into perspective, it is equivalent to more than a year and three months of non-stop TV channel production, condensed into just 19 days. AI technology played a pivotal role in this massive endeavour, optimising broadcast operations and revolutionising how OBS efficiently delivered this vast amount of content to broadcasters worldwide.

AI-GENERATED HIGHLIGHTS: REDEFINING OLYMPIC CONTENT CURATION

Managing and curating highlights from the vast array of content produced during the Olympics poses a significant challenge. However, advancements in AI have opened up new possibilities for efficiently generating key action moments in real time.

At the forefront of this innovation was OBS, in collaboration with TOP partner Intel, utilising AI, trained on the Intel® Geti™ platform. This technology enabled the automatic creation of highlight videos across various formats and languages. By harnessing AI, OBS efficiently identified and compiled crucial video moments into session highlights, player showcases, team features, and top actions across sessions. This capability allowed broadcasters to access and customise content, focusing specifically on highlights featuring athletes from their National Olympic Committee (NOC), thereby enhancing their ability to deliver tailored coverage according to their viewers' preferences.

The effectiveness of this AI-driven approach was first demonstrated at the Winter Youth Olympic Games Gangwon 2024 during Ice Hockey. Building on this successful proof of concept, its scope was significantly expanded for Paris 2024, encompassing 14 sports and disciplines. This showcased AI's ability to streamline content production while enhancing viewer engagement on a global scale. This initiative not only underscored the efficiency gains made possible by AI in content creation, but also highlighted its potential to transform how audiences experience and interact with Olympic sports in real time. As technology continues to evolve, AI-generated highlights promise to set new benchmarks for dynamic and personalised Olympic coverage, ensuring that every thrilling moment is captured and celebrated worldwide.

"AI-generated highlights significantly streamlined the workflow for Paris 2024, enabling producers to efficiently manage content from the 758 sessions and 329 events. While the current number of editors remained unchanged from Tokyo 2020, future editions of the Games may see adjustments. For now, OBS continues with its existing workflow, using AI to enhance efficiency and capture moments that might otherwise be missed."

Wendy McInroy
OBS Director of News and Highlights

CAPTURING EVERY ANGLE WITH MULTI-CAMERA REPLAY SYSTEMS

Imagine watching a 360-degree view of an athlete's performance, capturing every detail from multiple perspectives. Thanks to the innovative 'Multi-Camera Replay Systems', developed in collaboration with TOP partner Alibaba, this vision is now a reality.These systems use up to 45 cameras to capture images, which are processed with cloud-based AI and deep learning to generate 3D models and texture mappings. The result is stunning frame-freeze slow-motion replays from multiple angles, delivering a new dimension to sports coverage.

Since their debut at the Tokyo 2020 Olympics, the number of these systems has doubled. While the freeze-frame effect may evoke scenes from films like The Matrix, its use in live sports production offers audiences unprecedented insights into intricacies of each performance, showcasing the extraordinary athleticism, skill, and dedication of Olympic athletes. This technological innovation not only enhanced the visual storytelling of the Games but also deepened viewers' appreciation of the years of training and commitment behind every moment on the world's biggest stage.

"Our goal is to deepen the audience's appreciation for the physical excellence required to excel in the Olympic Games. This collaboration with Alibaba and the use of their advanced replay technology not only showcases the athletes' capabilities but also brings the viewers into the heart of the action."

Yiannis Exarchos
OBS CEO

TOKYO 2020 » PARIS 2024

TOKYO 2020: 9 SPORTS/ DISCIPLINES

PARIS 2024: 21 SPORTS/ DISCIPLINES

Artistic Gymnastics, Athletics Track & Field, Badminton, Basketball, 3×3 Basketball, Beach Volleyball, BMX Freestyle, Boxing (Finals), Breaking, Canoe Slalom, Equestrian, Golf, Handball (Finals), Judo, Rhythmic Gymnastics, Rugby Sevens, Skateboarding, Table Tennis, Tennis, Wrestling

TOTAL: 17 SYSTEMS AND 14 VENUES

The systems comprise between 23 and 45 cameras. At some venues, several systems are installed. For instance, at Bercy Arena, during the Basketball Finals, two systems of 45 camera each offer replays of the athletes inside the three-point line.

© OBS
Photo credit: Owen Hammond

TRANSFORMING HOURS OF COMMENTARY AND INTERVIEWS INTO AUTOMATED TRANSCRIPTIONS

Just like in Tokyo 2020 and Beijing 2022, OBS employed AI in Paris 2024 to transcribe live commentary and interviews across all sports and disciplines.

By converting audio streams into cloud-based speech and transforming them into text models, editors could easily access transcriptions in the form of subtitles.

This streamlined process not only enhanced workflows but also proved invaluable to editors. With thousands of hours of commentary and interview transcriptions automated seamlessly, these systems enabled rapid text production without any manual intervention.

"Here's an illustration of AI technology operating behind the scenes, invisible to viewers, yet significantly enhancing their viewing experience by providing faster access to a larger volume of content."

José Antonio Sánchez
OBS BDF & AI Applications Manager

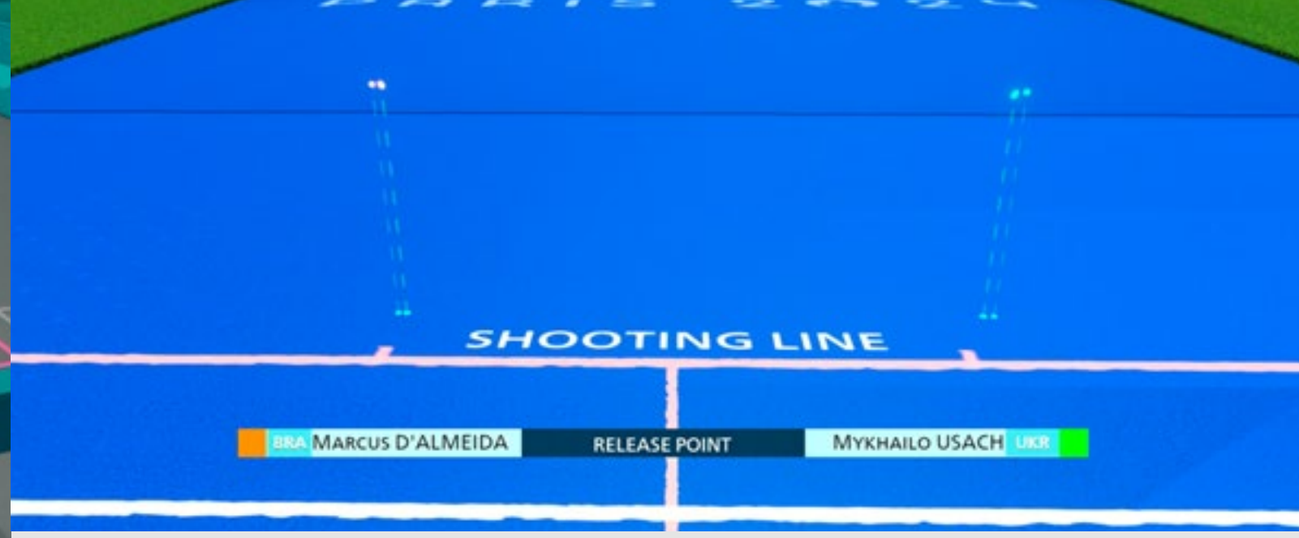
© OBS
Photo credit: Owen Hammond

INNOVATIONS IN TRACKING TECHNOLOGY FOR DYNAMIC SPORTS

In collaboration with TOP partner OMEGA, OBS unveiled a groundbreaking AI application called 'Athlete and Object Tracking' at the Paris 2024 Games, which was used across seven disciplines. This innovation addressed a common challenge for viewers: identifying and following athletes or objects in dynamic sports environments. For instance, distinguishing between sailing boats or tracking rowers from afar can be confusing. The new AI technology simplified this by using advanced pixel detection algorithms to recognise and track objects such as boats and athletes. The system created patterns from the captured images and integrated tracking data, ensuring precise identification and continuous monitoring. This application enhanced the viewer's experience, making it easier to follow the action and understand the progress of the events in real time.

"Our new AI-driven 'Athlete and Object Tracking' system greatly assisted both MRHs and viewers in pinpointing athletes during intricate events such as marathon or sailing. This innovation enabled dynamic graphics that enhanced the audience's understanding of the competition dynamics".

Stefano Frattini
OBS Principal Engineer
Live Sports Data



AI REAL-TIME TRAJECTORY ANALYSIS FOR ARCHERY

AI real-time trajectory analysis in archery reshaped how TV viewers experienced the sport, offering unprecedented insights into the precision and skill of athletes.

Through high-speed cameras that meticulously recorded the path of each arrow from release to target impact, viewers could witness detailed 3D representations of arrows in flight in real-time.

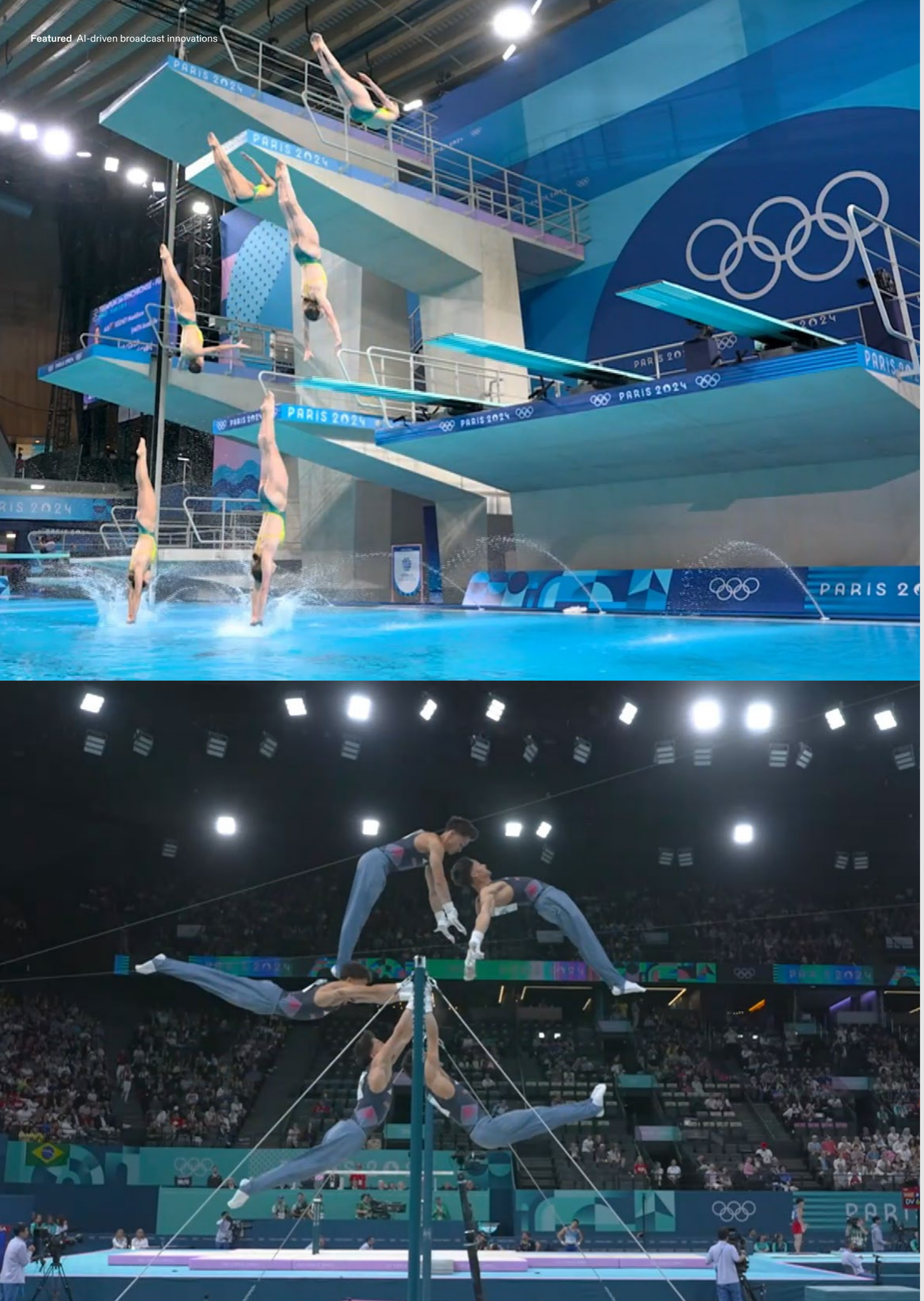
This virtual model not only visualised the arrow's trajectory height and speed, but also facilitated comparisons with past performances of the same athlete and against trajectories of other archers.

The real-time nature of AI analysis added a layer of excitement and immediacy to the live coverage, as viewers could follow along with instant feedback on each archer's performance, contributing to a deeper appreciation of the sport's intricacies and athletes' ongoing performance.

"AI-driven real-time trajectory analysis in archery isn't just transforming how we watch the sport; it's unveiling the unseen mastery behind each shot, offering viewers a richer, more engaging perspective on the sport."

Stefano Frattini
OBS Principal Engineer
Live Sports Data

© OBS
Photo credit: Owen Hammond



INSIGHT INTO ATHLETIC EXCELLENCE THROUGH INTELLIGENT STROBOSCOPIC ANALYSIS

OBS and OMEGA introduced stroboscopic analysis to the Games, enhancing the viewing experience for Diving, Athletics and Artistic Gymnastics and which redefined the viewer's understanding and appreciation of athletic performance like never before.

This technology captures motion, frames it, and applies Intelligent Background Handling in near real-time, allowing viewers to study the successive movements and biomechanical positions of athletes at critical points during their performances.

For the first time, viewers could sit virtually in the judges' chairs. Stroboscopic analysis enables a level of analysis previously reserved for trained judges. It provides viewers with a comprehensive view of athletes' biomechanical positions and sequences during critical moments of their performances.

Stroboscopic analysis uses advanced AI and intelligent background handling to capture and analyse the intricate movements of athletes in near real-time. This technique allows for the capture of stills from athletes' performances, which are then meticulously spaced to highlight the dynamics of their movements.

Imagine watching a diver leap from a 10-metre board. Traditionally, viewers only see the diver's movements for a split second, with only trained judges able to discern the precise movements. With stroboscopic analysis, viewers can now delve into a sequence of freezes that unveil the full spectrum of the diver's motion, from take-off to entry into the water.

In artistic gymnastics, stroboscopic analysis was deployed across the floor, horizontal bars, uneven bars, and vault events. This technology helped to deconstruct each routine into its most elemental parts, offering a detailed examination of every twist, turn, and aerial manoeuvre. By freezing key moments in a routine with unprecedented clarity and flexibility, AI-fuelled stroboscopic analysis empowered viewers to appreciate the sheer athleticism and artistry that define Olympic gymnastics.

What sets intelligent stroboscopic analysis apart is its ability to seamlessly integrate into live broadcasts. The fast turnaround time of this technology allowed OBS to include detailed analyses in replay sequences during live coverage. This meant that viewers not only witness the drama unfold in real-time but also gain immediate insights into the nuances of an athlete's performance, enhancing the overall viewing experience.

"Intelligent stroboscopic analysis represents a significant leap forward in how we perceive and understand athletic excellence, offering fans a closer, more immersive view into the physical prowess and technical precision of Olympians. Powered by deep learning, this AI-driven innovation captures and presents the full movement of the athlete's body with unprecedented clarity. It enables viewers to discern the nuanced details of athletic performances, fostering a deeper connection to the Olympic Games."

Yiannis Exarchos
OBS CEO

ENHANCED DATA GRAPHICS FOR DIVING

"One of the most exciting developments in Paris was our ability to utilise AI and data to offer viewers a clearer, more insightful view of diving - demystifying the sport's complexities for all."

Stefano Frattini
OBS Principal Engineer
Live Sports Data

Have you ever wondered about the speed a diver reaches upon entering the water? For Paris 2024, OMEGA and OBS pioneered an AI application called 'Enhanced Data Graphics' specifically for diving.

This technology utilises AI to detect and display an athlete's body position in real time. Detailed metrics such as the diver's height from the diving board at different stages of the dive, time in the air, and entry speed into the water were visually displayed on-screen. Viewers gained expert insights into the technical aspect of each dive through these enhanced data graphics. This innovation not only deepens understanding of the athlete's movements but also enriches the viewing experience by offering unprecedented clarity and context to every dive. By seeing detailed data displayed alongside the dive, audiences can better understand the difficulty and execution of each dive. This enhances the overall appreciation of the athleticism and skill required in diving and deepens the audience's engagement with the sport.

SERVE REACTION TIME FOR TENNIS

"Ace! Wow, what a serve!" The speed was so incredible that viewers missed the tennis player's body position and reaction time entirely.

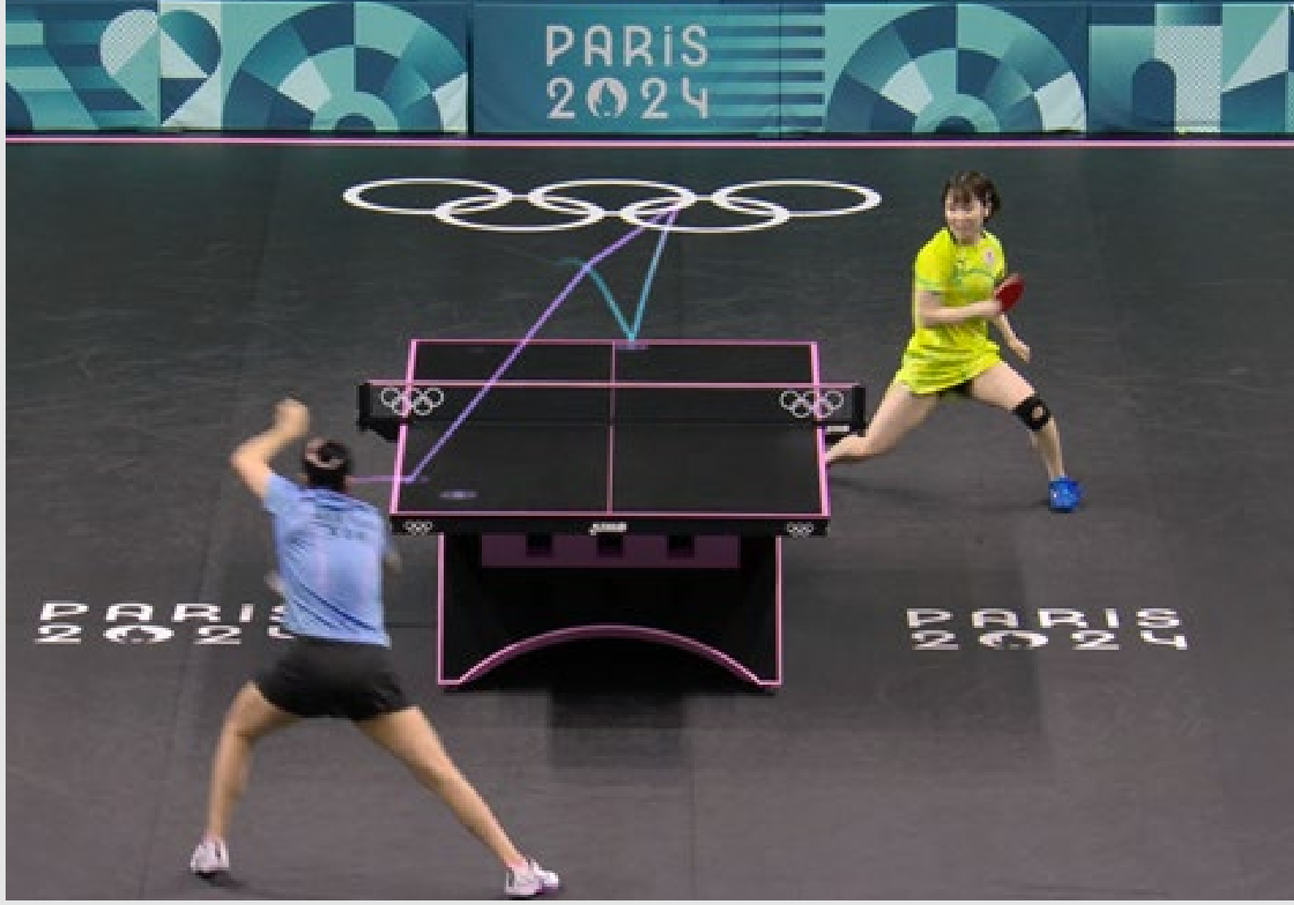
New to Paris, OBS and OMEGA introduced the AI application 'Serve Reaction Time', utilising intelligent motion detection.

This innovative system detects and analyses the player's movements, generating data to precisely measure their reaction time when receiving a serve. Using dedicated cameras, the intelligent motion detection system identifies key elements such as the serve's initiation, shoulder position, rotation, and the exact moment of reaction based on the ball's trajectory.

Imagine if we had this technology in the past; we could have witnessed opponents reacting to the serves of legends such as Andy Roddick, renowned for his lightning-fast serves.

"Introducing 'Serve Reaction Time' in tennis through AI technology was an exciting milestone. It provided a captivating look into the precision and lightning-fast reflexes of modern tennis players, showcasing how far the sport has advanced in terms of both serve velocity and player reactions."

Stefano Frattini
OBS Principal Engineer
Live Sports Data



AI SPIN DETECTION FOR TABLE TENNIS

Table tennis, a sport renowned for its speed and precision, also benefitted significantly in Paris from recent advancements in AI technology, particularly in the realm of ball spin detection.

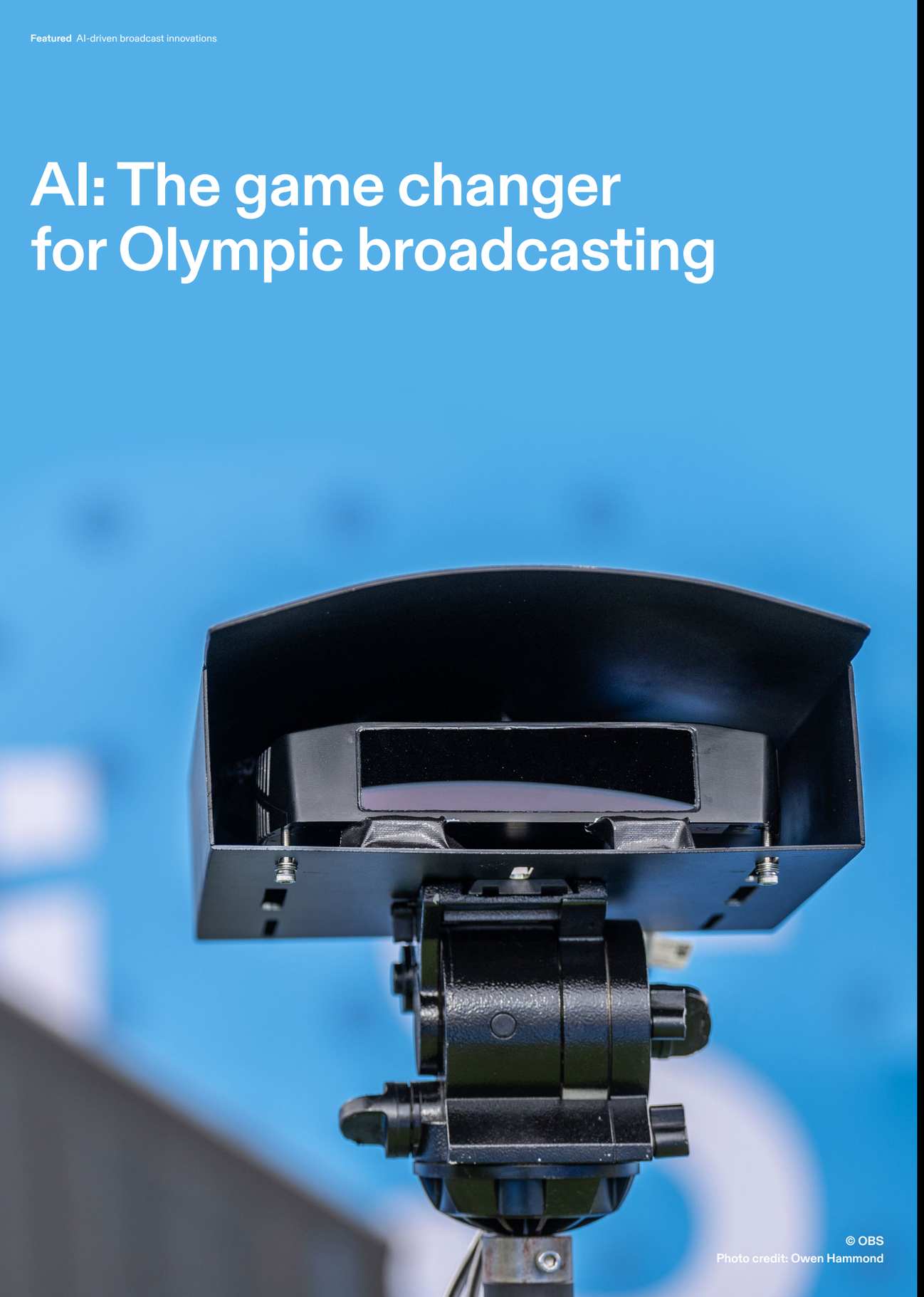
This innovation provided live data that offered Olympic viewers and commentators insights that were previously challenging to measure using traditional methods.

The AI-driven spin detection system which was used for table 1 in table tennis employed sophisticated algorithms in conjunction with high-speed cameras. These cameras captured detailed information about the ball's trajectory and speed. Through extensive training on large datasets of video footage, the AI algorithm could accurately identify and quantify various types of spin applied to the ball such as backspin and determine the ball's rotation speed in a fraction of a second, providing invaluable near real-time metrics for broadcasters and audiences alike.

"AI capabilities in ball spin detection are transforming table tennis by providing unprecedented insights through enhanced live data analysis, redefining how we understand and appreciate the game's dynamics in real-time."

Bobby Wang
OBS Host Broadcast Producer

AI: The game changer for Olympic broadcasting



© OBS
Photo credit: Owen Hammond

Insights from Yiannis Exarchos

"During the past year and a half, AI has become a buzzword across various sectors worldwide, and rightly so. AI is poised to impact every aspect of human activity. While some of the excitement around AI might seem like hype, it's important to remember that AI is not a new phenomenon; it has a history spanning 70 years of development. At OBS, we recognised early on that several AI-based technologies were mature enough to be integrated into broadcasting. About seven years ago, following the PyeongChang Games in 2018, we began exploring and understanding AI's capabilities. We even incorporated some AI elements in the production of the Tokyo and Beijing Olympics.

Now, the potential of AI is becoming increasingly evident. We are leveraging a variety of AI technologies to enhance both the experiential aspects and the operational efficiency of broadcasting. For instance, our 360-degree replays and virtual stroboscopic movements offer dynamic data presentations that enrich storytelling and elevate the excitement of the Olympic Games. Additionally, AI applications are streamlining our operations, such as the automated generation of highlights in collaboration with Intel.

AI-assisted editing and data reporting are also crucial for our digital operations, especially since our sister company, Olympic Channel Services (OCS), manages the Games' website. Throughout the Games, AI has been helping us maintain a continuous flow of insights. We have also been exploring AI's potential in logging and metadata management, which we anticipate will be ready for live adoption by the next Olympic Games. Every day, we uncover new opportunities for AI to enhance our processes, from planning and logistics to daily operations.

However, with these opportunities come significant challenges. We must be mindful of the ethical implications and the protection of intellectual property. At OBS and OCS, we have prioritised ensuring that our use of AI reflects reality accurately, avoids biases, and respects personal data. This commitment was underscored during a major gathering last year, where key presentations were made by our engineering, content creation, and legal teams to emphasise the importance of responsible AI use. The IOC's recent AI agenda highlights the necessity of using AI ethically to protect athletes and the integrity of sports. The development of large language models, which has driven much of the recent AI buzz, relies heavily on internet data. Given that the internet is rife with biases and divisive content, we must ensure that AI-generated outputs are accurate and rights-respecting.

Consistency is another critical issue. While AI tools can produce impressive results, they often lack consistency, which is vital for media production. We need AI tools to deliver reliable and uniform outputs, especially in professional settings. For the Olympic Games, we have worked with Intel to train AI models specifically for Olympic sports, ensuring the correct terminology and accurate reflection of reality. Despite these challenges, I am optimistic. With responsible use and proactive measures, we can harness AI's power to benefit sports without compromising integrity. The early establishment of rules and the proactive publication of the AI agenda give me confidence that we will successfully integrate AI into the world of sports, enhancing its value while maintaining ethical standards."

Yiannis Exarchos
OBS CEO

© OBS
Photo credit: Owen Hammond

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Photo credit: Owen Hammond

Insights from Sotiris Salamouris

"AI has the potential to deeply transform the creation and distribution of broadcast content, especially for live sports events. It enables the creation of new types of content and more efficient workflows, allowing for faster and more effective production.

Unlike generative AI, which creates content from scratch, our focus has been on enhancing the storytelling of live events by capturing and presenting existing content in the best possible way.

One of the key benefits of AI in live sports coverage is its ability to mix data and video content effectively. This process is inherently complex, but AI technology can handle it efficiently, ensuring that the final output is both informative and engaging. This capability is particularly important for large-scale events such as the Olympics, where the volume of content and the need for real-time processing are immense. By integrating various data points with live footage, AI can provide a more comprehensive and immersive viewing experience for the audience.

AI also plays a crucial role in scaling workflows, which is essential for managing the extensive production demands of the Olympic Games. Traditional workflows, while effective, can become strained under such immense pressure. AI streamlines these processes, enabling quicker turnaround times and reducing the workload on human professionals. This not only improves efficiency but also enhances the overall quality of the broadcast. For instance, AI can assist in automating routine tasks, freeing up human resources to focus on more creative and strategic aspects of production.

Another significant application of AI is in the automation of highlight creation. Highlights are a crucial aspect of sports broadcasting, offering viewers concise summaries of key moments. AI can automate this process, generating customised highlight packages tailored to the specific needs of different broadcasters. This capability is invaluable given the high volume and variety of content produced during the Games, ensuring that each broadcaster can deliver personalised and relevant highlights to their audiences. Moreover, AI can analyse vast amounts of footage quickly, identifying the most exciting and important moments, allowing producers to create compelling content effortlessly.

In addition to these applications, AI can also improve the accuracy and efficiency of live sports coverage through advanced analytics. By analysing player movements, game statistics, and other relevant data in real-time, AI can provide deeper insights and more detailed analysis. This not only enriches the commentary but also helps viewers understand the action better. AI-driven graphics and visualisations can make complex data more accessible and engaging, further enhancing the overall broadcast quality.

Overall, the integration of AI into live sports broadcasting represents a significant advancement in how content is created, managed, and delivered. By harnessing AI's capabilities, broadcasters can offer a more dynamic, efficient, and engaging viewing experience, meeting the high expectations of their audiences"

Sotiris Salamouris
OBS Chief Technology Officer

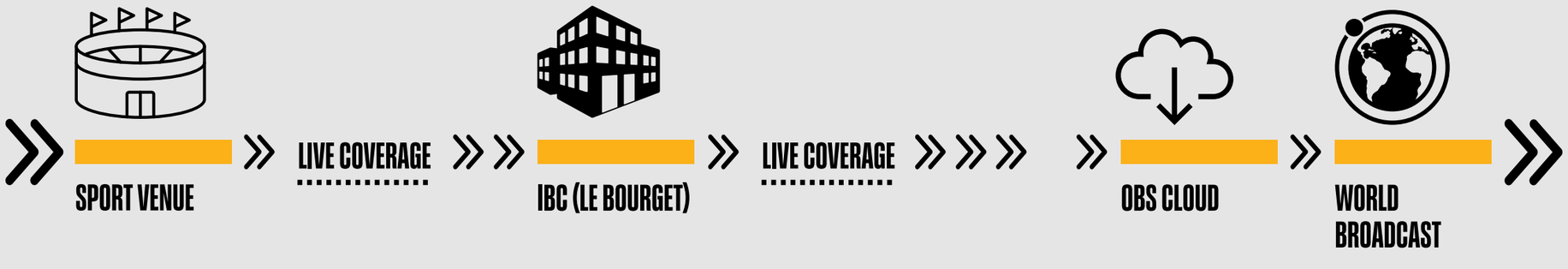
CLOUD INNOVATION MEETS SPORTS: OBS CLOUD 3.0

As Paris hosted the Olympic Games for the first time in a century, a quiet revolution unfolded behind the scenes.

The launch of OBS Cloud 3.0, in collaboration with Worldwide TOP sponsor Alibaba, transformed how we experienced the Games, combining cutting-edge AI-powered cloud technologies to streamline operations and deliver unprecedented access to Olympic content.

Photo credit: Owen Hammond

OBS and Alibaba Partnership



OBS Cloud 3.0 marks a major milestone in broadcasting technology, transforming workflows and delivery methods for the Olympic Games. Using cloud capabilities, OBS Cloud 3.0 significantly reduces the need for extensive equipment and resources, drastically cuts down setup times, and provides unmatched flexibility. For Paris 2024, this cloud-based infrastructure supported several key functions, ensuring a seamless and enhanced viewing experience for audiences worldwide.

Seamless content delivery

One of the standout features of OBS Cloud 3.0 is its ability to deliver a vast array of content to MRHs seamlessly through either Live Cloud or the Content+ portal. The introduction of OBS Live Cloud has revolutionised the delivery of live signals, making remote distribution the primary mode for broadcasters. For Paris 2024, two-thirds of booked remote services were cloud-based. More than 50 broadcast organisations received the feeds via the cloud, a significant increase from just one during the Tokyo 2020 Olympics. This shift underscores the growing reliance on cloud technology for live event broadcasting.

From live sessions and athlete interviews to behind-the-scenes footage and social media content, OBS Cloud 3.0 ensured that every piece of content produced by OBS was accessible in real-time on Content+. This seamless delivery method enabled MRHs to provide their audiences with comprehensive and engaging Olympic coverage.

Cutting-edge replay systems

In the world of sports broadcasting, the ability to analyse and appreciate key moments and athletes' performances is crucial. OBS Cloud 3.0 supported all the multi-camera replay systems, offering frame-freeze slow-motion replays of athletes' performances. These systems provided sports fans with detailed information for deeper analysis and understanding of athlete movements, serving as both educational tools for new viewers and invaluable resources for seasoned fans.

Access anywhere, anytime

OBS Cloud 3.0 also powered the OBS Olympic Video Player (OVP), enabling fans worldwide to access and enjoy Olympic content across various platforms. Whether it was on a mobile device, tablet, or desktop, OBS Cloud 3.0 ensured that Olympic content was always within reach, enhancing the global reach of the Games.

The benefits of cloud technology

The integration of cloud technology brought numerous benefits to the Olympic broadcasting environment:

- **Scalability and cost efficiency**:
  MRHs could easily scale their operations based on demand without the need for significant physical infrastructure investments. This flexibility allowed for more efficient and cost-effective broadcasting.

- **Sustainability**:
  By migrating to the cloud, MRHs reduced their dependence on on-site infrastructure, facilitating remote work and lowering the necessity for travel. This shift has not only cut down on carbon emissions but also promotes sustainable practices in broadcasting.

- **Improved collaboration**:
  Cloud-based workflows enabled teams to collaborate seamlessly, regardless of their location. Remote contributors could access, edit, and share content in real-time, enhancing efficiency and reducing time-to-air.

- **Flexibility and diverse streaming options**:
  By offering the option to choose between HD and UHD delivery, broadcasters gained greater flexibility in content presentation. OBS utilised Alibaba Cloud's availability zones across four regions to ensure seamless global transmission of live signals. Additionally, Alibaba's Cloud Enterprise Network (CEN) facilitated the efficient transfer of streams between these regions.

OBS Cloud 3.0 stands out as a game-changer in sports broadcasting. By harnessing the power of AI and cloud technology, OBS Cloud 3.0 promises to deliver a more efficient, flexible, and sustainable broadcasting experience. This innovation ensures that the excitement of the Games reaches every corner of the globe seamlessly.

Evolution of OBS live cloud distribution

This timeline showcases the progressive development and expansion of the OBS Live Cloud service, leading to a robust and versatile cloud-based distribution method for the Paris 2024 Olympics.

For the first time in Olympic broadcasting, live cloud distribution became the main delivery method outside the IBC.

Winter Youth Olympic Games Lausanne 2020
- **January 2020**: Proof of concept Participants: 2 MRHs
- Content delivery: Delivered one HD feed each via the Cloud for the first time
- Outcome: Proven successful, setting the stage for future cloud-based delivery

Olympic Games Tokyo 2020
- **July 2021**: Further testing of OBS Live Cloud's capabilities in delivering UHD signals
- Participants: 1 MRH
  Content delivery: One switchable feed in UHD for the first time
- Outcome: Successfully delivered and ready for full deployment

Olympic Winter Games Beijing 2022
- **February 2022**: Offered as a standard cloud service to MRHs for the first time
- Takers: 9 MRHs, representing 22 broadcast organisations
- Content delivery: 119 video feeds, delivered in HD or UHD; 16 audio feeds
- Outcome: Proved a successful delivery method

Olympic Games Paris 2024
- **July 2024**: Launch of OBS Cloud 3.0
- Takers: 26 MRHs, representing 53 broadcast organisations
- Content delivery: 384 video feeds, delivered in HD or UHD; 100 audio feeds; 31 mobile feeds
- Outcome: Established itself as the main delivery method outside the IBC for the first time

OBS Live Cloud offers broadcasters access to the same content as if they were at the International Broadcast Centre (IBC), allowing them to save time, resources, and money by relying on their established broadcast infrastructure in their home countries.

Here's how OBS Live Cloud helps to enhance MRHs' operations:

- **Cost and resource efficiency**: Eliminate the need for extensive on-site setups by using their existing infrastructure, reducing both setup time and expenses.
- **Backup feed**: OBS Live Cloud is a reliable backup feed to ensure continuous coverage.
- **Access to live commentary**: Seamlessly integrate live commentary into your broadcasts.
- **Multi-channel Distribution Service (MDS)**: Previously available only via satellite, MDS is now more reliable through the Cloud. Unlike satellite feeds, which are prone to service interruptions, the Live Cloud offers greater efficiency and lower failure rates.
- **Format flexibility**: OBS Cloud is agnostic to required formats, accommodating various audio configurations, including stereo, immersive audio, commentary tracks, and new formats such as UHD.
- **Scalability**: Easily scalable to meet the needs of MRHs, the Live Cloud distribution can include as many audio channels as required.

With the advantages of low latency and high resilience, cloud-based content transmission has outperformed traditional distribution methods in scalability, flexibility, and cost-effectiveness, all while enhancing stability and agility. Utilising OBS Live Cloud, MRHs now enjoy a more efficient, flexible, and reliable broadcasting solution tailored to their specific needs.

© OBS
Photo credit: Mario Martin Martin

"OBS Live Cloud enabled the delivery of content via the internet instead of satellite or dedicated telecommunication lines. We had four cloud regions: one in Europe, two in Asia, and one in America. Initially, the content packages were sent to the cloud region in Frankfurt through a dedicated telecom line. From there, they were distributed to other regions via Alibaba's Enterprise Network. Once the content reached these regions, MRHs could access the feed through the internet. They could choose from various services, including the full Video and Audio (VandA) package, a flexible version of it (up to five feeds), circuit extensions, or the delivery of their unilateral feeds to their headquarters."

Guillermo Jimenez
OBS Director of Broadcast Engineering

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Photo credit: Mario Martin Martin

Real-time flexibility:
How the VandA Flex offering transforms live coverage

Taking advantage of the scalability of OBS Live Cloud, OBS now offers MRHs a new option: switchable feed packages.

These packages include up to five VandA feeds that can be dynamically selected and switched at any time. This capability allows broadcasters to deliver a customised and seamless viewing experience by choosing the most relevant and engaging content for their audience in real-time. MRHs can adapt to changing situations and viewer preferences on the fly, managing everything remotely from a centralised control room. This significantly reduces the need for extensive on-site equipment and personnel.

Switchable feed packages provide the flexibility and reliability needed to deliver high-quality, engaging content. The ability to dynamically switch between multiple feeds enhances the viewer experience and allows broadcasters to respond to real-time developments efficiently.

This evolution ensures that OBS remains at the forefront of broadcasting technology, continuously enhancing the way live sports are covered and delivered.

"In the future, the flexibility of VandA Flex will expand even further. Broadcasters will be able to request up to 15 channels and schedule their own transmissions, automatically switching feeds to create personalised VandA packages. Opportunities will include playlist capabilities, synchronised switching, and the addition of unilateral commentary audio, providing even greater control and customisation for MRHs."

Isidoro Moreno
OBS Head of Engineering

Insights from Yiannis Exarchos

© IOC Getty Images
Photo credit: Ryan Pierse

The role of technology in Olympic storytelling and sustainable broadcasting

"In today's world, technology is undeniably crucial, and this is especially true for us at the Olympic Games. However, our focus isn't on showcasing technology itself, but on using it intelligently to tell more innovative and compelling stories about the world's greatest athletes. The heart of the Games lies with these athletes, who come from every corner of the globe. This unique gathering doesn't happen at any other event, and the competition between these athletes, embodying the Olympic ideals, is the story we aim to tell. We want to highlight how the best athletes in the world bring the world together.

Technology plays a vital role in this mission, helping us in numerous ways. It allows us to create more engaging and compelling narratives by using data to better explain events and reach places that were previously difficult to access. One of the key aspects of our coverage in Paris was our close access to the athletes. We stayed close to these heroes before, during, and after their competitions, following them behind the scenes while always respecting their need for personal space and the integrity of the sport.

One of our main goals, in collaboration with International Federations and the athletes, was to provide more access so that people could truly understand what it takes to be an athlete at this level. While delivering high-quality sports coverage, it was equally important for us to convey the immense effort, years of training, failures, disappointments, and injuries involved in becoming an Olympic athlete. Highlighting the humanity of these athletes remains core to our storytelling.

We need to ensure our coverage is tailored to all different platforms and ways of consuming media, which requires a lot of technology. In Paris, we produced more than 11,000 hours of content – more than 400 days of continuous production in just 19 days. This is because we create different versions of our coverage to suit various platforms. Doing this traditionally would be unsustainable, expensive, and energy-consuming. Technology helps us achieve this while reducing our broadcast footprint, using less space and energy.

Despite having more sports and competitions than in Tokyo, the International Broadcast Centre (IBC) in Paris was 15 per cent smaller than in Tokyo and 25 per cent smaller than in Rio. In Rio, we produced 6,000 hours of content, and we are now producing much more while consuming 50 per cent less energy. Technology is a huge enabler for building sustainable Games and broadcast operations. With the proliferation of digital media, new formats and ways of engaging with content emerge every year. Broadcasters feel the need to meet these demands without continuously increasing their budgets. This is where we, along with our technology partners and the OBS engineering team, find solutions to offer ready-made content that broadcasters can customise, reducing their production costs.

A major challenge in organising the world's largest sports event, the Olympic Games, is ensuring that the operation is sustainable. A significant achievement for the Paris 2024 Games was the Organising Committee's commitment to being carbon neutral. Throughout the planning of the Games, substantial efforts were made to deliver the event as sustainably as possible. The broadcast operation is inherently one of the largest components of the Games, with more than half the world's population tuning in through the efforts of hundreds of broadcasters globally. These broadcasters must narrate the stories of their athletes and transmit signals from an unprecedented number of sports venues and competitions back to their home country facilities. The question then arises: how can we achieve this more efficiently?

This is where technology offers a solution. The goal is not to reduce the scale of the Olympics or compromise on coverage quality. On the contrary, the aim is to deliver even better coverage and services to the broadcasters. I firmly believe in the power of technology. For OBS, the journey of achieving more with less began after the Beijing 2008 Games. The early days of digital technology made it clear that the demand for more production, coverage, and equipment would only increase. We quickly realised this was unsustainable and started implementing measures to make the broadcast of the Games more efficient.

One of the key advancements has been the aggressive adoption of cloud technologies. The Alibaba team has been instrumental in developing the OBS Cloud, which has become a central hub for broadcasters. Not only do they receive content from the cloud, but they also use it for editing, collaboration, and other production tasks. This reduces the need to bring extensive hardware to the Games, which is a significant source of unsustainable operations. The adoption of the cloud was massive in Paris, with all the content produced by OBS being delivered through the OBS Cloud. Broadcasters could receive high-quality signals back home without setting up extensive facilities, allowing them to work in a virtualised space.

We have also implemented new architectural approaches at the International Broadcast Centre (IBC). In the past, the IBC was traditionally a collection of TV stations, each with its own studios, production facilities, and offices. This setup was inefficient in terms of power and air conditioning requirements. By creating smaller technical hubs within the IBC, we now provide broadcasters with optimised conditions for their equipment, reducing the need for extensive facilities in their own spaces. This approach has significantly reduced the overall size of the broadcast centres and the power and air conditioning requirements, easing the burden on organising committees and host cities.

These are just a few examples of how technology helps make the Olympics more sustainable. Reducing the environmental impact and the need to transport heavy equipment and people around the world is a constant focus. We continue to explore new ideas and technologies to further improve sustainability. Every day brings new opportunities, and we are committed to breaking new ground in this area."

Yiannis Exarchos
OBS CEO

SOUNDS OF THE GAMES

Over the decades, the Olympic Games viewing experience has undergone remarkable transformations, with audio playing a pivotal role in this evolution. Notably, radio coverage made its debut at the Paris 1924 Olympics.

Fast forward a century, and the Olympic Games Paris 2024 featured an advanced immersive 5.1.4 audio setup – a multi-dimensional audio experience, where viewers were immersed in the action, hearing sports details like never before.

The audio mix aimed to fully engage viewers and listeners. Beyond creating an ambient field that mirrors the event's atmosphere, sound also conveys essential information. For instance, in tennis, the sound of the racquet hitting the ball, whether it is a powerful serve or a delicate drop shot, enables viewers to gauge the shot's intensity and spin by listening to the distinct 'thwack' or 'pop' of the ball off the strings.

Sound has always been at the heart of Olympic coverage right from the start, and its significance has only grown over time.

Whether it is the roar of the crowd during a decisive moment or the subtle rustle of a gymnast's landing, audio enriches people's connection to the Games.

"Our mission has been to transform audiences from mere spectators into active participants – feeling the adrenaline, sensing the tension, and celebrating victories alongside the athletes."

Nuno Duarte
OBS Audio Senior Manager

Photo credit: Owen Hammond

© OBS
Photo credit: Owen Hammond

From planning to execution

The planning process for Paris 2024 began during Tokyo 2020. Lessons learned from Tokyo 2020 were used to enhance the audio experience in Paris and push the boundaries further. “Conducting tests on the technology is essential. As a result, the process starts with an eye already on the Olympic Games Los Angeles 2028,” explained Duarte.

Typically, tasks such as equipment installation, infrastructure review, and cabling at the Olympic venues were completed a few months ahead of the Games. However, the process of setting up microphones in Paris extended from May until the start of the Games. With a total of 50 venues, the audio team faced the additional challenge of managing a significantly higher number of production setups, making the task complex – up to seven independent productions for athletics for instance.

In total, more than 3,600 microphones were used for the Paris 2024 coverage, using more than 30 distinct models. Each sport possesses its unique audio signature, and the microphones are meticulously chosen for individual sport events and specific moments. Approximately 300 engineers were involved in bringing the sounds of the Games to life.

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Photo credit: Owen Hammond

Unusual places to install microphones

Duarte explained that one of OBS’s initial goals was to ensure that microphones remained discreet and invisible on-screen during the broadcasts. OBS aims to keep microphones out of view in the picture. The microphones are strategically hidden, with their windshields blending seamlessly into the colour of the field of play or the venue layout.

To capture a wide range of sounds, microphones are positioned in close proximity to the athletes from various angles. When installing microphones, OBS audio engineers meticulously map out every angle of the field of play. From positioning microphones underwater in swimming pools and embedding them in volleyball nets to placing them in the back of the archery targets, OBS uses a diverse array of audio equipment to deliver immersive surround sound and 3D audio effects.

“In artistic swimming, capturing underwater sounds is essential,” explained Duarte. “Special hydrophones (underwater microphones) placed in the pool allow viewers to hear the swimmers’ movements, splashes, and coordinated routines, while listening to the music. These sounds beautifully complement the visual elegance of the sport.”

Another captivating example is diving. Thanks to microphones attached to the diving board, audiences can hear the diver’s initial breaths and footsteps as they ascend the 10-metre platform, focusing on their dive combination to come. But the auditory experience doesn’t end there. As the diver twists and flips into the swimming pool, underwater microphones capture the sounds beneath the water’s surface. This immersive content transports viewers, making them feel as though they are right there with the diver, submerged in the aquatic world.

“As the audience follows the visual spectacle, the emotional impact intensifies underwater,” described Duarte. “The crisp sound of the athlete entering the water heightens the viewing experience.

Although it is not the most remarkable sound due to water’s inherent properties, it creates an illusion, enveloping you as if you’re diving alongside the athlete.”

© OBS
Photo credit: Owen Hammond

For outdoor races such as race walks and triathlon, the audio production diverges from that of other sports events. Coordinating microphone placement and ensuring consistent audio quality in an open environment pose unique challenges. Since athletes cannot carry microphones during competition, alternative arrangements are made. For instance, microphones are strategically placed on motorbikes that closely follow the athletes as they raced. These motorbike-mounted microphones capture ambient sounds – footsteps, crowd cheers, and the athletes’ exertion – adding emotional depth to the broadcast.

Sound also plays a vital role in commentary as it provides commentators with additional layers of storytelling. Beyond visual cues, they can describe the atmosphere, crowd reactions, and subtle sounds such as a sprinter’s footsteps on the track. Some commentators are previous Olympians, and their ability to discern precise sounds within their expert sport enhances their analysis and provides unique perspectives on the game.

Getting mic’d up

While sport regulations prohibit athletes to wear microphones due to potential interference with their performance and associated injury risks, OBS employs creative solutions to enhance the audio experience for viewers.

For instance, judges, referees, and umpires are equipped with microphones in various sports. As a result, audiences can hear these officials providing instructions, adding depth and context to the sports action. In the case of rugby sevens, these enhancements promised to enrich the viewer experience, immersing them in the dynamics of high-stakes matches.

Hurdles on the track

Creating high-quality sound also comes with its hurdles. Irregular factors such as weather conditions must be carefully considered. Windy days pose a particular challenge for sound capture.

"In Paris, the presence of wind added complexity at outdoor venues during events like canoeing, kayaking and rowing," commented Duarte. "Wind creates unwanted noise that can interfere with audio capture. Microphones, especially those positioned near the water, pick up wind gusts, resulting in audio distortion. Achieving clear sound amidst windy conditions requires careful microphone placement and wind protection."

Additionally, advancements in sports equipment impact sound. Some traditional sounds are disappearing as new technologies evolve. These changes require listeners' ears to adapt. For instance, carbon fibre frames, aerodynamic helmets, and clipless pedals have revolutionised cycling. While these advancements have enhanced speed and efficiency, they have also altered the auditory experience. The hum of carbon wheels on asphalt differs from the older steel or aluminium counterparts. Fortunately, OBS is adept at addressing these tasks, providing viewers with the most immersive experience possible. Whether it's the swish of a tennis racket, the splash in a swimming pool, or the impact of a golf club, OBS adapts to provide an authentic audio experience ensuring that viewers can still connect with the essence of each sport through their ears, even as certain sounds fade away.

With the immersive audio setup at each Olympic venue, OBS empowers broadcasters to create immersive audio experiences, enabling the audience to vividly recreate the atmosphere of a live venue. The Olympic audio experience has evolved beyond standard 5.1 surround sound to a 5.1.4 configuration, which includes four hanging ceiling microphones to capture overhead dimensions. As viewers engage, they can imagine themselves in a bustling arena, surrounded by ambient sounds such as the cheers of fellow spectators, the reverberating PA system, and even the sounds of the field of play.

"Our dedicated efforts to advance immersive audio technology over the past few years have been instrumental. For Paris 2024, OBS provided broadcasters with the tools to seamlessly integrate this technology across multiple distribution formats."

Sotiris Salamouris
OBS Chief Technical Officer

For Paris 2024, one of OBS's key initiatives was to make microphones as discreet as possible by blending them with the colours of the fields of play. This effort ensured that the mics are nearly invisible, maintaining the aesthetic integrity of the venues while still capturing high-quality audio for broadcasts.

© OBS
Photo credit: Owen Hammond

HOW THE WORLD WATCHED THE GAMES

Recognised as the most-watched sporting event globally, the Olympic Games uniquely unite the world, celebrating not only athletic achievements but also the compelling human stories that inspire people everywhere.

The synergy between OBS and the Media Rights-Holders (MRHs) brings the Games to life, delivering vivid images, sounds, and data that engage audiences across all platforms. Supported by cutting-edge technologies and an enriched content offering, the Olympic Games Paris 2024 delivered the most immersive Olympic experience yet.

The world feed

COMPETITION VENUE

OBS produces unbiased live radio and television coverage of every sport from every venue

OBS

Video feeds

Audio tracks

OMEGA

Data and timing

BROADCAST COMPOUND

The world feed is created in the production unit before being delivered to the Technical Operations Centre (TOC) which serves as the transmission hub for all signals at each venue

OBS production unit

Technical Operations Centre

Video feeds

Audio signals

Production enhancements (multi-camera replays, overlay graphics etc.)

Graphics

WORLD FEED

INTERNATIONAL BROADCAST CENTRE (IBC)

The world feed generated from the venues is transmitted to the Contribution, Distribution and Unilateral (CDU) master control room at the IBC and distributed to all MRHs, either in UHD or HD

Content delivery methods

Direct delivery to the MRH space at the IBC

Through live streaming solutions

International telecommunication connectivity through Point-of-Presence (PoP)

Through satellite via the Multi-channel Distribution Service (MDS)

Direct delivery through OBS Cloud

Production Quality Control (PQC)

Performs quality control of the world feed and is in constant communication with the OBS venue production teams

As host broadcaster, OBS is responsible for delivering the pictures, sounds and data of the Olympic Games to billions of viewers worldwide. OBS produces and transmits unbiased live radio and television coverage of every sport from every venue, known as the International Signal or the World Feed.

Photo credit: Mario Martin Martin

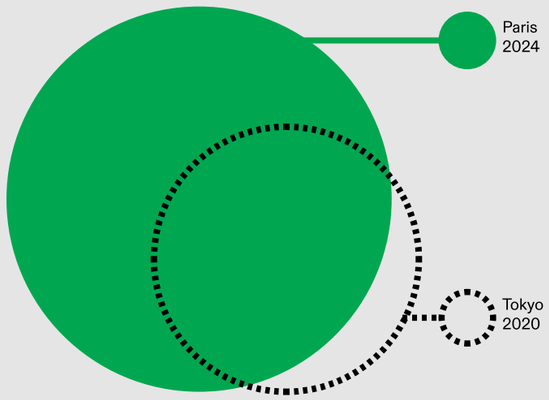
Increasing content, deepening engagement

More content than ever before was produced for the Olympic Games Paris 2024: the equivalent of one year and three months of continuous content of a 24/7 channel

© OBS
Photo credit: Mario Martin Martin

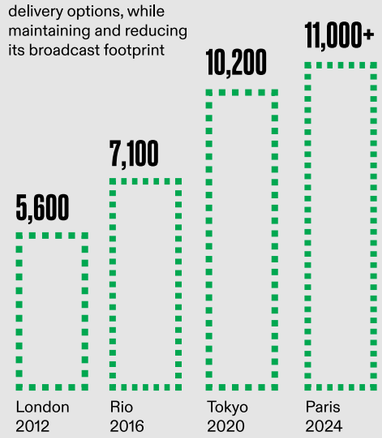
11,000+

Hours of content produced by OBS

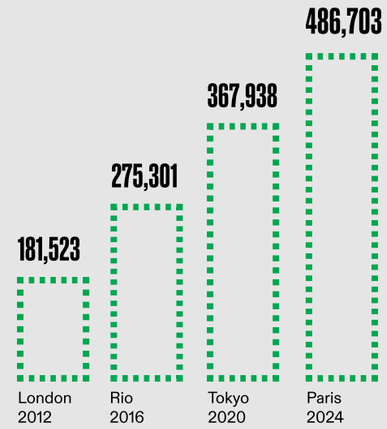


HOURS PRODUCED BY OBS

OBS increased the amount of content and delivery options, while maintaining and reducing its broadcast footprint



TOTAL COVERAGE OUTPUT



Customised Olympic broadcasts

In the ever-evolving media landscape, OBS provided a bespoke content production and delivery service tailored to Media Rights-Holders (MRHs) of all sizes. Offering more than 11,000 hours of content and a myriad of customisation options, OBS ensured a personalised and captivating viewing experience.

The OBS à la carte approach empowered MRHs to customise broadcasts for their unique audiences, seamlessly meeting multi-platform demands and the increasing need for diverse, swiftly delivered content. This blend of flexibility and editorial freedom helped MRHs deliver their coverage according to their specific needs.

Turnkey solutions for every broadcaster

OBS offered several turnkey solutions designed to be both comprehensive and cost-effective. The Olympic Channel News (OCN) provided a variety of Olympic highlights, features, and interviews that can be broadcast as a 24/7 channel. This service allowed broadcasters to add their own logos and commercials, ensuring a personalised touch.

Another notable solution was the Multi-channel Distribution Service (MDS), which enabled MRHs to air nearly the entire Olympics from their home countries. MDS offered four fully programmed, ready-to-air sports channels and 12 distribution channels with English commentary, in addition to the OCN.

This service, distributed globally by satellite, allowed MRHs to reduce costs by sending fewer resources and personnel to the Games, often eliminating the need for a local facility in the host city.

For broadcasters interested in digital and mobile solutions, OBS provided the Olympic Video Player (OVP), a ready-to-deploy, fully personalised digital application. The OVP offered live streaming and on-demand video of every competition session, tailored for both web and mobile experiences. It included an embeddable player and various widgets for websites, as well as a standalone app for smartphones and tablets.

This app featured live and recorded Olympic content, start lists, results, and customisable branding options, allowing MRHs to integrate their logos and colours and add their own short-form content and advertisements.

One of the strengths of OBS's offerings for Paris 2024 was their modular nature, allowing MRHs to select only the services they need.

For instance, broadcasters could choose to continuously stream the OCN as a 24/7 channel, pick specific programmes or segments featuring national athletes, or incorporate individual digital widgets such as the medal ranking or live streaming plug-in.

Olympic Games in the digital age

Over the past decade, changing viewing habits have led OBS to focus on digital content production and delivery. Today, audiences watch the Olympics on laptops, tablets, and smartphones just as much as on traditional television. They also use social media, websites, and apps to catch up on highlights, replays, and live streams. MRHs could take advantage of the digital content services offered by OBS to further customise their coverage. OBS developed a range of services for the digital arena including Content+, a cloud-based solution offering short-form content from across the Games, alongside all live sessions and other content produced by OBS. More than 19,000 pieces were made available during Paris 2024. This content was easily shareable across all platforms and was generated by dedicated crews covering behind-the-scenes action, competition venues, Olympic Village, and more. OBS also produced approximately 700 quick, smartphone-captured video clips in vertical format from athlete areas, available to MRHs' social media teams almost instantly. Additionally, OBS produced fast-turnaround clips from all sports, offering sports highlights clips for timely social media updates.

Various levels of customisation

Additionally, OBS enabled MRHs to enhance their broadcasts by offering them a variety of services – from having their own cameras to providing commentary to interview positions, MRHs could capture exclusive content, tailored to the interests of their viewers.

MRHs could deploy their own cameras at key locations throughout the Olympic venues, which allowed them to capture unique angles and exclusive footage that resonated with their audience. This included positioning cameras in areas of high national interest, such as where athletes from their country were competing, or in locations that provided compelling, behind-the-scenes perspectives. MRHs could also choose to include custom commentary that reflected the cultural and linguistic preferences of their audience.

This service allowed broadcasters to hire commentators who could deliver insightful and engaging narration, tailored to the nuances of the viewer's native language and cultural context. Whether it was expert analysis or enthusiastic play-by-play, the personalised commentary added a layer of relatability and excitement to the broadcast. In the mixed zone, MRHs could capture post-event reactions and interviews with athletes.

These dedicated areas were designed to provide MRHs with immediate access to athletes. This direct interaction was crucial for providing viewers with personal and emotional insights from their favourite athletes.

> **“In essence, OBS provided MRHs with the tools and flexibility needed to create compelling, customised Olympic content that captivated and engaged audiences worldwide. Through this collaboration, the spirit and excitement of the Olympic Games were delivered in a way that feels personal and relevant to each viewer, no matter where they were.”**
>
> **Karen Mullins**
> **OBS Director of Production Management**

Paris 2024 reached

record audiences

across the world.

Paris 2024 was available to fans

on more screens,

through more streaming platforms, websites, apps, and social media channels compared to any previous edition of the Olympic Games.

Olympic Media Rights-Holders broadcast more hours than ever before, with record numbers on both TV and digital platforms.

OBS

OBS produced more than 11,000 hours of content (approx. 15 per cent more than Tokyo 2020), including

3,575 hours

of live sports, Ceremony and Champions Park coverage

More that half of the world's population followed the Olympic Games Paris 2024.

From exclusive camera positions to personalised live commentary and dedicated interview positions, OBS enabled Olympic Media Rights-Holders (MRHs) to deliver a highly customised and engaging Olympic experience to their home audiences.

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Photo credit: Owen Hammond

SMALL CLIPS, BIG STORIES

With a bold strategy at Paris 2024, OBS turned fleeting Olympic moments into impactful digital stories. By embracing a social media-driven approach, OBS teams connected fans worldwide with the magic of the Games, one shareable clip at a time.

"It's more than just snapshots; it's about capturing the essence of the Games – the emotions, connections, and stories that unite and inspire us."

Karen Mullins
OBS Director of Production

"As the host broadcaster, OBS has always been committed to delivering high-quality live content to Media Rights Holders (MRHs)," explains Karen Mullins, OBS Director of Production Management. "But the demands of MRHs have evolved. Today, they want more than just live feeds – they seek feature stories, interviews, colour pieces, and behind-the-scenes glimpses. To meet these expectations, our extensive team at the International Broadcast Centre (IBC) worked around the clock, crafting everything from music montages and promo pieces to highlights and in-depth features. It was a collective effort to bring these stories to life and enrich the Olympic experience for audiences worldwide.

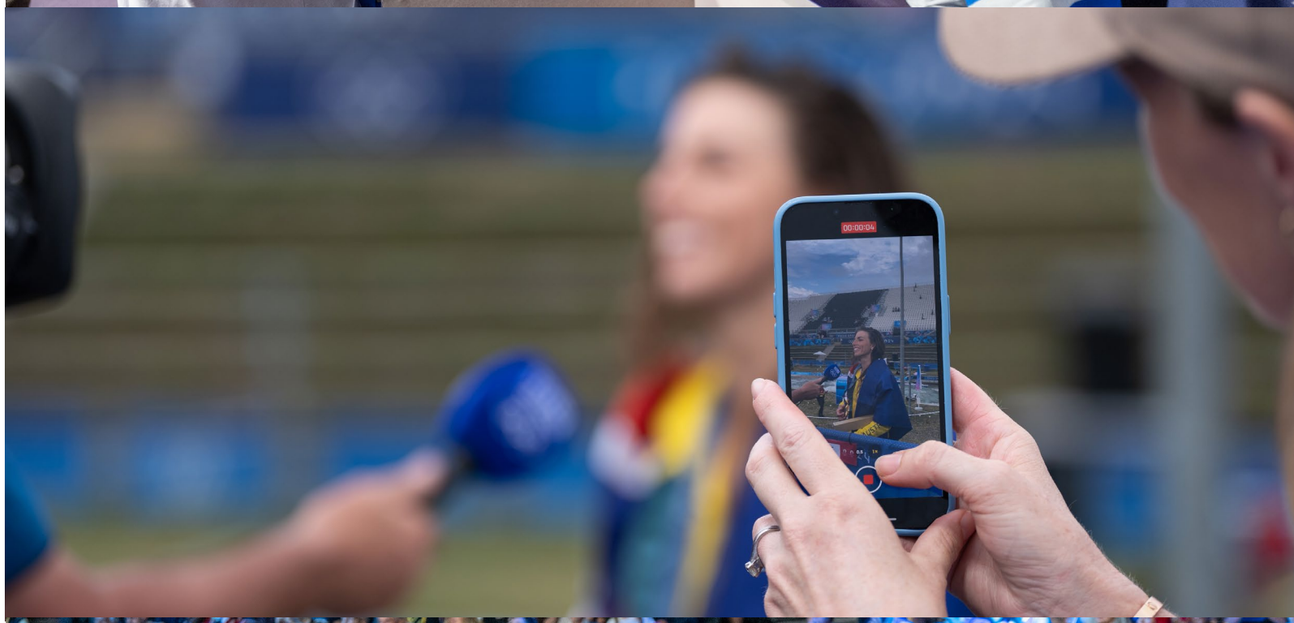
Navigating the digital landscape presents unique challenges for OBS. Unlike traditional broadcasters, OBS doesn't deliver content directly to end users, so its content productions must cater to a broad range of MRHs with varying needs. "Social and digital media require highly targeted content tailored to specific audiences or nationalities," said Mullins. "Striking this balance while maintaining universal appeal is no small feat."

For the first time at Paris 2024, OBS ramped up its social media efforts, producing more platform-specific content, including more than 700 vertical video formats. Delivering these unique perspectives required a specialised approach. "You can't rely on traditional crews to capture this kind of content. We need specialists with unparalleled access to field-of-play areas, ready to seize those fleeting, magical moments that MRHs value."

Social media creators captured moments often overlooked in main coverage – the heartfelt emotions backstage, quirky incidents, or humorous exchanges in the stands. These moments, though small, had a significant impact on social platforms, resonating with viewers and enhancing their connection to the Games. Once captured, these short clips were immediately uploaded to our content delivery platform, Content+, making them accessible to MRHs across the globe. "It's about finding that one clip or story that makes a lasting impression," said Mullins.

In an innovative move, OBS also integrated digital producers directly into venue production teams inside the production galleries in certain sports. These producers monitored all camera feeds, identifying clips that would work perfectly for social media – succinct, impactful moments that told compelling stories. This content was then uploaded to Content+ for MRHs to incorporate into their digital strategies almost instantly.

Through these efforts, OBS ensured that the Games were celebrated not only for their athletic achievements but also for the countless smaller moments that showcased the spirit and humanity of the event. These moments, both big and small, contributed to a truly memorable and inspiring Games.



© OBS
Photo credit: Owen Hammond

WHERE THE MAGIC HAPPENED: INSIDE THE IBC

Behind the Olympic broadcast coverage was the International Broadcast Centre (IBC), the central hub of broadcast operations for both OBS and the Media Rights-Holders (MRHs).

From this state-of-the-art facility, the magic of the Games was transmitted to screens worldwide, transforming the IBC into the largest broadcast hub in the world during the duration of the Games.

Beyond technology, the IBC stands as a testament to the incredible coordination and effort required to bring the Olympic Games to life to audiences worldwide.

The numbers are staggering. Over the course of the 19-day event, OBS produced and distributed a record 11,000 hours of content to the MRHs. This monumental task is achieved through meticulous planning, a robust technical infrastructure, and innovative solutions.

For Paris 2024, 62 broadcast organisations, in addition to the teams from Olympics.com and the Olympic Channel, established their operations or part of them at the IBC. Operating 24/7, these broadcasters worked diligently to produce and deliver their Olympic programming to their audiences across a multitude of platforms.

OBS's approach to meeting broadcasters' needs

As the landscape of broadcasting evolves, the demand for more elaborate infrastructure and additional services grows exponentially. Ensuring seamless Olympic coverage for billions of viewers worldwide is a monumental task.

For three to four years, OBS collaborated closely with broadcasters to meticulously plan every detail to ensure that every aspect of their setup is addressed well in advance. OBS assisted them in designing their IBC spaces and preparing their technical setups to receive and transmit signals efficiently. The IBC offered a wide range of broadcast spaces, from small units with a few desks and computers to expansive broadcast spaces featuring multiple control rooms, TV studios, editing suites, commentary booths, and news production areas, accommodating a wide range of operational needs. In recent Games, remote production has gained prominence, with a significant portion of broadcasting now managed directly from the MRHs' home premises.

“As the host broadcaster, our role extends beyond mere facilitation. It is about deeply understanding and anticipating the unique needs of every MRH. This early engagement allows us to delve into the intricacies of their broadcast requirements, whether they choose to operate from the host city or manage their operations remotely.

Our approach is rooted in innovation and flexibility. We proactively explore and implement cutting-edge solutions tailored to optimise their operations, ensuring seamless and efficient broadcasting experiences. This dedication to customisation and continuous improvement is not just a service; it's our commitment to ensuring that every broadcaster can deliver the highest quality coverage to their global audience during the Olympic Games,” explained Tomoyo Sato of OBS Broadcaster Services.

During the Games, OBS remained steadfast in its support of broadcasters. From the dedicated Broadcaster Services Counter, the OBS team helped with troubleshooting technical issues, facilitating smooth operations, and ensuring that MRHs could deliver uninterrupted coverage to their audiences. The role of OBS encompasses infrastructure provision, customisation, early planning, continuous support, and innovation – all aimed at ensuring that broadcasters can deliver high-quality Olympic coverage to audiences around the world.

“Ensuring that MRHs’ plans come to fruition in an optimal manner is our shared objective,” Sato emphasises. This collaborative goal drives every aspect of our work at OBS Broadcaster Services. From the initial planning stages through to the execution during the Games, we are dedicated to supporting MRHs in delivering their operations seamlessly. By anticipating challenges and proactively finding solutions, we aim to exceed expectations and empower MRHs to deliver exceptional Olympic coverage to audiences worldwide.

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Photo credit: Mario Martin Martin

“Through constant communication and a deep understanding of each MRH’s requirements, we foster a partnership built on trust and innovation. This ensures that together, we achieve not only operational success but also create memorable broadcasting experiences that capture the spirit and excitement of the Olympic Games.”

The result was a flawlessly coordinated broadcasting effort that brought the action from the Games to viewers around the globe, showcasing the dedication and expertise of OBS.

Pioneering efficiency

Located in northern Paris, the Paris Le Bourget Exhibition Centre, which regularly hosts major events such as the International Paris Air Show and COP21, was converted into a modern broadcast hub for the Paris 2024 Games.

Spanning less than 40,000 square metres, the Paris 2024 IBC boasted the smallest footprint for a summer Games edition in recent history, underscoring OBS's commitment to optimising space and operational efficiencies where possible. This transformation from a multi-purpose exhibition space into a state-of-the-art broadcast hub was achieved in record time, with the facility handed over by Paris 2024 in January 2024 and fully operational within a remarkably swift six months.

“At OBS, every IBC project becomes a canvas for redefining the boundaries of broadcasting infrastructure,” explained Eugenia Fuenmayor, OBS Director of Construction. “For Paris 2024, our approach focused on leveraging existing facilities to minimise costs and broadcast footprint while maximising operational efficiency. However, it's crucial to recognise that what works seamlessly in one facility may not translate to another. Additionally, we must adapt to the varying operational preferences of MRHs, which dictate the scale of technical, production, and storage facilities required.

The OBS Construction team plays a pivotal role in navigating these complexities. Beyond blueprints, we grasp the unique context of each IBC, ensuring a holistic approach that not only meets but often exceeds broadcasters' operational needs. This commitment demonstrates our dedication to sustainability and innovation, shaping the future of Olympic broadcasting.”

Central to this innovative approach was OBS's pioneering use of prefabricated modular solutions, which proved instrumental in the rapid fit-out of the Paris 2024 IBC. This ingenious construction method was first introduced by OBS during the Olympic Winter Games PyeongChang 2018, marking a significant milestone in Olympic broadcasting infrastructure. The modular panels deployed in Paris were previously employed at the Olympic Winter Games Beijing 2022, embodying OBS's ongoing commitment to sustainability and operational efficiency. Remarkably, these panels are slated for reuse at the next Olympic Winter Games in Milan in 2026, boasting an impressive 85 per cent reuse rate. This highlights OBS's proactive efforts to minimise environmental impact while optimising logistical operations across successive Olympics. Upon dismantling, the modules have been shipped directly to Italy, where they will await the next IBC transformation.

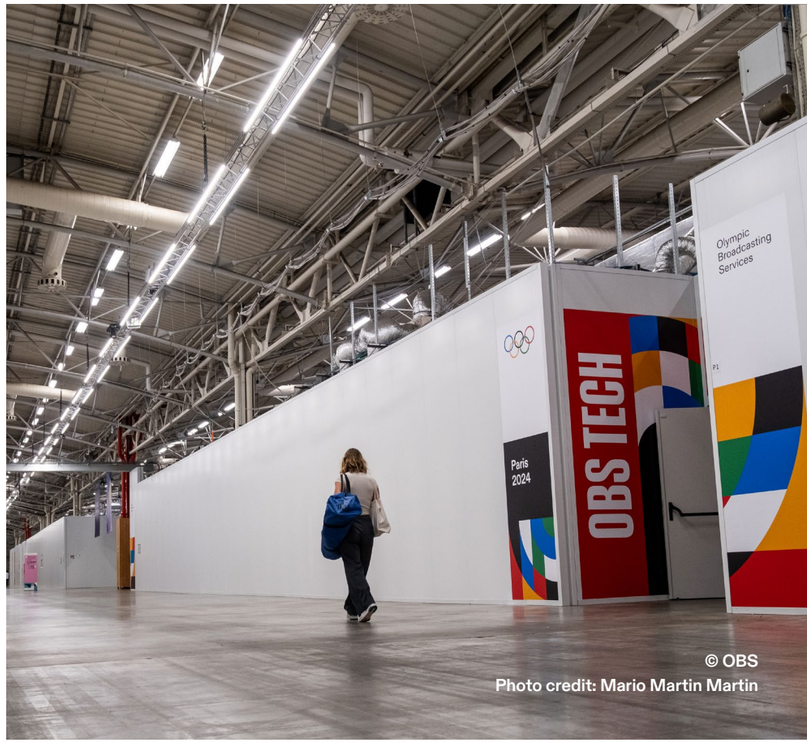

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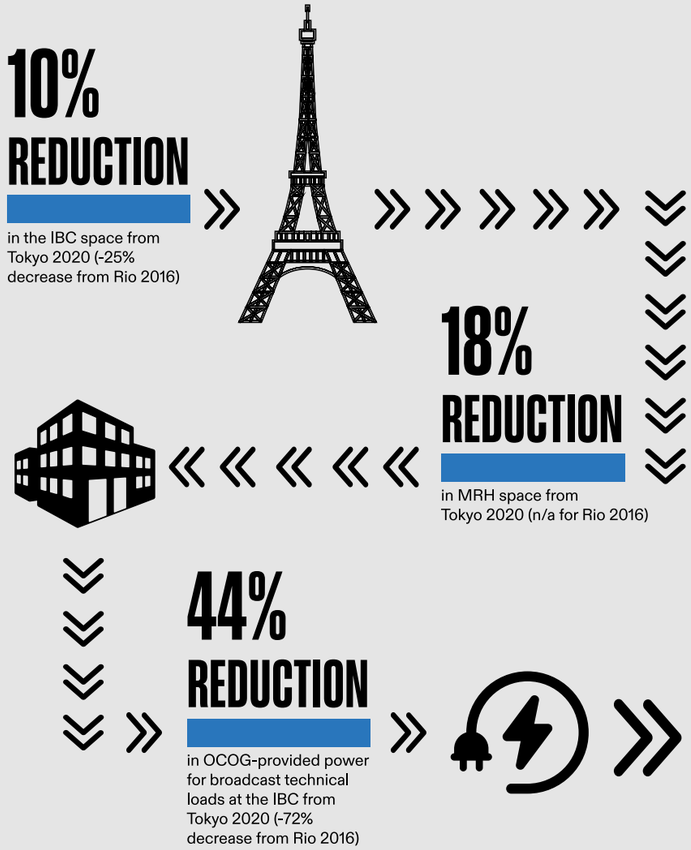
Photo credit: Mario Martin Martin

“Our prefabricated system not only accelerates construction timelines but also reduces waste significantly,” Fuenmayor continued. “By standardising construction processes and using modular components, we streamline the fit-out of each IBC, allowing for quicker deployment and setup. This approach not only benefits the environment by minimising construction waste but also ensures that each Games edition benefits from streamlined operations and enhanced cost-effectiveness. Moreover, the prefabricated system promotes consistency and reliability in construction quality across different venues, which is crucial for meeting the high standards expected in Olympic broadcasting. As we look ahead to future Games, we are committed to refining and expanding our prefabricated solutions to further improve sustainability and operational efficiency.”

Beyond physical infrastructure, OBS has strategically reimagined the layout of the IBC to optimise operational workflows and enhance energy efficiency.

Broadcast technical equipment generates high heat loads and requires substantial power to maintain optimal performance, necessitating operation within closely-monitored, temperature-controlled environments. Previously, each MRH would individually set up equipment rooms.



OBS has addressed this challenge by consolidating MRHs' equipment into Centralised Technical Areas (CTAs) strategically positioned throughout the IBC. These CTAs feature precision cooling equipment and achieve a significant reduction in overall power consumption compared to installing widespread high-capacity cooling systems for dispersed individual MRH equipment rooms.

By aligning with OBS's broader sustainability goals, this innovative approach not only supports the complex demands of broadcasting but also sets a new benchmark for environmental responsibility within Olympic venues.

In addition to rethinking the design and layout of the IBC's physical infrastructure, OBS has led a transformative evolution in Olympic broadcasting over the past five years by embracing cloud technologies, moving its broadcast workflows into the cloud and enabling MRHs to conduct remote operations seamlessly. The shift to cloud-based broadcasting supports sustainability goals by reducing the need for extensive physical infrastructure.

By minimising the reliance on traditional hardware and on-site facilities, OBS could significantly lower the environmental impact of broadcasting operations. By encouraging remote production and integrating advanced cloud solutions, OBS not only met the complex broadcasting demands of Paris 2024 but also paved the way for more sustainable and adaptable broadcasting practices.

Cloud-based solutions offered unparalleled flexibility, scalability, and global accessibility. This game-changing approach allowed broadcasters to adapt swiftly to varying demands, ensuring that resources could be scaled up or down as needed without the constraints of physical infrastructure. With cloud technology, broadcasters could access and distribute content from anywhere in the world, breaking free from the traditional limitations of on-site operations. Leveraging cloud delivery, OBS empowered MRHs with robust tools to fully adopt remote production. This strategic integration has enabled broadcasters such as TV Globo to manage their entire workflow remotely, a proven success since Tokyo 2020.

“We distributed content to only one broadcaster back in 2021; for Paris 2024, OBS Live Cloud was the primary method for live signal distribution outside the IBC, delivering content in both HD and UHD to nearly 40 broadcast organisations” explained Guillermo Jimenez, OBS Director of Broadcast Engineering.

“As we look ahead for future Games, our commitment remains steadfast: to push the boundaries of technology while maintaining the highest standards in Olympic coverage,” concluded Jimenez. “We are at the forefront of a transformative shift in the broadcasting industry, where broadcasters are increasingly embracing cloud production technology. The cloud's versatility and adaptability empower us to achieve more with a smaller footprint, paving the way for a more efficient and sustainable approach to broadcasting.”

What was achieved at the IBC in Paris exemplifies OBS's commitment to leading the way in innovative broadcasting, setting new benchmarks for efficiency and sustainability. By reimagining the IBC's physical and technological infrastructure, OBS empowered broadcasters to access content seamlessly from anywhere in the world while optimising their operations. This forward-thinking approach ensures that MRHs can meet the evolving demands of today's audiences while significantly reducing their broadcast footprint.

Looking ahead, the advancements introduced at Paris 2024 will serve as a blueprint for future Games, demonstrating how cutting-edge technology and sustainability goals can coexist. OBS's commitment to innovation ensures that each Olympic edition will deliver captivating, seamless, and high-quality coverage to audiences worldwide.

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Photo credit: Owen Hammond

A small village

One month prior to the Opening Ceremony, the IBC transformed into a bustling, 24/7 hub, reminiscent of a small village. Thousands of broadcast personnel from around the globe converged there, working non-stop to bring the Games to audiences worldwide.

Life inside the IBC was thoughtfully designed to make broadcasters' lives easier during these intense weeks of work. Imagine a vibrant village where everything you need is within reach.

For Paris 2024, the IBC included a general store for everyday essentials, an official merchandising store for those looking to take home a piece of the Games, a bank, and even a post office. Broadcasters could drop off their clothes at the dry-cleaning service and relax in the well-being centre.

Health was prioritised with an on-site medical centre providing comprehensive care. A variety of dining options were available to ensure that no one went hungry.

Restaurants, coffee corners, and a bar provided much-needed breaks and social spots for the hard-working teams. Convenience is key, and a transport mall adjacent to the IBC ensured easy access to and from Olympic venues and accommodations.

This small village setup not only supported the demanding work schedules but also fostered a sense of community among the broadcasters, making their experience at the Games both productive and enjoyable.

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Photo credit: Mario Martin Martin

Insights from Sotiris Salamouris

Broadcasting the Olympics: The essential role of the IBC

"The International Broadcast Centre (IBC) is a crucial and unique facility, serving as the hub for all broadcast operations during major events. While the IBC is not exclusive to the Olympic Games, the one established for the Olympics is among the largest. This essential infrastructure has an evolving history and purpose. In the past, the IBC was indispensable due to technological limitations.

There was no way to deliver all the content created at the venues to Media Rights-Holders (MRHs) without a central facility specifically built for that purpose. It was a technical necessity, as there was no other method to hand over live content to broadcasters.

The IBC also meets various broadcast expectations and requirements. For instance, it provides a space where broadcasters can set up their studio facilities. The IBC houses some of the largest television studios in the broadcast industry, albeit temporarily for the Games. By consolidating these studios in one location, numerous efficiencies and synergies are achieved with other Olympic-related functions.

The IBC ensures centralised delivery of high-quality and resilient environmental conditions, including secure power and cooling capacity.

Over time, the need for broadcasters to be physically present at the IBC has become optional, thanks to advancements in technology that allow access to content from anywhere in the world.

This trend is evident in the decreasing space requirements for the IBC from one Olympic Games to the next.

While the IBC has always been a large facility, the space requirements peaked during the Rio 2016 Games. Since then, the demand for space has gradually decreased, which is a positive development as it reduces unnecessary infrastructure in the host city. Although we are pleased with this trend, it remains uncertain whether there will come a time when an IBC is no longer needed.

Certain requirements, such as the need for multiple studios, are still challenging to fulfill without a physical presence. Broadcasters require studios to conduct interviews and produce shows with athletes who are present at the Games.

While there are technological possibilities for virtual or remote studios, physical workflows still offer significant advantages. The trend towards remote operations is growing, but predicting its evolution over the next decade is difficult.

We will continue to support broadcasters and remote operations, adapting to changing needs and technologies."

Sotiris Salamouris
OBS Chief Technology Officer

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Photo credit: Mario Martin Martin

© OBS
Photo credit: Mario Martin Martin

Insights from Lavinia Marafante

“As the Director of Planning and Broadcast Operations at OBS, my role encompasses two distinct yet interconnected phases: the planning phase and the operational phase. During the planning phase, our team focuses on gathering all broadcast-related requirements and meticulously communicating them to the Organising Committee. Once on-site, we transition to operations, ensuring that every detail of our plans is implemented correctly at competition venues and the International Broadcast Centre (IBC).

One of the most significant challenges we faced for Paris 2024 was the compressed timeline for installations. Many venues, such as the temporary beach volleyball arena under the Eiffel Tower, were located in public spaces. Access to these areas was only possible close to the Games, requiring us to work within extremely tight schedules. This left little room for error, so we had to monitor progress closely and make rapid decisions to address any potential issues.

Our team may be small – just seven people during the planning phase – but we act as the command centre for broadcast operations. Once we reach the operational phase, we rely on a network of Broadcast Venue Managers (BVMs) at each competition venue. These BVMs are our boots on the ground, responsible for resolving access issues, ensuring all elements are ready for OBS and MRHs to start broadcasting, and verifying that all Organising Committee commitments are met. They also act as the face of OBS, liaising with Media Rights-Holders (MRHs) to ensure their needs are met during setup, testing, and the Games themselves, working side by side with their Paris 2024 counterparts.

To illustrate our work, consider a common issue: access. It’s not uncommon for MRHs or team members to be mistakenly denied entry to a venue despite having proper credentials. When this happens, our BVMs step in to coordinate with venue security, ensuring everyone can complete their installations and preparations without delay.

Beyond access, the BVM troubleshoots a variety of issues on site, supporting not only the MRHs but also leading the OBS team to smooth and successful operations.

The scope of our operation is enormous. Planning for Paris 2024 began as early as 2018, with initial surveys and requirements gathering. Then, during the Games, our Broadcast Operations Centre (BOC) served as the central hub for managing daily reports, addressing issues, and tracking progress. This room was equipped with tools to monitor everything from live venue installations to the health and safety requirements for on-site personnel. Each day, our team reviewed an issue tracking system to address outstanding challenges. For example, delays in venue deliverables or discrepancies in specifications often required immediate action. Our goal was to resolve these matters quickly so that they didn’t impact the live broadcasts.

The complexity of Paris 2024 extended beyond logistics. With many events hosted in iconic and highly trafficked locations across the city, coordinating with local authorities added another layer of challenge. However, it was also what made these Games so special. The vibrancy of the city, the energy of the fans, and the stunning backdrops made for truly unforgettable broadcasts.

The success of the Paris 2024 broadcast operation meant that all of our planning and hard work paid off, allowing the Games to unfold seamlessly for broadcasters and audiences alike. Seeing our team’s dedication translate into a flawless broadcast experience is what makes this work so rewarding.”

Lavinia Marafante
Head of Broadcast Operations and Planning

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Photo credit: Mario Martin Martin

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Photo credit: Owen Hammond

Contribution, Distribution and Unilateral centre

© OBS
Photo credit: Mario Martin Martin

CONTRIBUTION

All signals produced by OBS from each of the venues are received at the Contribution centre

			MDS	Extra feeds	CATV
15	15	12	20	12	1
15	15	29	13	12	12
		MCF	Beauty cameras	5G camera feeds	MPC, Helicopters and other speciality feeds

DISTRIBUTION

From the Distribution centre, all signals will be monitored, processed and distributed to the broadcasters

DX1-82

12	12	16	8K
12	14	16	16
			MDS output

UNILATERAL

All signals produced by the MRHs at the venues will be checked and equalised, not synchronised, at the Unilateral centre and then passed on to the broadcasters

16	16	16
16	16	16

Note: the numbers correspond to the picture-in-picture mosaic on each monitor

Nestled in the OBS Tech area, the Contribution, Distribution and Unilateral (CDU) centre served as the technical hub of Olympic broadcasting. Here, all video and audio signals – both those produced by OBS (multilateral) and the MRHs (unilateral) – converged under the vigilant supervision of CDU supervisors.

Imagine a wall of monitors showcasing a mosaic of more than 360 picture-in-picture live broadcasts of the Games – each screen telling a part of the story unfolding across various venues. On the busiest day of the Games, up to 60 concurrent feeds arrived from the competition venues. In this bustling control room, experts managed the flow of signals, ensuring the flawless delivery of every moment of the action. Behind glass windows, broadcast personnel and visitors could catch a glimpse as they passed by.

The process began at each of the 42 competition venues. Feeds were sent via the Technical Operations Centre (TOC), located in the nearby broadcast compound, back to the IBC through a fully redundant fibre optic network, known as the Broadcast Contribution Network – the backbone of Olympic broadcasting, guaranteeing that every signal reaches its destination without a hitch.

The contribution team received, monitored, and meticulously controlled every incoming video feed, processing and distributing them to the MRHs via the distribution system. Signals were switched to pre-defined distribution channels based on the daily transmission schedule, delivering them to the MRHs in their selected format (HD or UHD), as part of their booked distribution packages. For Paris 2024, more than 4,800 feeds were delivered both locally at the IBC and externally, either in HD or UHD, according to MRH bookings.

Alongside this workflow was a team monitoring the feeds coming in from each MRH's unilateral positions in the venues, such as stand-up, mixed zone and com cam positions, as well as from their remote studios. These feeds were also monitored before being delivered to the MRHs, allowing them to tailor their coverage of the Games to their audiences. In essence technology and expertise worked seamlessly to deliver the unforgettable moments of the Games to viewers around the world, making the CDU the heartbeat of Olympic broadcasting.

The work of OBS host broadcast producers

OBS Chief Content Officer Mark Wallace led a dedicated team of five OBS Host Broadcast (HB) Producers responsible for overseeing the production of Olympic coverage. These producers played an integral role in ensuring the seamless and high-quality and high-quality broadcasts, managing a range of tasks from careful planning to supervising live events.

Before the Games, HB producers engaged in extensive planning to prepare for the unique needs of each Olympic sport. Within OBS, they worked closely with venue technical and planning teams, as well as with the venue production teams responsible for executing the coverage designed by OBS. Regular communication with the Organising Committee and the International Federations ensured that all aspects of the broadcast were aligned, resulting in cohesive and well-executed coverage.

During the Games, HB producers monitored live broadcasts from the Production Quality Control (PQC) room at the IBC. From here, they oversaw the video, audio, and graphics produced at competition venues to maintain the high standards and values of Olympic broadcasting. Their role included ensuring the content adhered to OBS's storytelling principles, such as neutrality and balanced gender representation, while making sure the coverage was comprehensive and engaging for a global audience.

As the countdown to a live event approached, the atmosphere in the PQC room became sharply focused. Producers coordinated with venue teams through a network of intercoms, ready to address any unexpected challenges in real-time. Adjustments, such as updating graphics or adapting to unfolding events, were executed with precision, reflecting the teamwork and preparation that underpin live Olympic broadcasts.

In live broadcasting, where every moment happens in real time, there is little margin for error. Producers and directors must remain alert, making quick decisions to ensure a smooth viewing experience. This dynamic environment requires constant collaboration and quick thinking from everyone involved, from camera operators to technicians, as they work together to bring the Olympic Games to audiences around the world.

A team of five HB producers and nine quality control producers, who collectively have experience in more than 100 Games, oversaw 32 venue production teams from the PQC in the IBC.

Helen Borobokas

Nationality: Australia

13 OLYMPIC GAMES

Christopher Jensen

Nationality: USA

15 OLYMPIC GAMES

Haiwei 'Bobby' Wang

Nationality: China

10 OLYMPIC GAMES

Marcin Grzybowski

Nationality: Poland

13 OLYMPIC GAMES

Trevor Pilling

Nationality: Canada

13 OLYMPIC GAMES

From venue to viewer: The technical hub of Olympic commentary

When the world tunes in to watch the Olympic Games, they're not merely witnessing feats of athleticism – they're also transported into a narrative woven by the unsung heroes behind the microphone: TV and radio commentators. These voices play a crucial role in vividly bringing the Games to life for millions of viewers worldwide.

Imagine this: You are on the edge of your seat, eyes locked on the screen. The commentator's voice is trembling with excitement, mirroring your own heartbeat. Do you feel that rush? We all do. In real time, the commentators spin a spellbinding tale. They don't just describe, they paint vivid strokes of action, drama and triumph. From soaring goals to breathtaking saves, missed chances to heart-stopping near-misses – every moment is part of the magic. It is more than play-by-play; it is storytelling that transcends sport, turning mere events into epic sagas of human spirit and determination.

But it is not just about the action on the field of play; it is the insights that Olympic commentators bring. They analyse the powerful throws and expertly executed techniques of a judo contest with surgical precision, decode tactical maneuvers in a relay race, and unveil the poignant backstory of an underdog's journey to victory. Their words paint detailed portraits of athletes' paths, transforming quick bursts of athleticism into moments of cinematic grandeur. And at the heart of it all lies the Commentary Switching Centre (CSC). Why? Because it is the nerve centre which enables commentators' voices to echo across living rooms and sports bars alike, uniting the world in the shared experience of Olympic magic.

The CSC serves as the primary hub for commentary circuits, coordination circuits and the International Sound for Radio. The majority of these circuits originate from commentary positions scattered across the competition venues – approximately 850 commentary positions for Paris 2024.

Overall, more than 3,500 bi-directional audio circuits between the venues and the IBC were handled by the CSC personnel during the Games, in addition to the bookable off-tube facilities in the IBC catering to both OBS and MRH operations. At the CSC, personnel meticulously monitored, switched, and routed commentary circuits to meet the operational needs of broadcasters worldwide. They ensured seamless delivery of live commentary, whether destined for MRH premises in the IBC, transmitted over the internet or Cloud to broadcasters' headquarters globally.

The CSC isn't just about technical logistics; it's the lifeline that connects passionate commentators with eager audiences, enriching the Olympic viewing experience with every word spoken. It's where the art of commentary meets the science of broadcast technology, ensuring that every Olympic moment resonates with clarity, passion, and precision across the globe.

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Photo credit: Mario Martin Martin

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Photo credit: Owen Hammond

Preserving the glory: Unveiling the archive services

In this sense, the Archive Services are not just about preserving content; they are about ensuring the legacy of the Olympic Games. By maintaining a comprehensive, accessible, and meticulously organised archive, OBS ensures that the stories of the athletes, the spirit of the competition, and the cultural significance of the Games are preserved and can be shared with the world for years to come.

How artificial intelligence will transform archive services: looking ahead

AI technology is drastically transforming Olympic archiving process, making it more efficient, accurate, and accessible. With AI, content tagging can be automated, search capabilities can be enhanced, and personalised experiences can be offered. This advancement will empower MRHs to swiftly retrieve specific content from the vast volume generated during the Games, improving both access and overall archival efficiency.

ANNAMARIA GENERO

"The Olympic Games are a celebration of human achievement and cultural exchange. Our mission at Archive Services is to meticulously record and preserve these extraordinary moments so they can inspire future generations.

© OBS
Photo credit: Mario Martin Martin

© OBS
Photo credit: Mario Martin Martin

The Olympic Games are more than just a series of sporting events; they are a treasure trove of historic moments, stories of triumph and perseverance, and cultural exchanges that resonate with audiences worldwide. Ensuring that these moments were easily accessible to the MRHs' production teams but also preserved for future generations was a monumental task entrusted to the Archive Services. This department played an instrumental role in carefully cataloguing and archiving the vast array of content generated during the Olympic Games.

The primary mission of the Archive Services was to ensure that every significant moment of the Olympic Games was meticulously recorded and logged.

This included all feeds generated by OBS throughout the Games – everything from the opening and closing ceremonies to every competition, athlete mixed zone interviews, press conferences, behind-the-scenes footage, and much more. Each piece of content was meticulously tagged with detailed metadata, making it easily searchable and retrievable.

This comprehensive approach ensured that the archive was not just a collection of raw footage but a rich, detailed repository of Olympic history.

The Archive Services team, consisting of 290 staff from 36 different nationalities, facilitated access to archived content for OBS post-production editors, producers and all MRHs. The OBS Media Server was accessible remotely via the Content+ platform, enabling broadcasters to access footage from anywhere in the world and transfer it to their local production units as needed for editorial purposes. Live video logging metadata was also globally distributed as part of a service called the OBS Broadcast Data Feed (BDF).

Ensuring legacy and accessibility

The recorded content was sent to the IOC Olympic Foundation for Culture and Heritage in Lausanne, Switzerland. It will function as the Official Archive for the Olympic Games, serving both historical purposes and supporting future content requests from various stakeholders.

"One of the most labour-intensive aspects of archiving is the manual tagging of content with metadata," explained Sotiris Salamouris, OBS Chief Technical Officer. "AI can significantly streamline this process.

Advanced AI algorithms can automatically analyse video footage, recognise faces, identify specific events, and generate detailed metadata tags.

This automation not only boosts efficiency but also enhances the accuracy and depth of metadata, making it far easier to search and retrieve specific content."

By cataloguing every significant event with detailed metadata and making this content accessible to production teams worldwide, we ensure that the legacy of the Olympics is not only preserved but also enriched. It's about honouring the past, capturing the present, and safeguarding the future of the Olympic story."

OBS Archive Services Senior Manager

VENUE OPTIMISATIONS

Despite the Olympic Games' reputation for being large-scale and complex, behind the scenes, efforts to streamline operations are transforming how they're produced. At the Olympic Games Paris 2024, OBS set a new benchmark in sustainable and efficient broadcast operations through advanced technologies and innovative practices.

A standout achievement of Paris 2024 was the continuation of a philosophy OBS has embraced over the last decade: **doing more with less**.

While the volume of content produced for Paris was more than double that of the Olympic Games Rio 2016, the operational footprint was significantly reduced. This included a smaller footprint for the IBC operation, optimised space at venues, reduced energy consumption, and a high utilisation rate of recovered cables and equipment from previous Games.

This leap in efficiency was made possible by the aggressive adoption of new technologies. OBS transitioned most of its systems to IP-based solutions, reducing the need for physical equipment at venues. Virtualisation and cloud-based technologies now play a central role in the production workflow. These advancements not only cut down on the logistical demands of transporting and maintaining equipment but also enable broadcasters to handle many tasks remotely, further lightening the footprint in host cities.

Cloud technology, in particular, has matured significantly since OBS first adopted it in 2018. What began as a bold experiment has become a core component of OBS operations. The use of cloud services at Paris 2024 was more than double that of Rio 2016. By integrating these technologies, OBS is enhancing the flexibility and quality of broadcasts while aligning with global sustainability goals.

Paris 2024 stands as a testament to how innovation can deliver both operational excellence and environmental responsibility, setting the stage for future Games to follow suit.

LESS COMPOUND FOOTPRINT

-5%

vs Tokyo 2020

-14%

vs Rio 2016

LESS CABINS IN COMPOUNDS

-14%

vs Tokyo 2020

LESS VENUE BROADCAST POWER REQUIREMENTS

-29%

vs Tokyo 2020

-46%

vs Rio 2016

SUSTAINABLE CABLING FOR PARIS 2024 HOST BROADCAST OPERATION

Total cabling deployed

2,340KM

including approx.

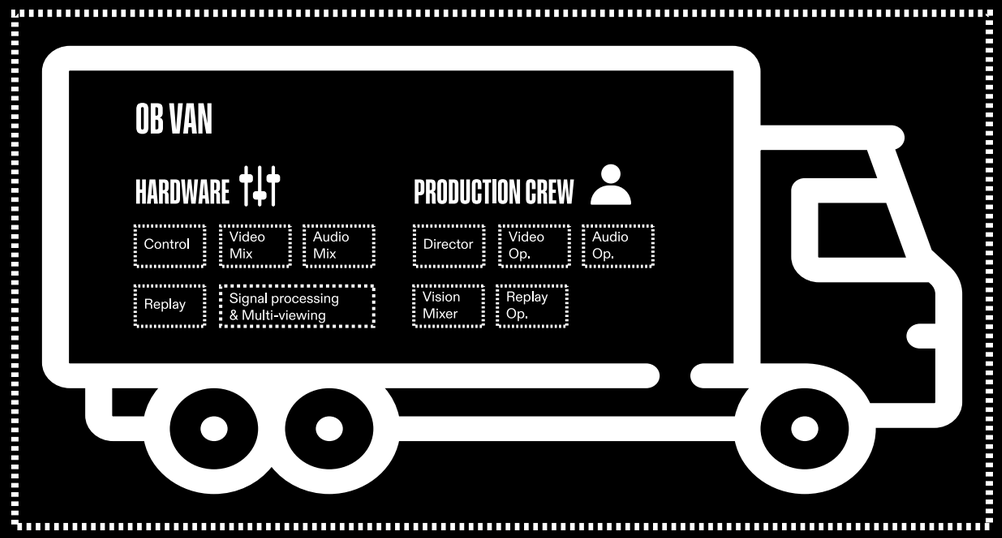
900KM

cabling recovered from Tokyo 2020 and Beijing 2022

48%

of the cabling was recovered and will be used again for the Winter Olympic Games Milano Cortina 2026. The remaining cabling from Paris 2024 was recycled.

REINVENTING THE OB VAN

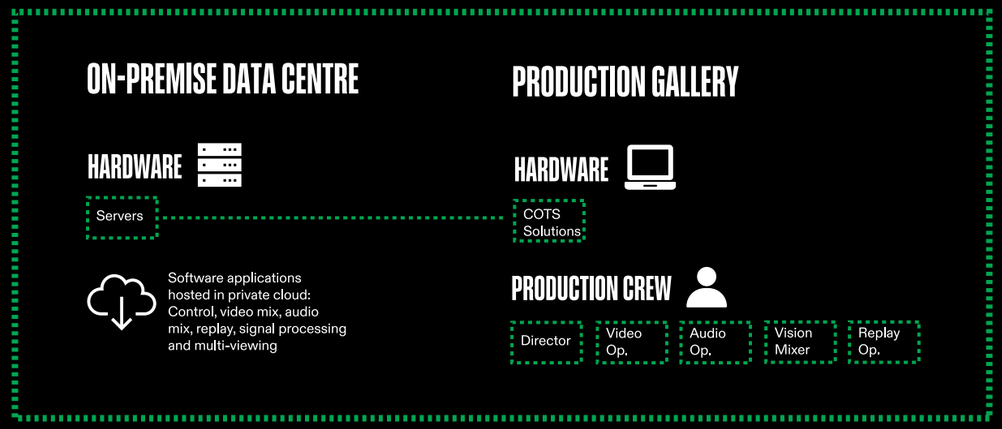


TRADITIONAL PRODUCTION SETUP

FIELD OF PLAY

BROADCAST COMPOUND

VIRTUALISED PRODUCTION SETUP



OBS and Intel's modular, virtualised production revolution

As the host broadcaster for the Olympic Games, OBS encounters a distinct set of challenges when planning for the Outside Broadcast (OB) vans or fly-away systems essential for live event coverage. Key factors include the required footprint in the broadcast compound at the venues, the internal space needed to accommodate both the equipment and the production crew and ensuring that all hardware is configured and up-to-date to deliver top-notch production quality.

Logistics are equally crucial, encompassing the sourcing of production units, transporting them globally, shipping specialised equipment, staffing technical and production teams, and setting up at the venue.

To address these challenges, OBS has partnered with Worldwide TOP Partner Intel to explore more flexible and modular production environments. This innovative strategy aims to streamline logistical and operational complexity, increase flexibility, and reduce the overall broadcast footprint at the venues. Through this collaboration, OBS and Intel have pioneered a new era in broadcast technology, creating scalable and adaptable solutions that meet the demands of Olympic broadcasting while establishing new benchmarks for efficiency and sustainability in the industry.

The move towards virtualised OB Vans is set to continue as technology advances and broadcasters seek more efficient, flexible, and sustainable production methods. With ongoing developments in cloud computing, Artificial Intelligence (AI), and real-time communication, virtualised OB vans will likely become a standard in sports broadcasting, offering unprecedented capabilities and transforming how live events are covered.

© OBS
Photo credit: Mario Martin Martin

What is a virtualised OB van?

A traditional OB van is a mobile production unit equipped with all the necessary technology to produce live broadcasts, including cameras, audio equipment, switchers, and control panels. A virtualised OB van, on the other hand, decentralises much of this equipment, utilising a cloud-hosted, software-based architecture that mirrors the function of a traditional OB van and Commercial Off-The-Shelf (COTS) solutions to handle many production tasks. This transition offers several advantages:

- **Reduced footprint:** Virtualised production setups are designed to significantly reduce the technical, logistical, physical, financial, and ecological footprint. Less equipment is needed on-site, leading to smaller, more mobile units and less space and resources required at the venues.
- **Scalability**: Cloud resources can be scaled up or down based on the requirements of the event, making it cost-effective.
- **Remote production capabilities**: Production teams can operate from any location, offering greater flexibility and resilience.

Key features

- **Cloud-based infrastructure**: Core production tasks such as video switching, audio mixing, and replay generation are performed using cloud servers. This setup reduces the dependency on on-site hardware.
- **Remote operations**: Directors, producers, and technicians can collaborate and control the broadcast remotely, allowing for more efficient use of personnel and resources.
- **Resilience & redundancy**: Cloud solutions provide built-in redundancy and failover capabilities, ensuring uninterrupted broadcast even in case of hardware failures.

Benefits

- **Cost efficiency**: By reducing the need for extensive on-site equipment and personnel, a virtualised OB van lowers production costs.
- **Flexibility**: It can quickly be adapted to different types of events and scales
- **Improved quality**: Advanced cloud technology allows for higher-quality production capabilities
- **Sustainability**: Smaller physical footprints (and potentially reduced travel for production crews in a fully remote setup) contribute to a lower environmental impact.
- **Future-proofing:** As broadcasting technology continues to evolve, a virtualised OB van can easily integrate new innovations without significant overhauls of physical infrastructure.

Challenges

- **Bandwidth and Latency**: Reliable high-speed cloud connections are crucial for the seamless operation of a virtualised OB van. Latency can be a significant issue for live broadcasts.
- **Training and Adoption**: Production teams need to be trained to adapt to new workflows and technologies associated with a virtualised OB van.
- **Cybersecurity**: Ensuring the security of cloud-based operations is vital to protect against cyber threats and unauthorised access.

Timeline

JANUARY 2021
START OF DEVELOPMENT

Following extensive research, OBS initiated the development of an innovative solution. This effort marked the start of a journey towards creating a proof of concept to showcase the feasibility and potential impact of virtualised OB vans in broadcast production.

FEBRUARY 2022
PROOF-OF-CONCEPT (POC) AT BEIJING 2022

The virtualised OB van was deployed at the curling venue, in parallel to the main production set-up. The focus on this trial was on functionality and interoperability, as well as ingesting and processing the 1080p50 SDR video feeds coming from 18 cameras used for the coverage of one of the sheets at curling, alongside the audio feeds. An on-premise data centre replicated the cloud-based architecture platform. In addition, four additional native IP cameras, dedicated to the virtualised OB van project, were connected to the network stack, eliminating the need for camera control units. The performance of the virtualised OB van exceeded expectations.

MARCH 2022-
DECEMBER 2023
DEVELOPMENT PERIOD

To ensure virtualised OB vans met the stringent production standards of OBS, multiple POCs, test events, and close collaboration with partners and vendors were conducted. The collaboration with the OBS Host Broadcast Producers played a key role in ensuring that the technology was prepared for live-on-air use, demonstrating its practicality and robustness in real-world scenarios. This rigorous process included the production teams verifying quality standards, guaranteeing that the virtualised OB vans deliver exceptional performance and reliability. Significant strides have been made in the realm of virtualised broadcast solutions in the last two years, advancing closer to matching the capabilities of traditional broadcast equipment.

Despite not achieving full parity with traditional systems yet, the rapid increase in processing power of COTS hardware indicated that this gap will soon be closed. The development period has seen a remarkable improvement in the processing power of COTS hardware. This progress is pivotal as it drives the capabilities of virtualised solutions, bringing them closer to the performance levels of traditional broadcast equipment. Through careful analysis and persistent development efforts, OBS has successfully met most of the productional and operational requirements necessary for multilateral coverage. This achievement underscored the readiness of OBS to deploy the technology on a grand scale, showcasing its reliability and efficiency.

JANUARY 2024
LIVE PRODUCTION DEPLOYMENT - STAGE 1 AT GANGWON 2024

The virtualised OB van was initially deployed at the Curling venue in week 1 and subsequently re-installed at the Ice Hockey venue in week 2, adhering strictly to the technical setup and specifications planned for Paris 2024. This application demonstrated the solution's viability and efficiency as an alternative to traditional broadcast equipment in a live coverage environment and helped finetune the preparations for Paris 2024.

JULY 2024
LIVE PRODUCTION DEPLOYMENT - STAGE 2 AT PARIS 2024

OBS deployed virtualised OB vans at three competition venues to produce 14 multilateral feeds across five disciplines. These next-generation production units were stationed at Roland Garros Stadium (for all tennis side courts), Champ-de-Mars Arena (for judo and wrestling), and Chateauroux Shooting Centre (for shooting).

© OBS
Photo credit: Owen Hammond

© OBS
Photo credit: Owen Hammond

An in-depth look at Olympic virtualised OB vans

The deployment of virtualised OB vans mark a significant advancement in broadcasting technology. These state-of-the-art production units are set to revolutionise how Olympic live events are broadcast. Here is a detailed insight into the technology and processes driving this innovation.

Setting up a virtualised OB van

The virtualised OB vans are powered by a sophisticated VOB software stack, divided into five key pillars. Each pillar is populated by top-tier manufacturers offering virtualised solutions, selected after rigorous research and development with our partners. This collaborative approach ensures that only the best-in-class technologies are utilised, paving the way for cutting-edge broadcasting capabilities. Deploying a virtualised OB van mirrors the setup of a flypack system. The on-premises data centre comprises racks of COTS equipment (servers, network gear), to which camera sources are connected. Adjacent to this are the production galleries, designed to resemble traditional production units closely. This design requirement ensures minimal visible and operational impact on production teams.

Setup times are progressively decreasing as integration of various software components becomes more streamlined through sophisticated IT-based mechanisms. This trend promises even faster and more efficient setups in the future. OBS employs a straightforward multilateral approach with minimal video layers in the vision switcher, typically utilising one GFX signal and avoiding complex picture-in-picture configurations. This simplicity allows for optimal use of available resources, enhancing efficiency and performance.

Ensuring low latency and high reliability

One of the primary challenges in cloud-based broadcasting is managing latency, particularly for on-site multilateral programme delivery, which must be accessible with minimal delay for commentator positions, big screens, and other local uses. To address this, OBS has opted for private on-premises data centres, avoiding the need to route signals back and forth to the cloud. This setup ensures that latency remains within the 100 to 150 milliseconds range. Theoretical setups suggest that these private data centres could be centralised at the International Broadcast Centre (IBC) or a nearby commercial data centre, provided the physical distance does not exceed certain limits (considering the speed of light at approximately five milliseconds per 1,000 kilometres).

Additionally, latency issues are compounded by the encoding and decoding of IP streams. OBS mitigates this by using uncompressed signals (SMPTE 2110-20 and 2110-30) or, in rare cases, ultra-low-latency processing types like JPEG-XS following SMPTE 2110-22. While uncompressed signals are large and demanding on software, this approach minimises latency significantly. Future developments may focus on enhancing video-switching capabilities at the network edge.

“By virtualising the OB van, we transcend the physical limitations of traditional broadcast setups. This innovation not only enables unprecedented flexibility and sustainability but also unlocks immense creative potential in live sports production. With the ability to integrate infinitely more systems without the constraints of physical space, we are poised to revolutionise how the Olympic Games are covered, making the process more efficient and environmentally friendly.”

Yiannis Exarchos
OBS CEO

JOHN PEARCE

“Our strategic goals for the virtualised OB van project were clear: to push the limits of technology, enhance operational efficiency, and reduce our environmental footprint. This project embodies our dedication to setting new industry benchmarks.”

OBS Director of Venue Technical Operations

A visionary leap

With a clear vision for the future and strategic goals aligned with technological advancements, the transition to virtualised systems represents a significant leap forward for OBS and Olympic broadcasting.

The journey of virtualised OB vans has been remarkable, starting from smaller-scale deployments and culminating in a full-fledged integration at three key venues for Paris 2024. With an eye on the future, OBS is gearing up for the Olympic Winter Games Milano Cortina 2026, where an escalated deployment of these systems is anticipated. A central core in Cortina will be instrumental, simultaneously catering to numerous venues, thus demonstrating the versatility and operational efficiency of these innovative systems.

OBS envisions a large-scale deployment of virtualised OB systems for the Olympic Games LA2028. This endeavour will be optimised through colocation and centralisation of core hardware. The rapid advancements in COTS technologies, along with enhanced processing capabilities, are set to unlock new possibilities, facilitating a more effective and far-reaching broadcast experience.

Virtualised OB vans contribute significantly to sustainability and cost-efficiency.

By minimising the physical footprint and optimising resource allocation, these systems align with the broader industry's sustainability objectives, positioning virtualised OB vans as a forward-thinking solution.

Technological evolution in the next decade

The next five to 10 years will witness a seismic shift in broadcasting technology. As cloud capacity expands, more broadcast processes will migrate to the public cloud. The current one-to-one relationship between software and hardware, dictated by high processing demands and vendor specifics, will evolve. It will pave the way for applications from different manufacturers to operate on a single piece of hardware, offering greater flexibility in software allocation and hardware usage. Manufacturers' operating panels, which are currently tied to specific software, will become agnostic to the underlying software. Protocols will align, allowing users to choose their preferred operator panels, whether button-based or touch-screen, independent of the connected software.

The horizon of virtualised OB vans is bright, with numerous enhancements in the pipeline. OBS is working closely with vendors to automate and streamline software deployment across available hardware. In the near future, operators will be able to swiftly configure control rooms by selecting various parameters such as the number of replay channels, switcher inputs, audio Digital Signal Processing (DSP), and other settings, with applications and configurations deployed automatically in seconds. Customisation and template deployment are also areas of focus. OBS is exploring the use of planning documents and AI to automate resource allocation, reducing the need to recreate setups for each event.

Future enhancements in cloud technology, such as increased processing power, higher cloud throughput, and a greater abstraction of underlying hardware, will further enhance the capabilities of virtualised OB vans. These advancements promise to deliver more sophisticated, efficient, and flexible broadcasting solutions, setting new standards for the industry.

In conclusion

The success of OBS is anchored in its foresight and ability to stay at the forefront of technological advancements. By consistently pushing the boundaries of what is technically feasible and fostering robust partnerships with leading vendors and manufacturers, OBS ensures that it remains at the cutting edge of the industry. As broadcasting moves towards hyper-convergence, OBS is committed to exploring and integrating the latest innovations.

The Olympic virtualised OB van project is set to redefine the future of sports broadcasting. With clear strategic goals, a commitment to technological innovation, and a focus on sustainability and cost-efficiency, OBS is paving the way for a new era in broadcasting.

As OBS gears up for the upcoming Olympics in Milano Cortina and LA, the potential for virtualised OB vans is vast. This groundbreaking approach promises a future where flexibility, efficiency, and state-of-the-art technology converge to deliver unparalleled live coverage.

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Photo credit: Mario Martin Martin

GEERT HEIRBAUT

"Through close collaboration with Intel and industry leaders, we are developing virtualised OB vans that combine the best of technology and broadcasting expertise. Our goal is to create versatile, high-performing solutions for future Olympics, enhancing our ability to deliver high-quality broadcasts while minimising our environmental footprint."

OBS Advanced Technologies Manager

WITNESS EVERY DETAIL WITH 8K

Photo credit: Owen Hammond

8K RESOLUTION boasts an astounding **7,680 X 4,320** pixels, which is **FOUR TIMES** the number of pixels in 4K / UHD and **16 TIMES** that of full HD.

This immense increase in pixel density translates to **UNPARALLELED CLARITY AND DETAIL.**

© OBS
Photo credit: Owen Hammond

© OBS
Photo credit: Mario Martin Martin

For sports broadcasting, producing in 8K allows fans to see every bead of sweat, every blade of grass, and every intricate movement with remarkable clarity.

The ultra-realism and depth of 8K broadcasting makes viewers feel as though they are right in the heart of the action.

Enhanced viewer engagement

The extraordinary detail provided by 8K resolution uncovers nuances that were previously invisible, enriching the viewing experience and drawing viewers in with lifelike precision. Sports fans can appreciate the subtleties of the event, from the strategic tactics employed by teams to the physical prowess of individual athletes.

This level of detail fosters a deeper connection between the audience and the sport, creating a more engaged and passionate fan base.

8K live broadcasting at Paris 2024

In collaboration with broadcast partners NHK from Japan and China Media Group (CMG) from the People's Republic of China, OBS elevated the viewing experience of Paris 2024 by trialing 8K broadcasting once again.

OBS, NHK, and CMG co-produced selected Olympic events in the UHD-2–HDR (8K) standard. The coverage incorporated High Dynamic Range (HDR) and Wide Colour Gamut (WCG) standards, ensuring images that are sharper, crisper, and more vibrant than ever before.

The 8K live signals were transmitted to the International Broadcast Centre (IBC) via the Broadcast Contribution Network. These signals were showcased in a dedicated theatre within the IBC, equipped with a 350-inch UHD HDR-capable screen and a 22.2 surround sound system, operated by NHK. This setup provided an unparalleled immersive experience for MRHs and IBC visitors.

NHK spearheaded the production of 8K live signals with live coverage of the Opening Ceremony, basketball 3×3, and skateboarding park.

With five production units and up to 10 cameras, including 8K Super Slow-Motion (SSM) cameras, NHK captured every intricate detail of these events.

Meanwhile, CMG focused on the athletics track and field events at Stade de France, utilising an 8K OB van and a support truck to deliver stunning live coverage.

This trial of 8K broadcasting at Paris 2024 was more than just a technical showcase; it was a glimpse into the future of broadcasting.

The collaboration between OBS, NHK, and CMG showcased a shared commitment to pushing the boundaries of possibility, establishing new benchmarks for live sports and viewing experiences.

The 8K broadcasts from Paris 2024 not only captivated audiences with their stunning visual quality but also paved the way for the next generation of sports broadcasting. The promise of 8K technology highlights that the future of sports viewing is brighter, clearer, and more immersive than ever before.

Innovative 8K live OTT broadcast workflow delivery

In collaboration with OBS, TOP Worldwide Partner Intel successfully demonstrated live 8K streaming at Paris 2024, marking a world-first for end-to-end 8K livestreaming over the internet. Using advanced h.266/VVC encoding technologies, Intel delivered 8K over-the-top (OTT) broadcasts from select events to MRHs and Intel campuses globally. This groundbreaking achievement leveraged Intel's 5th Gen Xeon® processors for encoding and Intel® Core™ i9 processor-based PCs with Intel® Arc™ GPUs, along with Intel® Core™ Ultra 9 processor-based laptops, for real-time decoding. The system achieved low-latency, broadcast-grade 8K streaming, compressing raw 48 Gbps 8K/60fps/HDR signals to 40–60 Mbps using the VVC standard in under 400 milliseconds – a remarkable compression ratio compression ratio of 1,000 times. The signal, produced by OBS, was transmitted to Intel-powered devices connected to 8K TVs at various global locations within seconds, delivering an unparalleled viewing experience. This milestone sets the stage for a future where audiences worldwide can enjoy Olympic events via high-resolution, low-latency livestreaming with unmatched broadcast quality.

FOSTERING EQUALITY AND OPPORTUNITY

In Olympic history, legacy is about more than just medals and records; it encompasses the profound impacts made beyond the field of play and the screens. These legacies provide opportunities, shape industries, and drive change for years to come. Central to this narrative are initiatives such as the Broadcast Training Programme (BTP), the 'Framing the Future' initiative, and the Olympic Commentary Training, which are instrumental in fostering growth and development in the broadcast field. These various programmes led by OBS stand as pillars of legacy, not only in the technical realms of broadcasting but also in promoting gender equality and creating opportunity.

The BTP, with its commitment to training the next generation of broadcast professionals, serves as a testament to the enduring legacy of knowledge transfer and skill development. 'Framing the Future' builds on this legacy by breaking barriers and opening doors for aspiring female camera operators, thereby promoting diversity within the operational core of broadcasting operations. Similarly, the Olympic Commentary Training programme not only equips athletes with valuable skills but also advances gender equality by amplifying the voices of women in the commentary booth. Together, these initiatives symbolise a commitment to building a legacy that transcends sport, championing equality, empowerment, and progress for generations to come.

Broadcast Training Programme (BTP)

At the heart of each Olympic Games lies the BTP, a source of immense pride within OBS broadcast operations. It inspires countless future broadcast professionals worldwide, serving as a beacon of opportunity by providing invaluable knowledge and hands-on skills to local university students at every Olympic Games. Guided by OBS broadcast experts, students receive exciting training opportunities combined and gain valuable work experience during the Games.

Through this programme, OBS aims to empower a new generation of broadcast professionals in each host country, equipping young graduates with both the technical proficiency and soft skills required to excel in their roles. Students gain extensive hands-on experience in a real working environment, developing a solid understanding of broadcast workflows and operations. This comprehensive training not only enhances their job readiness but also provides them with a competitive edge in the job market, significantly boosting their employability and career prospects.

Since Los Angeles 1984, more than 12,000 students have benefitted from the programme, enabling them to launch their professional career and secure jobs within the broadcast industry and beyond. Students consistently report that they enjoyed the unique integrated learning approach of the BTP, which armed them with a wide range of skills, including an increased sense of responsibility and confidence.

Paris, renowned as one of the world's premier destinations for education and media production, saw more than 1,300 students placed in paid entry-level positions through partnerships with local institutions. These students actively contributed to the OBS Host Broadcast operation during the Games, gaining invaluable real-world experience that will shape their future careers. They received comprehensive training and on-the-job experience in key broadcast areas such as archives, production, commentary, venue technical operations, Games-time services, broadcast support, and office support. Participants engaged in intense training workshops during the fall of 2023 and were provided access to a dedicated e-learning platform to fully prepare for their Olympic roles.

For Paris 2024, 57 per cent of the students selected to participate in the programme were women, reflecting OBS's commitment to advancing gender equality within broadcasting. This effort is part of OBS's ongoing efforts to foster a more inclusive and diverse environment within the broadcast industry. OBS is proud to witness a new generation of young individuals in the host country, enthusiastic about applying the valuable lessons from their Olympic journey and motivated to pursue their dream careers.

As the cauldron was extinguished during the Closing Ceremony, marking the official end of the Games, a lasting human legacy was established in the broadcast industry for years to follow.

© OBS
Photo credit: Mario Martin Martin

LUANA FLORENTINO

"By inviting students to join us during the Games, we're not only supporting them in kickstarting their professional careers; we're immersing them in the splendour of one of the world's largest sporting events, granting them access that few others have. Through this journey, their professional futures will know no boundaries."

OBS Training and BTP Manager

Framing the Future

In 2023, OBS launched a groundbreaking camera training programme with a clear mission: to increase the representation of women in the operational side of the broadcasting industry. Named Framing the Future, the programme took place in Paris in autumn 2023, and welcomed more than 70 aspiring female camera operators.

The primary objective of this new initiative was to equip women with the essential skills and knowledge for camera operation. Participants engaged in a rigorous curriculum covering critical aspects of camera work, including lighting techniques, audio management, framing compositions, and focus maintenance.

This comprehensive training was designed to empower these future professionals with the proficiency needed to excel behind the camera.

Upon completing the programme, OBS selected the top trainees based on their dedication, skill, and potential for growth. These individuals were integrated into the OBS camera crews for Paris 2024, gaining Olympic field experience and career advancement opportunities.

By offering these positions, OBS not only recognises the talent and commitment of these women but also actively promotes diversity and inclusion within the broadcasting industry. Providing women with the necessary training and opportunities to excel in operational roles, OBS is paving the way for a more diverse and representative future in the industry. Notably, all OBS camera operators working in the mixed zone for the Games were women.

Olympic Commentary Training

For Paris 2024, another key initiative was to offer athletes – both current and retired – opportunities in commentary and broadcasting. The Olympic Commentary Training programme was specifically designed to equip Olympians and Paralympians with practical commentary skills, facilitating their transition from on-screen competitors to behind-the-scenes experts, sharing their valuable insights with viewers worldwide.

This programme is a cornerstone of OBS's broader strategy to recruit more former athletes into broadcasting roles, as well as to boost the representation of female commentators across various sports events.

The inaugural training sessions were attended by a total of 67 participants, among whom were 46 Olympic and Paralympic athletes. Following these sessions, 19 athletes – comprising 16 women and 3 men – progressed to the in-person training conducted in London in autumn 2023. Notably, two-thirds of this group were offered positions as part of the commentary team for the Olympic Games Paris 2024.

Through the Olympic Commentary Training programme, OBS is not only creating valuable career opportunities for athletes beyond their competitive years but also enriching the broadcasting landscape with diverse voices and perspectives. The unique insights and experiences of these athletes help to enhance the viewing experience, bringing added depth and authenticity to the coverage of the Games.

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Photo credit: Mario Martin Martin


© OBS
Photo credit: Mario Martin Martin

SHANNON BENTLEY

"Through our new commentary programme, not only can we assist athletes in pursuing their post-Olympic passions, but we also enable the world to experience the Olympic Games through the perspective and passion of the athletes themselves."

OBS Programming Producer

KAREN MULLINS

"By empowering women with the skills and experiences required to thrive in production, editorial or technical roles, we hope to contribute to a more inclusive and diverse broadcast environment in sport."

OBS Director of Production Management

Shattering stereotypes and inspiring future generations

In Paris, OBS boosted the representation of women in leadership and production positions.

New initiative

70+

female participants joined the groundbreaking **Framing the Future Programme**, specifically designed for camera operators

40

trainees were offered Games-time positions to work for OBS during the Paris 2024 Games

More female voices

Nearly

40%

of OBS commentators were women

80%

increase from Tokyo 2020

200%

increase from Rio 2016

Paris 2024 milestones

OBS hired more women in key operational roles than at any other Games

66%

of OBS Broadcast Venue Managers were women. Two-thirds of the BOC staff in the IBC were women.

57%

of the Broadcast Training Programme (BTP) students were women

Permanent staff gender balance

An equal opportunity environment

OBS permanent staff:
53% male / 47% female

58%

of employees promoted to senior management have been women (since 2017)

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Photo credit: Mario Martin Martin

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Photo credit: Owen Hammond

Insights from Yiannis Exarchos

© OBS
Photo credit: Mario Martin Martin

Olympic Games: Bridging the gender gap in sports media

“The Olympic Games have been groundbreaking since their inception, not just because of their concept, but because they aim to create a better society through sports. This vision allows the Games to be a catalyst for positive social change.

The Olympics are inherently inclusive, bringing together the best athletes from all nations. They have also made significant strides in gender equality. For instance, the Paris 2024 Games were the first to have equal representation of male and female athletes. This level of gender parity is rare in major sports events, making the Olympic Games a leader in this area.

I’m thrilled to see other sports, such as women’s football and basketball, gaining traction. While some major sports events lag behind societal changes, the Olympics are ahead of the curve. This achievement was celebrated in Paris, but the work is far from being finished. Participation is one thing, but how the world experiences and receives these events is another. Despite equal viewership among men and women for the Olympics, there is still a significant disparity in sports content consumption on social media, with men dominating the audience.

This is a huge opportunity for the media to improve. Sports media often falls short in reflecting and portraying women in sports or in the participation of women in sports media production. There are still significant discrepancies in the number of women working in sports media. While it is improving, it is not happening as quickly as we would like.

The International Olympic Committee (IOC) has released new portrayal guidelines for media to ensure balanced gender representation. These guidelines, now in their third version, were used by OBS and our media partners during the Games. They address unconscious biases in how men and women are portrayed, such as focusing on physical attractiveness for women but not for men. These guidelines aim to provide a more balanced portrayal and have been shared with the Media Rights-Holders (MRHs), who were encouraged to use them and provide feedback.

We view Olympic broadcasters as natural allies in promoting gender equality in media. Many choose to partner with the Olympics not just because it is a captivating event, but because of its unique ability to tell stories and unite audiences. In a media landscape fragmented by diverse channels, the Olympic Games offer a rare chance to bring everyone together. The significant female viewership of the Games is a crucial factor for many broadcasters.

This unique capacity of the Olympics to bring audiences together must be reflected in how the Games are broadcast in each country.

Therefore, we see the Games as a significant opportunity to advance the conversation on gender equality in media.

The sports media industry has traditionally been male-dominated. When OBS started nearly 20 years ago, the staff was 70 per cent men and 30 per cent women. Today, it is 53 per cent male and 47 per cent female, and we’re optimistic about reaching 50/50 soon.

We also have more women in senior executive positions and in digital operations. Two-thirds of the broadcast venue managers and the broadcast operation centre staff for the Paris 2024 operation were women, which marks a significant change from the past.

For Paris 2024, we also created more opportunities through groundbreaking training programmes for commentators and camera operators. Such initiatives are crucial to increase the percentage of women working in the broadcast industry.

While there is still much to be done globally, the IOC, OBS, and OCS are committed to staying the course until gender equality is fully achieved. Gender equality should be a conversation of the past, and we are working towards making that a reality.

I firmly believe that any operation with a natural representation of people – whether in terms of gender, nationality, or beliefs – is far more creative and productive than a segregated one.

There are countless examples of cities, countries, companies, and ideas that have thrived by incorporating diverse perspectives. While bringing together different viewpoints isn’t always easy, it undoubtedly makes organisations smarter and more efficient.

For me, fostering diversity in our organisation, the Games, and the media is one of the most straightforward ways to improve. It leads to better content, more interesting and compelling productions, and overall excellence. I am totally convinced of this.

Beyond the ethical considerations, failing to understand that diversity drives progress and innovation is a significant management failure. Leaders must recognise that diversity is not just a moral imperative but a critical component of success and innovation.”

Yiannis Exarchos
OBS CEO

THE BEAUTY OF PARIS CAPTURED FOR THE WORLD

Olympic cauldron rose into Paris skies each night during the Games. The cauldron attached to a balloon was the first in Olympic history to light up without fossil fuels, using LEDs and mist instead.

© IOC Getty Images
Photo credit: Julian Finney

Through the lens of OBS cameras, audiences around the world experienced the excitement of the Games set against the backdrop of one of the most historically and architecturally significant cities in the world.

OBS set up a comprehensive and visually stunning network of cameras to capture the beauty of the Olympic host city. These carefully placed 'beauty cameras' offered global viewers unparalleled views of the most iconic landmarks of the French capital and the vibrant atmosphere of the Games.

1. Olympic Cauldron
Each Opening Ceremony culminates in the symbolic lighting of the cauldron, marking the official start of the Games. The Olympic cauldron burns brightly for the entire duration of the event. But here's the twist: the location of the cauldron remained a closely guarded secret until its grand reveal at the end of the Opening Ceremony! To capture every flicker in stunning detail, a dedicated camera was set up in the Jardins des Tuileries to capture the spectacle of Paris 2024's unique Olympic cauldron.

2. Eiffel Tower
No coverage of Paris would have been complete without the Eiffel Tower. OBS strategically placed a camera to film this iconic landmark day and night, ensuring that its majesty was showcased throughout the Games.

3. Trocadero & Cityscape
From the Trocadero, viewers could enjoy sweeping views of the Eiffel Tower and the surrounding cityscape. This camera provided breathtaking vistas that highlighted the architectural beauty and historical significance of Paris. This beauty shot also played a vital role in the coverage of the Opening Ceremony, and provided a birds-eye view of the innovative Champions Park concept, during which medallists were celebrated amongst their loved ones and the public.

4. Rive Gauche (Notre-Dame)
Capturing the essence of Paris's left bank, this beauty camera focussed on the cathedral of Notre-Dame and its surroundings. These views offered a glimpse into the heart of Parisian history and culture, adding a layer of depth to the Games' coverage.

5. Palace of Versailles
The grandeur of the Palace of Versailles was not left out. A camera captured its sprawling gardens and opulent architecture, bringing the elegance and history of this royal residence to a global audience, while offering beauty shots during the Equestrian live coverage.

6. Louvre Museum
Home to thousands of works of art, the Louvre was showcased with a camera highlighting its magnificent structure and the famous glass pyramid, merging modern and classical aesthetics.

7. Bridges over the Seine
The romantic Seine River, with its many historic bridges, was beautifully captured. This camera focussed on the picturesque scenes of the river and its crossings, adding a poetic touch to the event's coverage.

8. Arc de Triomphe
Standing proudly at the end of the Champs-Élysées avenue, the Arc de Triomphe was featured prominently. A beauty camera emphasised its monumental presence and the bustling life around it. This camera also offered beauty shots from the road events.

9. Grand Palais, Pont Alexandre III & Invalides
This area was captured to highlight its architectural brilliance and historical significance, while showing several Games' venues. The Grand Palais and Pont Alexandre III, with the Invalides in the background, offered a rich visual treat.

10. Place de la Concorde & Champs-Elysées
The Place de la Concorde was turned into a bustling Olympic urban park featuring five different fields of play, with the iconic avenue of Champs-Élysées in the background, stretching from the Place de la Concorde to the Arc de Triomphe, a quintessential symbol of Parisian life.

11. Cable system from Grand Palais to Invalides
A cable camera system provided dynamic aerial views from the Grand Palais to the Invalides, offering viewers a unique perspective on this historic area and the Seine River.

12. Stade de France and Aquatics Centre
The Stade de France and the Aquatics Centre, with their distinctly modern designs and sustainable features, were showcased through an external wide shot showing both competition venues and the atmosphere of the Games.

13. Cable system from Eiffel Tower to Trocadero
Another cable camera system offered stunning views from the Eiffel Tower to the Trocadero, ensuring that viewers could enjoy sweeping aerial shots during the Games.

MARK WALLACE

“The integration of beauty cameras into our broadcast coverage was a pivotal enhancement. These beauty shots allowed us to capture and share the stunning visuals of the host city like never before. For the first time, we had more beauty shots than any previous Games, with a total of 13 beauty cameras in operation. Additionally, we introduced two cable cameras, a first in Olympic history, which provided dynamic and sweeping views of key locations. These setups delivered slow-moving, beautiful shots that highlight the grandeur of Paris.

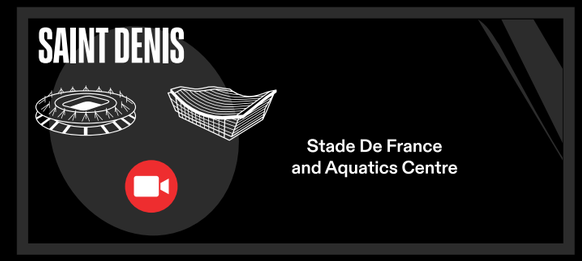
Our beauty camera coverage played a crucial role in reinforcing the unique and historic backdrop of these Games. By bringing the beauty of the French capital and the excitement of the Olympic Games to life, we created an unforgettable viewing experience for audiences worldwide.”

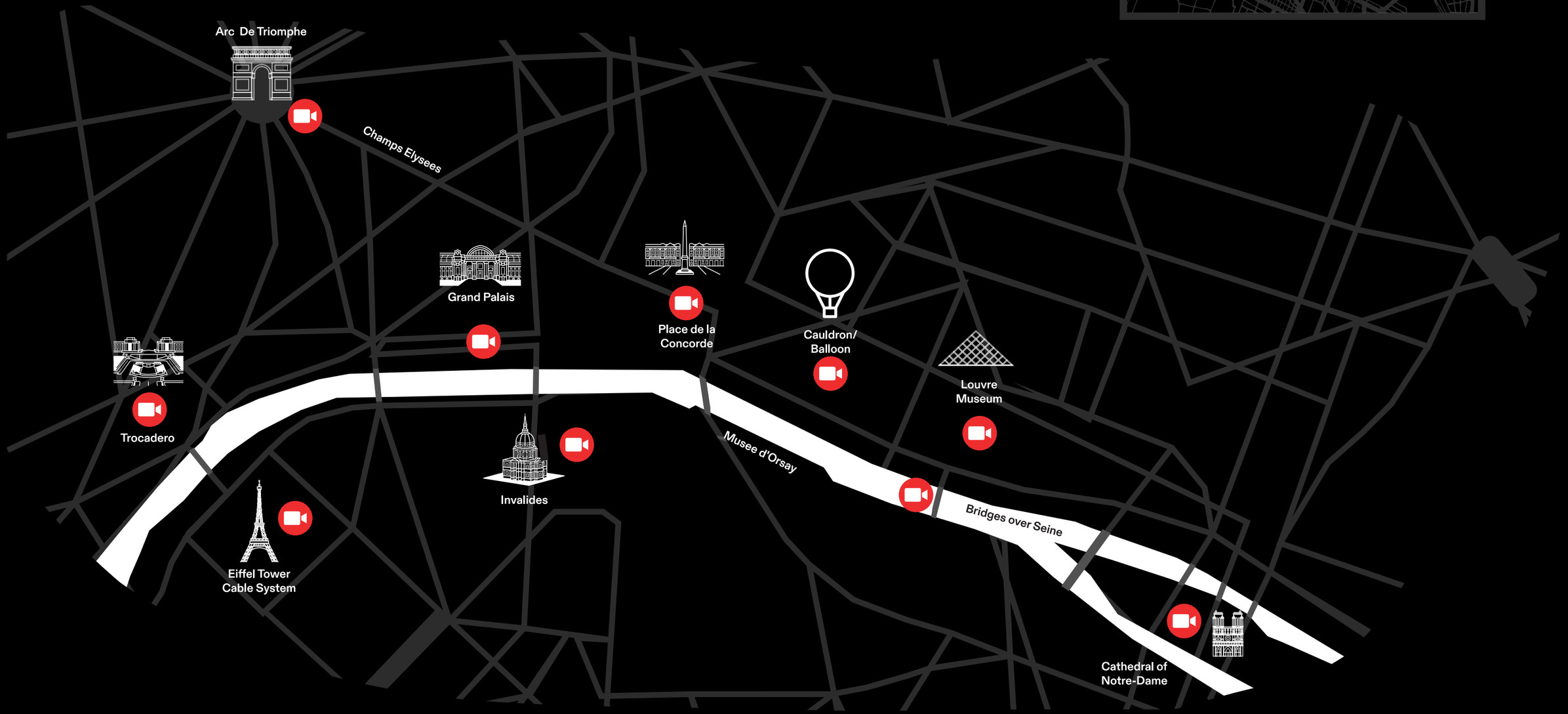
OBS Chief Content Officer

Photo credit: Owen Hammond

OBS beauty cameras around Paris

Beauty cam location





MARRYING UP THE REAL WORLD AND THE VIRTUAL

The iconic charm of Paris and its competition venues served as the perfect backdrop for the 2024 Games – literally.

From the historic streets of Montmartre to the effervecence of Champions Park at Trocadero, every corner of the city radiated the spirit of the Games.

This unique essence was not confined to the host city alone but was shared with the world in an entirely new way.

Thanks to advanced broadcast solutions, broadcasters brought the beauty and vibrancy of Paris into studios worldwide, allowing audiences to experience the magic of the city as if they were there in person.

This effort went beyond simple visuals, turning Paris into an active part of the storytelling experience and immersing viewers in the excitement of the Games like never before.

For the first time in a Summer Olympic Games, OBS introduced panoramic studio backdrops, showcasing breathtaking views from iconic venues and landmarks. These backdrops were seamlessly integrated into live broadcasts, transforming studio environments into vibrant windows to the host city. This innovation elevated the overall viewing experience for global audiences, creating an unforgettable connection between the Games, the host city, and the world.

Overcoming the physical limits of traditional studios

Virtual studio backdrops are transforming live broadcasting, offering a dynamic and flexible alternative to traditional studio setups. These innovative solutions allow broadcasters to design immersive environments tailored to each segment. Instead of relying on static images or physical sets, broadcasters can utilise high-definition, 180-degree views, creating depth and movement that captivate audiences and elevate storytelling.

For Paris 2024, Media Rights-Holders (MRHs) gained unparalleled access to the city through five strategically placed 180-degree UHD cameras. These cameras were installed at: Bercy Arena (Artistic Gymnastics and Basketball Finals), La Défense Arena (Swimming and Water Polo Finals), Stade de France (Athletics Track and Field), Pont Alexandre III (Triathlon and Marathon Swimming) and at the OBS TV studio facilities in Trocadero overlooking the Eiffel Tower.

These weren't mere static beauty shots. The 180 immersive ISO feeds delivered stunning 3,840 × 2,160 pixels at 50p video quality, ensuring continuous availability of three to four live backdrops. Broadcasters could instantly switch between views, adapting their studio environments to reflect the energy of each venue or moment. From the electrifying atmosphere at La Défense Arena to the Eiffel Tower's mesmerising light show at night, MRHs had the flexibility to align their studio ambiance with the narrative, creating a seamless and engaging viewing experience.

The future of broadcasting with virtual studio sets

Virtual studios are reshaping live production by offering three distinct advantages: ease of setup, enhanced creativity, and resource efficiency. They eliminate the logistical complexities and costs of on-site studios while delivering the illusion of being at the heart of the action. Viewers enjoy a tangible connection to the host city, enriching the storytelling and emotional impact of the Games.

For MRHs, the adaptability of virtual studios unlocks new possibilities. These sets can be redesigned effortlessly to match changing narratives, allowing broadcasters to quickly transition between segments or shows at a fraction of the cost, time, and resources of physical sets. Virtual backdrops empower broadcasters to turn their studios into powerful storytelling tools, ensuring compelling and visually dynamic coverage of the Games.

MATT MILLINGTON

"Adopting virtual sets represents a transformative step toward more innovative, creative, and versatile broadcasting solutions. These cutting-edge sets not only elevate the storytelling capabilities of MRHs but also provide a cost-effective, seamlessly integrated approach to production. Virtual studio backdrops redefine the concept of location, turning it into a boundless canvas for creativity. They empower broadcasters with the flexibility to switch between distinct environments in an instant – whether to present from a main studio or shift to a tailored backdrop for a specific segment – enhancing engagement and adding dynamic variety to programming."

OBS Director of Digital Content

STORYTELLERS OF THE GAMES

For more than four decades, the OBS team's rich experience and diverse backgrounds have played a pivotal role in bringing hundreds of the world's greatest sporting events to screens around the world.

Olympic Broadcasting Services (OBS), the official host broadcaster of the Olympic Games, plays a crucial role in delivering the sights and sounds of the Olympic Games to billions of viewers worldwide. OBS provides unbiased live radio and television coverage from every sport and every venue, creating the International Signal or world feed.

OBS maintains a consistent approach across all Olympic editions, optimising resources to enhance the efficiency of the host broadcast operation. This ensures that all International Olympic Committee (IOC) contractual obligations are fulfilled, offering Media Rights-Holders (MRHs) the high-quality production expected of the Olympic Games.

Through their efforts, OBS ensures that every moment of the Olympics, from the Opening Ceremony until the flame is extinguished, reaches a global audience with the clarity and excitement that defines the Olympic Games.

Expertise and diversity driving Olympic Broadcasting success

In Madrid, a diverse team of more than 160 professionals from 28 different nationalities handles the intricate planning of Olympic broadcast operations. As the Games approach, they relocate to the host city, ensuring that installations and preparations remain on track. Once the Games are set to begin, between 4,000 to 8,000 local and international personnel will join forces and work to execute the broadcast operation and support the MRHs.

Creation of a permanent host broadcaster

The IOC established OBS to serve as the permanent host broadcaster for the Games, eliminating the need to continually rebuild the broadcast operation for each edition, and as a result create a more efficient, streamlined operation.

In 2003, the IOC registered the company in Madrid. Manolo Romero, a television pioneer, who had overseen the Olympic host broadcast organisations since Barcelona 1992 became the first Chief Executive Officer (CEO) of OBS.

2001

The IOC establishes the need for a single host broadcast organisation and OBS is formed.

2003

The IOC registers OBS SA in Switzerland, as well as a subsidiary company, OBS SL, in Madrid, Spain.

2005

Television pioneer Manolo Romero establishes offices in Madrid, recognising the benefits of Spain's highly trained workforce and strategic location for global operations.

2007

OBS

OBS Board of Directors approves the plan to create a permanent central planning structure for OBS, working across all Games. The core team in Madrid expands from 18 employees to 146 broadcast professionals.

2010

The Olympic Winter Games Vancouver 2010 represents the first time the host broadcast operation is completely independent from the Organising Committee, and the sole responsibility of OBS.

2012

Yiannis Exarchos is appointed OBS CEO after the Olympic Games London 2012.

2018

A Cooperation Agreement between the IOC and the IPC is signed and established OBS as the Paralympic Games' host broadcaster of all future editions.

At that time, agreements and structures were already in place for the broadcast of the Olympic Games Athens 2004 and the Olympic Winter Games Torino 2006, so the first official OBS operation was the broadcast of the Beijing 2008 Games. A joint venture was created between the Beijing Organising Committee and OBS. OBS supplied not only the equipment but, more importantly, the know-how of experienced personnel from previous Olympic broadcast operations as well as new personnel hired and trained through the Athens and Torino Games.

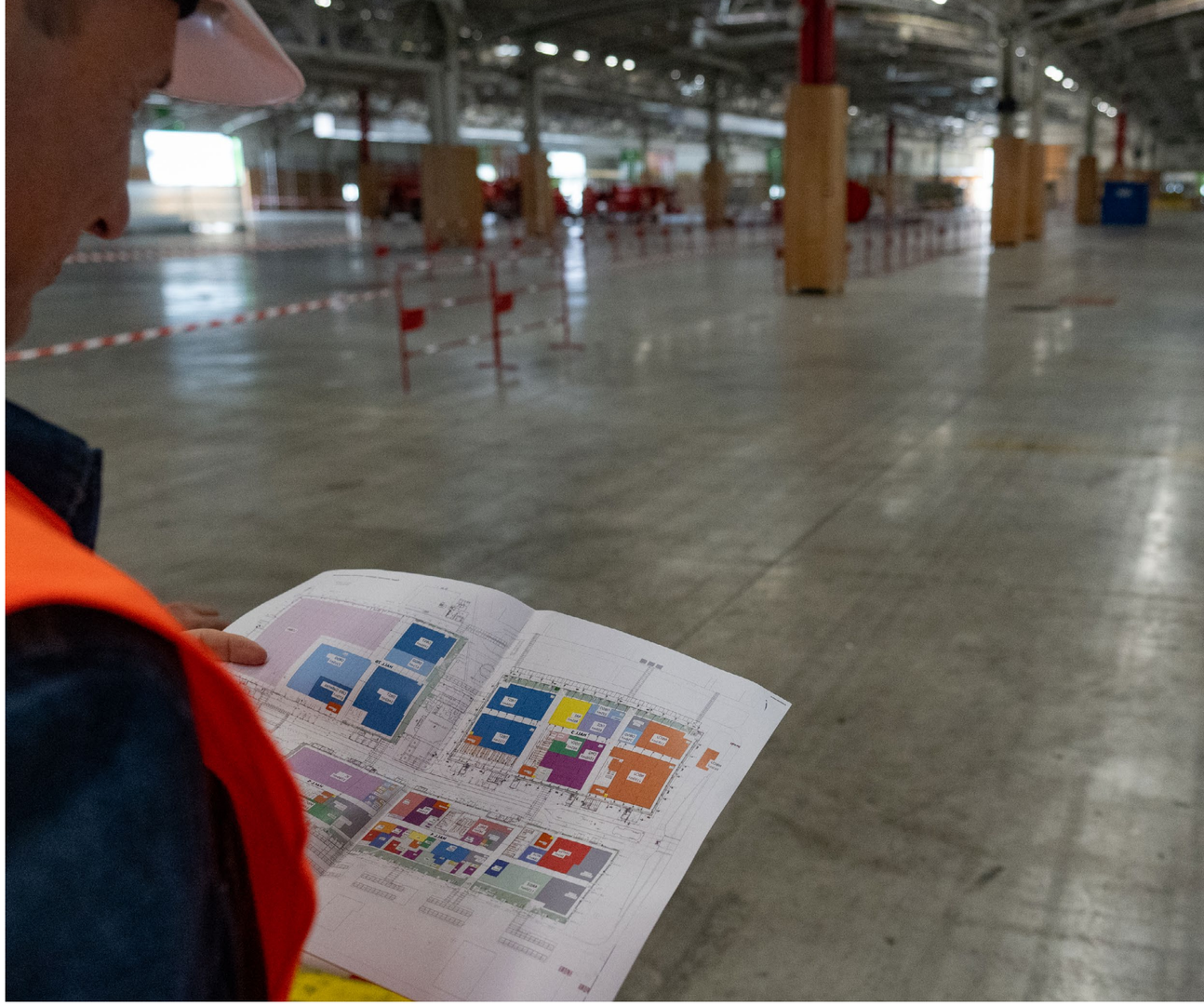
In November 2007, the OBS Board of Directors approved a plan to create a permanent central planning structure for OBS to work across all Games. Previously, a full-blown planning operation had to be recruited and trained for each edition of the Games in each host city, while OBS in Madrid was working as a management company made up of a small group of employees looking after its central assets used across the Games. As a result, OBS developed into a much larger permanent team and has been completely independent from the Organising Committees since the Olympic Winter Games Vancouver 2010. Yiannis Exarchos was appointed OBS CEO after the Olympic Games London 2012.

In March 2018, a Cooperation Agreement between the IOC and the International Paralympic Committee (IPC) was signed and established OBS as the Paralympic Games host broadcaster of all future editions.

Today, OBS S.L. is supervised by an IOC-appointed board of directors, whose current chair is IOC member Gerardo Werthein from Argentina.

LEARN MORE ABOUT OBS

SCAN ME



Behind each Olympic Games are years of detailed planning and preparation to ensure viewers can enjoy the world's largest sporting event on their screens.
© OBS. Photo credit: Owen Hammond

The complexity of bringing the Olympic Games to the world

A copious amount of detail and effort goes into the preparation of the broadcast of the Olympics. Successful planning requires identifying the right people, infrastructure and equipment to properly deliver the coverage from each competition venue, while working closely with all of the stakeholders, in particular the IOC, the local Organising Committee of the Games (OCOG), the International Federations and the MRHs.

Live broadcasting by its very nature requires being prepared for every eventuality – an enticing challenge that grips everyone at OBS.

From the design of the coverage plan to the high-powered, back-end technical support required to make it happen and ensure proper delivery to the MRHs, to the offering of a plethora of services and facilities for the world's broadcasters to customise the signals for their home audiences, OBS can depend on a core team that offers a unique blend of technical expertise, practical experience and creativity.

This know-how is key when it comes to planning, adapting, innovating, supporting and delivering solutions across the various aspects of the operation.

The scale of the Games and the nature of the sports programme are two key features that set the Olympics apart from any other major sporting events.

Setting up the host broadcast operation also entails a tremendous logistical challenge, which involves transporting tons of equipment to the host city(ies), ensuring its safe delivery and then providing the same service when it is time to pack up and leave.

It also means recruiting thousands of broadcast professionals worldwide, across a broad range of positions, training local students through the Broadcast Training Programme (BTP) and managing the accreditation of the entire workforce. It also includes meeting the service level needs of the OBS team by providing air and ground transport, accommodation, uniforms and catering, all the while, providing a high level of support whenever it is required during the Games.

The MRH journey

OBS is at the service of the Media Rights-Holders (MRHs)

The IOC is responsible for managing the global broadcast rights for the Olympic Games across all media platforms, including free-to-air television, paid television, radio, internet and mobile, and allocating exclusive rights for a certain territory to broadcast partners through the negotiation of media agreements.

Through their partnership agreements, the MRHs are provided access to the International Signal produced by OBS and may book the required facilities at the Olympic venues and the International Broadcast Centre (IBC) in order to produce their own coverage. While OBS is responsible for producing the multilateral coverage of the Games, the MRHs personalise the programming for their respective audiences. They are uniquely positioned to provide detailed commentary on the competition, interview athletes and cover the news of the Games in their native languages.

Whether a broadcast organisation has only recently acquired the rights to the Games, or has had a long-standing relationship with the Olympics, OBS will assist and guide the MRH through the entire planning process.

While no two Games are the same, OBS has built upon many years of experience to deliver the most efficient and streamlined approach to planning and delivering all the services and facilities required to bring the Games to the world.

MRH AS OFFICIAL BROADCASTER

A broadcast organisation enters into agreement with the IOC to purchase the rights to broadcast the Olympic Games in their home territory (television, digital, radio or some combination).

START OF THE RELATIONSHIP WITH OBS

OBS will assist each MRH during the planning phase and provide access to a broad range of resources to support and enhance their production plans.

ANNUAL BROADCASTER MEETINGS

Beginning three years prior to the Games, OBS will hold annual meetings in the host city(ies), together with the OCOG, to update the MRHs on the preparations for each Games.

COORDINATION WITH THE ORGANISING COMMITTEE

MRHs will work directly with the OCOG to establish their needs for accreditation and visas, arrivals and departures, accommodation, transportation, etc.

CATALOGUES OF SERVICES AVAILABLE FOR BOOKING

Two years out, OBS releases the Directory of Services (DOS) that details all broadcast-related services and facilities available for the Games. Additional services such as vehicle rental will need to be booked through the OCOG's Rate Card.

OBS BOOKING DEADLINE

Each MRH must submit to OBS all of their requests for services and facilities that will be deployed for their exclusive use during the Games during the specific booking window set in the DOS.

VENUE SURVEYS

OBS, in conjunction with the OCOG, will offer MRHs the opportunity to visit select venues to observe the status of construction and preparation, as well as better identify their needs within each venue.

MOVE TO THE HOST CITY(IES)

MRHs who have chosen to have all or some portion of their operations in the host city(ies) begin moving equipment and personnel, including occupying space in the IBC, if booked.

SET-UP AND TESTING

Installations, testing of signals and systems, rehearsals and all preparations commence prior to the start of the Games.

GAMES-TIME

MRHs, OBS, the IOC and the OCOG conduct Games-time operations.

35 MRH organisations reached media agreements and purchased the rights to broadcast the Olympic Games Paris 2024 in their territories, alongside the Olympic Channel.

Insights from Raquel Rozados

"As the Head of Broadcast Services at OBS, my team and I are dedicated to meeting the needs and expectations of the Media Rights-Holders (MRHs). We listen to their requests and ensure they are fulfilled, working closely with other OBS departments such as Production, Engineering, and Planning. Together, we make it all happen.

What sets our approach apart is the personal connection we build with the MRHs. Each MRH has a single point of contact on our team – not just an email or phone number, but a person who truly understands their operation inside out. This goes beyond technical requirements; it's about knowing them as individuals. Over the years, we've built strong relationships that last across multiple Games. These connections are built on trust, which is essential to what we do.

Our work is guided by the Directory of Services, a comprehensive catalogue detailing all the services OBS provides to MRHs. This includes everything from physical setups, such as commentary positions, camera platforms, and transmission circuits, to more complex offerings like automated highlights, advanced content delivery platforms, and signal routing. The directory ensures that MRHs understand the full range of options available to them, helping them customise their operations and achieve their production goals. It is a cornerstone of our planning process, providing clarity and structure while allowing us to adapt to the unique needs of each broadcaster.

After the challenges of two pandemic Games, Paris 2024 carried immense expectations. Everyone wanted these Games to be extraordinary, and I believe we delivered. Paris itself played a central role in making this edition so special. The city became more than just a backdrop – it was a star of the Games.

The Organising Committee showcased everything beautiful about Paris, and the people of the city fully embraced and celebrated the event. That energy came through on-screen and made a difference for audiences worldwide.

We often hear from MRHs that what we deliver feels like magic. I recall a moment during these Games that captures this perfectly. There was a last-minute request from an MRH for a commentator with accessibility needs. They hadn't informed us ahead of time, but we found a solution. The MRH said, 'We expect OBS to do the magic you always do.' And we did. For them, it felt like magic, but for us, it was about going above and beyond, finding solutions no matter what, and ensuring that everyone felt supported.

This is why our relationships with the MRHs are so strong. They know they can count on us – not just to meet their needs but to listen, to guide, and even to advocate for them when needed. They aren't just clients; they are partners, and that connection is something we value deeply.

Paris 2024 wasn't just a technical success – it was a celebration of collaboration, trust, and shared excellence. That's the magic we strive to create every day, and I couldn't be prouder to have been part of it."

Raquel Rozados
OBS Head of Broadcaster Services

© OBS
Photo credit: Mario Martin Martin

© OBS
Photo credit: Owen Hammond

BREAKING RECORDS

Record global audience and digital engagement

A record 84 per cent of the potential global audience* followed the Olympic Games Paris 2024 according to independent research conducted on behalf of the International Olympic Committee (IOC). This equals around five billion people and means that more than half of the world's population followed the inspirational achievements of the Olympic athletes and the magic of the Olympic Games, underlining the massive success of the Games in Paris.

READ THE IOC AUDIENCE AND INSIGHTS REPORT FOR PARIS 2024

SCAN ME

© IOC
Photo credit: Greg Martin

"Paris 2024 demonstrated the unprecedented global appeal of the Olympic Games. Working with our MRH partners, more coverage was made available and watched than ever, in particular on digital and social media platforms.

Engagement on social media platforms went through the roof, with a 290 per cent increase on the previous edition of the Games. Audiences are following and interacting with the Olympic Games like never before. The independent surveys also demonstrate that people believe that the Olympic Movement's mission to unite the world in peaceful competition is more important than ever in a divided world; and that the Olympic values truly resonate with younger generations.

These were Olympic Games of a new era."

Thomas Bach
IOC President

*Potential global audience with access to follow the Olympic Games and over the age of 4 years old.

© OBS
Photo credit: Owen Hammond

© OBS
Photo credit: Owen Hammond

Digital platforms drove an unprecedented level of attention

© OBS
Photo credit: Owen Hammond

412B

ENGAGEMENTS FROM 270 MILLION POSTS
ON SOCIAL MEDIA PLATFORMS (ESTIMATE)

3.9X

MORE ENGAGEMENTS
ON INTERNATIONAL SOCIAL MEDIA PLATFORMS VS TOKYO 2020

13X

MORE ENGAGEMENTS ON MRH HANDLES
ON INTERNATIONAL SOCIAL MEDIA PLATFORMS VS TOKYO 2020

3X

HIGHER INTERNET SEARCH INDEX
VS TOKYO 2020

The IOC's own digital platforms and social handles generated 16.7 billion engagements, a 174 per cent increase on the previous edition of the Games.

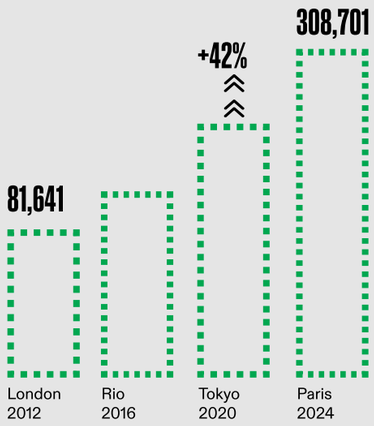
Olympic athletes, National Olympic Committees, International Federations and Organising Committees all benefitted from the huge social media engagement, growing their digital presence and adding a combined 85 million followers to their main social media handles.

There was a 200 per cent increase in internet searches related to Olympic sports and the Olympic Games compared to the previous edition of the Olympic Games.

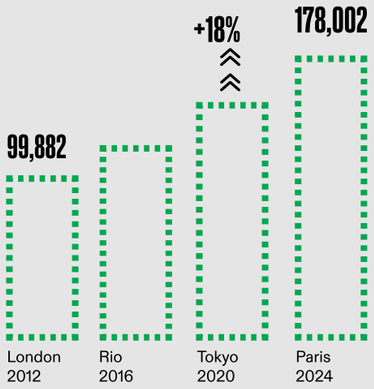
Media Rights-Holders (MRHs) delivered record results, driven in large part by this increased visibility on digital channels

13X
MORE ENGAGEMENTS ON MRH HANDLES
ON INTERNATIONAL SOCIAL MEDIA PLATFORMS VS TOKYO 2020

DIGITAL COVERAGE (HOURS)

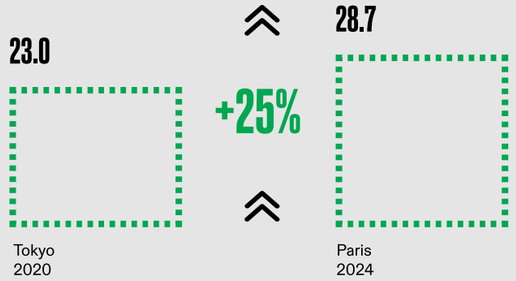


LINEAR TV COVERAGE (HOURS)

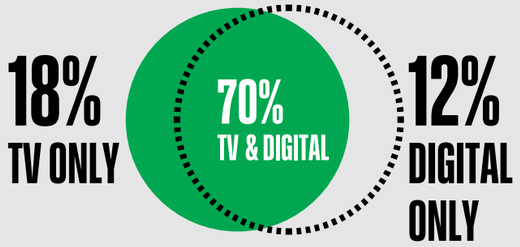


VIEWER HOURS (BILLIONS)

Every viewer on average watched 9 hours of MRH coverage
(+20% vs Tokyo 2020)



TOTAL MRH VIEWERSHIP



Tokyo 2020:
TV only: 27% / Digital only: 9%
TV and digital: 64%

MRH Testimonials

"The Olympics is more than just a sporting event. It's a cultural phenomenon that resonates deeply with Australians from all walks of life. It unites the nation in a way that few other events can, bringing together millions of viewers across the country."

Michael Healy
Director of Television,
Nine

"The Brazilian people fell in love with Paris and everything we broadcast. Every day, we reached over 50 million people across all platforms and TV Globo. Our reach was 30-40% larger than it was in Tokyo, making this a tremendous success. Thank you for making this possible."

Marcela Zaiden
Executive Planning
Major Sport Event Globo

"The Opening Ceremony captivated 70% of Japanese viewers. Team Japan's impressive medal haul further boosted viewer ratings and interest, leading to a steady rise in the number of viewers. This clearly indicates the growing popularity of the Games in Japan. While the last Summer Olympics in Tokyo were held under challenging circumstances, the Olympic Movement has successfully continued here in Paris."

Tatsuya Ogawa
Team Leader,
Japan Consortium

"We witnessed outstanding collaboration and cooperation with the IOC, OBS, and Paris 2024 teams. In the United States, we achieved remarkable results, reaching 30.4 million viewers across NBCU, Peacock and key NBCU platforms. Our prime-time audience increased by 82% compared to the last Olympics. We streamed 23.5 billion minutes, surpassing the combined live streaming minutes of all previous Summer and Winter Olympics. The Olympics reestablished its unique power to reassemble the American media audience."

Gary Zenkel
Sr VP Olympic Operations/President,
NBC Sports

"We were cautiously optimistic about whether the energy would return to the Games, and it certainly did for Canadians. It all started with Celine Dion's performance at the Opening Ceremony. The Paris 2024 Games reached 80% of all Canadians, and streaming was up 80% from Tokyo 2020 and Beijing 2022."

Chris Wilson
Executive Director/General Manager,
CBC/Radio-Canada

"Success is a collective effort, and this achievement is a testament to that. The Opening Ceremony captivated over 24 million French viewers, making it the most-watched program in French TV history. We reached 90% of the French population. France Télévisions made a strategic decision to broadcast the Games on our two main channels all day long, and it was a tremendous success."

Laurent Eric Lelay
Head of Sports Department,
France Télévisions

"We are a content house, we are a storyteller, and the combination between Warner Bros. Discovery, storytelling of the Olympians and OBS coverage of the sport was a marriage made in heaven. We were delighted with the way that Paris 2024 came to life. The city looked spectacular. The venues were remarkable. They were out of this world. Our viewers thoroughly enjoyed streaming by consuming 7,000,000,000 minutes of content. We achieved over 250 million viewers worldwide on our linear channels, and our Olympics posts on social media garnered over five billion social views. That translates to an audience loving the Olympic Games, being back and particularly back in our time zone, which was very relevant, but being back en masse, and our relationship with OBS meant we could broadcast every moment of the Olympic Games that they produced every minute."

Scott Young
Group Senior Vice President,
Content, Production and Business Operations, Discover Sports, Europe,
Warner Bros. Discovery

"Over sixteen days, athletes showcased the Olympic motto of 'Faster, Higher, Stronger. Together.' With the support of OBS, China Media Group (CMG) reached an all-media audience of 1.049 billion, with a total cross-media reading and viewing volume of 77 billion, setting new records. The China Red 8K UHD OB Van played a key role in producing 8K signals for the Closing Ceremony and track events. Despite the end of the Games, the spirit of peace and friendship endures, with a commitment to promoting Olympic culture and unity worldwide."

Shen Haixiong
President, CMG

THE 2024 OLYMPIC GOLDEN RINGS AWARDS

Broadcast excellence shines at the 2024 Olympic Golden Rings awards

The Golden Rings Awards ceremony held at the Olympic House in Lausanne, Switzerland on 3 December 2024, was a dazzling celebration of the Olympic broadcasters' successful coverage of the Olympic Games Paris 2024.

With more than 100 submissions, the International Olympic Committee (IOC) honoured 10 Media Rights-Holders (MRHs) across 12 categories. These awards highlighted the innovation, creativity, and excellence that brought the magic of the Olympic Games Paris 2024 to life for more than half of the world's population.

Honouring the best of Olympic broadcasting

The 2024 Olympic Golden Rings awards winners included:

BEST ATHLETE PROFILE:
Gold France Télévisions
"Les Paris de Leon"
Silver CMG Group
"Becoming Quan Hongchan"
Bronze Nine Australia
"Saya Sakakibara"

BEST CONTENT TO PROMOTE GENDER EQUALITY AND INCLUSION:
Gold Globo
"Olympic Stories: Women and the fight for gender equality"
Silver Livemode
"Laís Souza Returns to the Olympic Games"
Bronze CMG Group
"Women Break Through to the Olympics"

BEST DIGITAL OFFER (WEB AND APP):
Gold NBCUniversal
NBC Olympics and Peacock
Silver CMG Group
CMG Mobile Olympic Tab
Bronze WBD
Eurosport: Every moment of the Olympics on Max

BEST DIRECTOR:
Gold NBCUniversal
"Paris Titans"
Silver CBC/Radio-Canada
"Paris 2024: Make or Break"
Bronze CMG Group
"Champions at Home"

BEST FILM:
Gold CBC/Radio-Canada
"Running a Revolution"
Silver France Télévisions
"L'album des Jeux Olympiques : Pour tout l'Or du Monde"
Bronze BBC
"Paris 2024 - BBC Closing Montage"

BEST INNOVATIONS (AI/TECHNOLOGY):
Gold BBC
BBC Paris studio
Silver France Télévisions
The Torch Relay live broadcast
Silver NBCUniversal
Peacock Olympic Daily Recap

BEST OLYMPIC PROGRAMME:
Gold Nine Australia
"Olympic Games Paris 2024 | Nine Network"
Silver Globo
"Olympic Center"
Bronze BBC
"Tonight at the Games (BBC)"

BEST ON-AIR PROMOTION:
Gold Globo
"All the shine"
Silver France Télévisions
"Aux Jeux, citoyens !"
Bronze Nine Australia
"2024 Paris Olympics Down Under | Nine Network"

BEST REMOTE BROADCAST OPERATIONS:
Gold WBD
"WBD Sports' European coverage of Paris 2024"
Silver CMG Group
"Paris Olympics 2024 Broadcasting Coordination and Operations"
Bronze Sky NZ
"Sky NZ Olympic Coverage"

BEST REMOTE STUDIO AND PRESENTATION:
Gold WBD
"WBD House - Paris 2024 studio"
Silver Globo
"Globo Olympic Studio"
Bronze NBCUniversal
"NBC's Coverage of the Games of the XXXIII Olympiad"

BEST SOCIAL MEDIA CAMPAIGN:
Gold NBCUniversal
"NBC Olympics Social Media"
Silver CBC/Radio-Canada
"CBC/COC's Promotional Campaign - Brave is Unbeatable"
Bronze Sky NZ
"Authentic Aotearoa, New Zealand Olympic Experience"

BEST HOST PRODUCTION TEAM:
OBS Athletics

SPECIAL RECOGNITION BY THE JURY AWARDS:
France Télévisions
Olympic Ceremonies broadcast team

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Phot credit: Christophe Moratal

“Paris 2024 was a truly unforgettable chapter in Olympic history, where the rich heritage of this iconic city met the unmatched dedication of the world’s best athletes.

The energy and passion of the French people brought a vibrant, electrifying spirit that transcended borders, reminding us of the unique power of the Games to unite and inspire.

Reflecting on these moments of global unity and celebration, we are immensely proud to have shared this extraordinary experience with viewers around the world.

The legacy of Paris 2024 will resonate for years to come.”

Yiannis Exarchos
OBS CEO

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