



DATA, TECHNOLOGY, AND SURVEILLANCE AT THE FIFA WORLD CUP: LEGAL IMPLICATIONS FOR FANS AND ATHLETES

INTRODUCTION

The Fédération Internationale de Football Association (FIFA) World Cup is one of the world's largest sporting events and has evolved into a technologically sophisticated competition driven by artificial intelligence, biometric monitoring, surveillance systems and large-scale data collection. At the heart of this transformation is the collection and commercial exploitation of vast quantities of players and fans' data.

At the 2022 World Cup, FIFA introduced Semi-Automated Offside Technology (SAOT), combining camera tracking and sensor-equipped match balls transmitting positional data to a video operation room 500 times per second, to improve officiating while simultaneously generating unprecedented volumes of player data. For the 2026 tournament, FIFA's ticketing framework continues to require extensive data processing as a condition of attendance, raising questions about ownership, storage and lawful use of personal data. These innovations have been largely presented as innovations that improve the accuracy, fairness and beauty of the game. However, what received considerably less attention was the legal infrastructure, that governed how this data was owned, stored, shared, and used beyond the immediate purpose of refereeing a football match.

This article examines the legal implications of athlete biometric monitoring, fan surveillance and AI-driven decision-making at the FIFA World Cup. Together, these dimensions reveal a World Cup in which some of the most

consequential considerations may take place not on the pitch, but in the legal space between innovation and individual rights.

ATHLETE MONITORING AND BIOMETRIC DATA: PERFORMANCE ENHANCEMENT OR CONSTANT SURVEILLANCE?

Elite footballers competing at the FIFA World Cup are among the most technologically monitored professionals on the planet. GPS vests, heart rate monitors, and AI-linked wearable platforms now accompany players through training sessions, warm-up routines, and match days. These technologies collect extensive biometric and performance data in real time which are analysed by teams of performance scientists, coaches, and medical staff.

Biometric data occupies a special category in most sophisticated data protection regimes. Under Article 9 of the European Union's General Data Protection Regulation (GDPR), which applies not only within Europe but wherever European athletes or their data are involved, biometric information processed for the purpose of uniquely identifying a natural person is classified as sensitive personal data warranting heightened protection. As a general rule, processing such data is prohibited unless the data processor satisfies at least one of a narrow set of conditions including, the explicit and informed consent of the data subject. The challenge in modern football is that such consent, in the contractual and power-dynamics context of a professional football team or a governing body like FIFA, is rarely as voluntary as the law requires it to be.

¹ FIFA, "Semi-Automated Offside Technology" - <https://inside.fifa.com/innovation/world-cup-2022/semi-automated-offside-technology> (accessed June 2026), Sky Sports, "World Cup 2022 to feature semi-automated offside technology with ball sensors and <https://www.skysports.com/football/news/12098/12643330> (accessed June 2026). cameras"

² FIFA, "FIFA World Cup 2026 Ticketing Terms of Use" (PDF)

<https://digitalhub.fifa.com/m/c3856874964e176/original/FIFA-World-Cup-2026-Ticketing-Terms-of-Use.pdf> (accessed June 2026).

An ongoing 2024 study shows that professional footballers remain concerned about ownership, consent and commercial exploitation of biometric data. The same study identified three primary legal challenges: the question of who owns and controls the data once it is generated; whether consent to its collection is genuinely informed and voluntary given the structural inequalities between players and clubs; and the risk of discrimination based on biometric data in contract negotiations and transfer decisions. A club that holds detailed information about a player's injury recovery patterns, cardiovascular stress responses, or chronic fatigue levels holds commercially valuable intelligence that the player may have generated with their body but whose downstream use they cannot control.

As monitoring and tracking technologies become integral to professional football, players are subjected to constant surveillance and extensive biometric data collection. This data can affect their insurability, contract value, and commercial opportunities, yet they often lack meaningful control over its future use, a gap that existing legal frameworks fail to adequately address.

FAN SURVEILLANCE AND PRIVACY RIGHTS

If the legal exposure of athletes to data collection is significant, the position of fans attending the FIFA World Cup raises questions of an entirely different order of magnitude. Unlike elite players, who at least operate within contractual frameworks that nominally acknowledge their rights, fans enter World Cup venues as members of the general public. Their engagement with the surveillance infrastructure of modern sport is largely invisible to them and their consent, to the extent that it is obtained at all, is typically buried in the terms and conditions of a digital ticketing application clicked past in the excitement of securing a match ticket.

The 2022 FIFA World Cup in Qatar provided an early and stark illustration of what fan surveillance in a modern tournament looks like in practice. Visitors were required to download two government-mandated mobile applications as a condition of attending: Hayya, the official tournament app used to gain stadium entry and access to free public

transportation, and Ehteraz, a COVID-19 contact tracing tool.

Some European data protection authorities raised alarms promptly. France's Commission Nationale de l'Informatique et des Libertés (CNIL) and Germany's Federal Commissioner for Data Protection and Freedom of Information (BfDI), both issued public warnings that the applications collected considerably more data than their privacy notices disclosed.

The legal questions raised by these applications were numerous and significant. First, there was the question of the lawful basis for processing: the GDPR permits processing of personal data on grounds including consent, performance of a contract, and legitimate interests, but where an application is effectively mandatory for access to a regulated event, the voluntariness of consent is legally undermined.

Second, there was the question of purpose limitation: data collected for the stated purposes of ticketing verification and public health monitoring was, on the evidence of the permissions granted and the transmission patterns observed, available for considerably broader surveillance purposes by the host nation's authorities.

Third, there was a failure of data minimisation: the collection of call logs, persistent location data, and file system access goes far beyond what is necessary or proportionate for verifying a ticket or tracking COVID-19 contacts.

Meanwhile, for the 2026 World Cup in the United States, Canada, and Mexico, the surveillance architecture has expanded in both scope and technical sophistication. Federal agencies in the United States are reported to have invested \$365 million in surveillance technology for the tournament, with companies including Lenovo and Booz Allen Hamilton developing digital twins of stadiums and integrated command platforms. The "Go-Ahead Entry" facial recognition system, deployed across multiple stadium venues, requires fans to upload a selfie through a smartphone application, from which a biometric facial vector is extracted and stored for matching at stadium entry

³ General Data Protection Regulation, Regulation (EU) 2016/679, Art. 9, 2016 O.J. (L 119) 1

⁴ Preprints.org, "Legal Challenges of Wearable Technology in Sports: A Case Study of European Football Leagues" (November 2024) <https://www.preprints.org/manuscript/202411.0558/v1> (accessed June 2026).

gates. The Electronic Frontier Foundation has warned that much of this surveillance infrastructure may remain in place long after the tournament concludes.

Algorithmic error in a stadium surveillance system can result in wrongful denial of access, unlawful detention and in the geopolitical environment surrounding the 2026 World Cup, the initiation of immigration enforcement proceedings against fans who have committed no offence whatsoever.

The legal tension at the heart of fan surveillance is ultimately about whether genuine consent is possible in a context where the practical barriers to opting out are insurmountable. In the World Cup context, a fan who has spent thousands of dollars on flights, accommodation, and tickets to attend the World Cup Finals is not in a meaningful position to refuse biometric registration at the stadium gate. This is the same structural problem that data protection law has long recognised in employment contexts, where the power imbalance between employer and employee renders consent coerced rather than freely given. The challenge for the next generation of sports law is to develop frameworks capable of recognising the same reality in the context of major international sporting events, where the choice between participation and privacy has effectively ceased to exist.

ARTIFICIAL INTELLIGENCE AND AUTOMATED DECISION-MAKING IN FOOTBALL

While discussions surrounding technology in football have traditionally focused on tools such as the Video Assistant Referee (VAR), the role of AI extends far beyond match officiating including identifying offside plays. Today, AI systems are used to analyse player performances, predict injury risks, identify emerging talent, support recruitment decisions, optimise tactical strategies, and manage stadium operations and crowd control.

One of the most visible applications of AI is Semi-Automated Offside Technology (SAOT), first introduced at the 2022 FIFA World Cup to improve the speed and accuracy of offside decisions. The technology was first deployed at the FIFA World Cup Qatar 2022 and has

continued to evolve through subsequent FIFA competitions.

Although such innovations are often welcomed for enhancing consistency and reducing human error, they also raise important legal and ethical questions. If an AI-assisted decision materially affects the outcome of a match, who bears responsibility where the technology malfunctions or produces an inaccurate result? Is liability attributable to FIFA, the technology provider, match officials, or some combination thereof?

Beyond officiating, AI is increasingly involved in decision-making processes that directly affect athletes' careers. Clubs and national teams now rely on predictive analytics to evaluate player performance, assess transfer targets, determine playing time, and forecast injury risks. While these tools may improve efficiency and objectivity, they also create concerns regarding transparency and accountability. Athletes may find themselves subject to decisions influenced by complex algorithms without understanding how those decisions were reached or having any meaningful opportunity to challenge them.

This issue becomes particularly significant where AI systems process personal or biometric data to generate recommendations that affect an athlete's professional opportunities. Questions therefore arise regarding the extent to which athletes should be entitled to access information about the operation of these systems, understand the basis of automated decisions, and seek review where they believe such decisions are inaccurate or unfair. These concerns mirror broader regulatory developments, particularly within the European Union, where increasing emphasis is being placed on transparency, explainability, and accountability in AI systems.

RETHINKING SPORTS GOVERNANCE IN THE DIGITAL AGE

The rapid adoption of emerging technologies across global sport raises a broader question: are existing sports governance frameworks adequately equipped to regulate the digital transformation of football?

⁵ DataBreach Today "Qatar's World Cup Apps Pose Privacy Concerns" (November 2022) <https://www.databreachtoday.com/qatars-world-cup-apps-pose-privacy-concerns-a-20481> (accessed June 2026).

⁶ General Data Protection Regulation, Regulation (EU) 2016/679, Art. 6, 2016 O.J. (L 119) 1

⁷ Gadget Review / Yahoo News, "World Cup 2026 Security Normalizes Mass Surveillance" (June 2026) - <https://www.gadgetreview.com/world-cup-2026-security-normalizes-mass-surveillance>

⁸ TeleSur English, "Crystal Football Stadiums: The World Cup of Surveillance" (June 2026) <https://www.telesurenglish.net/crystal-stadiums-world-cup-surveillance/>

Historically, sports governance has focused primarily on issues such as competition integrity, player eligibility, disciplinary proceedings, anti-doping compliance, and financial regulation. While these areas remain important, modern sporting events increasingly operate within a technological ecosystem characterised by extensive data collection, sophisticated surveillance systems, artificial intelligence, and complex digital infrastructure. As a result, governance frameworks designed for an earlier era may struggle to address the legal and ethical challenges created by these developments.

The FIFA World Cup illustrates the growing complexity of this regulatory landscape. Numerous stakeholders are involved in the collection, processing, and use of data generated during the tournament, including FIFA, host nations, national football associations, technology providers, sponsors, broadcasters, and security agencies. Each of these stakeholders have distinct commercial interests, regulatory obligations, and responsibilities regarding data protection and privacy.

The increasing use of biometric technologies presents a particularly significant challenge. Biometric information is among the most sensitive categories of personal data. Yet current sports regulations often provide limited guidance regarding the collection, storage, sharing, and commercial exploitation of such information. As biometric monitoring becomes more prevalent, governing bodies need to develop clearer standards concerning consent, retention periods, access controls, and permissible uses of athlete and fan data.

Similarly, the growing use of artificial intelligence in officiating, performance analysis, recruitment, and security operations raises questions regarding regulatory oversight. Existing sports governance structures have traditionally focused on regulating human conduct. However, they may be less equipped to address decisions influenced or generated by automated systems.

The challenge is further complicated by the global nature of football. Data generated during the World Cup frequently crosses multiple jurisdictions, each with distinct legal requirements concerning privacy, cybersecurity, and data protection. Ensuring compliance within such a fragmented regulatory environment requires close cooperation between sporting organisations, governments, regulators, and technology providers.

CONCLUSION

The FIFA World Cup has long been celebrated as the pinnacle of international football. Yet beyond the goals and trophies lies a rapidly expanding digital ecosystem that is transforming how the game is being played and governed. From biometric monitoring and artificial intelligence to facial recognition technologies and advanced surveillance systems, data has become an increasingly valuable asset within modern sport.

While these technological developments offer undeniable benefits, they also introduce complex legal questions concerning privacy, ownership, accountability, transparency, and regulatory compliance. Athletes are generating unprecedented volumes of personal and performance-related data. Fans are increasingly interacting with digital platforms that collect and process sensitive information. Governing bodies and commercial stakeholders are seeking to harness this information for operational, commercial, and strategic purposes.

The future of sports law extends beyond traditional issues such as player transfers and disciplinary proceedings, to encompass data ownership, digital rights, artificial intelligence, cybersecurity, and surveillance governance. As the FIFA World Cup becomes more technologically advanced, the most significant legal disputes may no longer arise from events on the pitch but from the collection, control, and commercialisation of data. In the digital era, information has become one of sport's most valuable assets, making its regulation the next great frontier of sports law.

⁹ Gadget Review / Yahoo News, "World Cup 2026 Security Normalizes Mass Surveillance" (June 2026) -<https://www.gadgetreview.com/world-cup-2026-security-normalizes-mass-surveillance>
<https://inside.fifa.com/innovation/innovating-the->

¹⁰ FIFA, Semi-Automated Offside Technology game/semi-automated-offside-technology (accessed June 2026).

¹¹ Ibid

¹² FIFA, Semi-Automated Offside Technology FIFA Women's World Cup Australia & New Zealand 2023 <https://football-technology.fifa.com/innovation/womens-world-cup-2023/semi-automated-offside-technology> (accessed June 2026).