FIFPRO

In cooperation with
FOOTBALL BENCHMARK

2024

EXCESSIVE WORKLOAD DEMANDS:

PLAYER PERFORMANCE RECOVERY AND HEALTH

FIFPRO PLAYER WORKLOAD MONITORING

Men's Football Report

FIFPRO PLAYER IQ WORKLOAD

PLAYERS' VIEW

"WE NEED TO THINK TOGETHER ABOUT HOW TO OFFER THE BEST POSSIBLE SOLUTION SO THAT PLAYERS, SPECTATORS, AND FOOTBALL'S GOVERNING BODIES CAN ALL EMBRACE IT."

Kylian Mbappé

"THE SCHEDULE IS GETTING BUSIER AND BUSIER."

Virgil van Dijk

"IT'S SO TOUGH WITH CRAZY SCHEDULES... IT'S DIFFICULT ON THE BODY — MENTALLY AND PHYSICALLY YOU ARE EXHAUSTED."

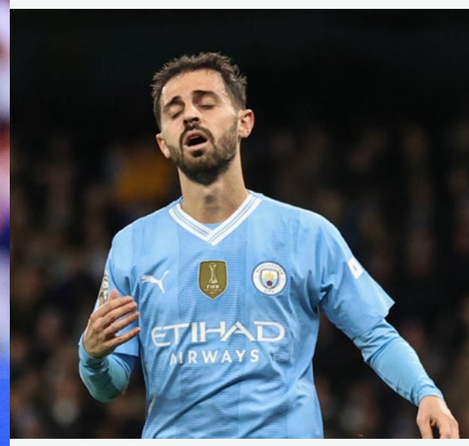
Jude Bellingham

"THE SCHEDULE IS VERY TOUGH, ESPECIALLY FOR THOSE OF US FROM SOUTH AMERICA"

Valverde

"IT'S TOO MUCH. TODAY WAS TOO MUCH. WE PLAYED 120 MINUTES LESS THAN THREE DAYS AGO."

Bernardo Silva



I DO NEED A REST

Rodri

> “Playing 80 games is not possible. It's too much. The authorities have to do something.”
>
> **AURÉLIEN TCHOUAMÉNI**
> (REAL MADRID CF AND FRANCE)

LISTEN TO THE PLAYERS!

Welcome to this year’s FIFPRO Player Workload Monitoring (PWM) report, developed in cooperation with Football Benchmark.

If we take a step back and look at the content within, some of us might ask: is it not a little curious that we have another report on the workload of professional footballers? After all, who could be healthier than a top athlete?

But, as you all know, we release these reports for a good reason. Because, today, we face one of the most serious and urgent problems in our sport. A problem that results from the abuse of governance and a failure of the duty of care.
The holistic workload that confronts our players is unprecedented. It has produced a physical and mental fatigue that is now dangerous.

But how did we get here?
As player unions, listening to players is perhaps the most important part of our work. Our members are the ones in the centre of everything. They are the ones standing on the pitch. They are the ones training, travelling and spending several weeks at tournaments.

So, what are they telling us, today, about the state of our game?
Well, you can read what the players are saying here in the report. Their words and the data presented paint a clear picture. Our players have already surpassed their limits. The international calendar is already more than full.

But what is the response from international bodies?
More. More games, more competitions, more votes. And no safeguards or considerations for players. This seems to be the vision for the future of our sport.
We cannot continue like this! This path is not sustainable. It harms the players and harms the competitions that already exist.

But it does not have to be this way. We can build a new vision for our sport. A vision that respects the performance and health of every player. A vision that listens to the players and their national competitions – giving them a seat at the table. A vision for the future that recognises football in its national markets – players, fans, clubs, leagues – and one that allows to innovate the industry together.

But as long as international bodies refuse to listen and decide by themselves, we must take matters into our own hands. This is our duty as a union – the duty we owe to our members. To call out the abuse of governance and failure of the duty of care. To demand our seat at the table together with our social partners. The international calendar can no longer be discussed and approved without the players' agreement.

Thank you for your time and please enjoy reading the 2023/2024 player workload report for men’s football.

Stephane Burchkalter,
Acting General-Secretary, FIFPRO

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"It's too much. Today was too much. We played 120 minutes less than three days ago."

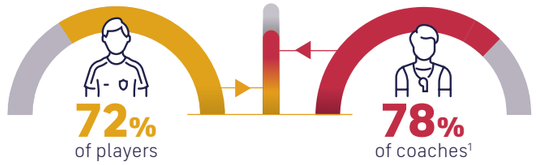
BERNARDO SILVA
(MANCHESTER CITY FC AND PORTUGAL)

01 PLAYER WORKLOAD KEY FINDINGS

SEASON 2023/2024

FIFPRO | PLAYER IQ WORKLOAD

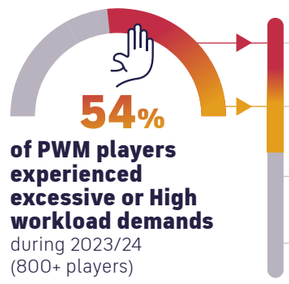
01 PLAYERS & EXPERTS CONTINUE TO CALL FOR SAFEGUARDS



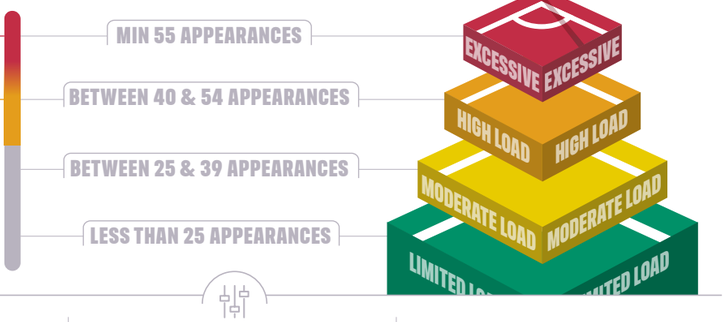
Support implementation of a guaranteed rest period

> "To ignore the consequences of the number of games and amount of travelling will end in injuries for any player."
>
> Marcelo Bielsa, Uruguay national team manager

02 PLAYER HEALTH JEOPARDISED BY LACK OF REGULATION



of PWM players experienced excessive or High workload demands
during 2023/24
(800+ players)



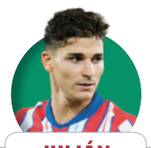
31% OF PLAYERS HAD 55+ MATCHDAY SQUAD INCLUSIONS

17% OF PLAYERS MADE 55+ APPEARANCES

30% OF PLAYERS HAD AT LEAST ONE SEQUENCE OF 6+ CONSECUTIVE BACK-TO-BACK MATCHES

03 GLOBAL CALENDAR DEMANDS SHOW EXTREME IMPACT ON PLAYERS

SEASON 2023/24



JULIÁN ALVAREZ

75 Match appearances

83 Squad inclusions

TAKUMI MINAMINO

01 DAY Recovery post-AFC Cup before next club match

ALEXANDER LÓPEZ

19 Consecutive back-to-back matches

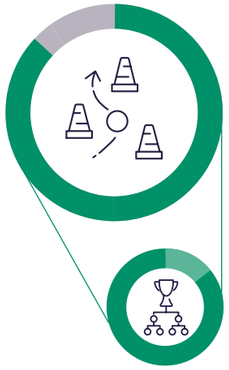
CRISTIAN ROMERO

162,978KM travelled internationally cross-border

1. UNFP Player & Coach Surveys 2024

04 INTERNATIONAL COMPETITIONS CRITICALLY IMPACT WORKING TIME & REST

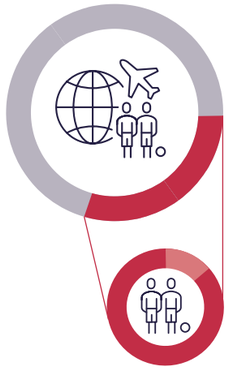
WORKING TIME IN 2023/24



88% TIME SPENT IN THE WORKPLACE ENVIRONMENT by leading players

17% TIME SPENT IN NATIONAL TEAM ENVIRONMENT by leading players who played in Euro 2024

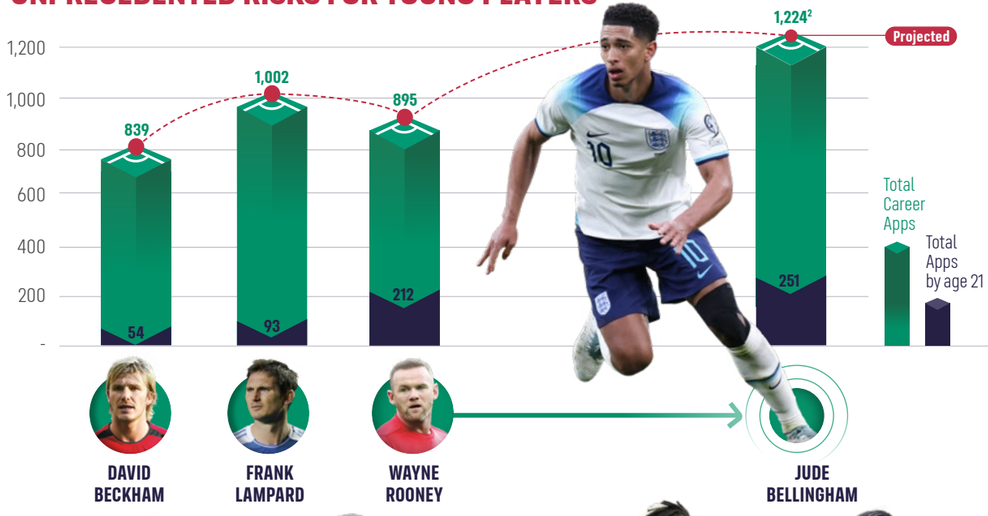
TOTAL MATCHES IN 2023/24



30% OF MATCHES FOR PLAYERS WITH EXCESSIVE WORKLOAD (55+ APPS) were international fixtures (Club Int'l or National Team)

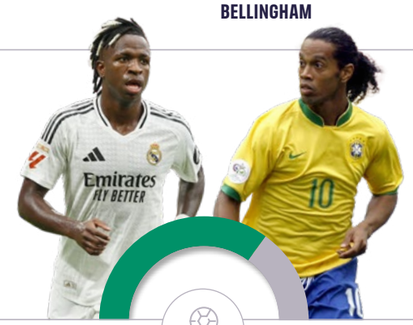
15% OF THESE MATCHES were National Team fixtures

05 UNPRECEDENTED RISKS FOR YOUNG PLAYERS



FLORIAN WIRTZ
11,501
Minutes played by age 21

MICHAEL BALLACK
4,175
Minutes played by age 21



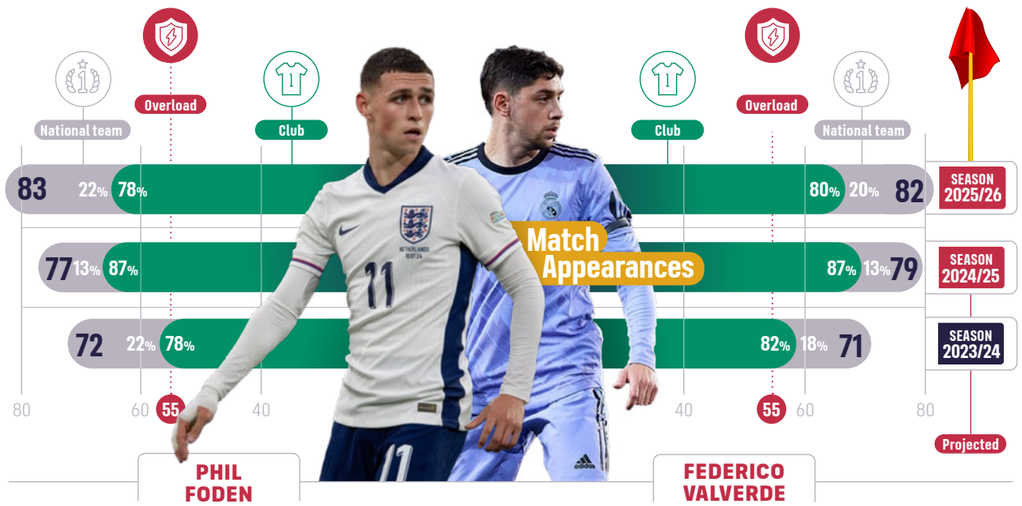
VINICIUS JUNIOR
369
Apps by age 24

RONALDINHO GAÚCHO
163
Apps by age 24

2. Projected based on current rate and relevant assumptions and risk factors2024

06

INTERNATIONAL COMPETITION EXPANSION INCREASES RISK FOR PLAYERS



07

TOTAL ABSENCE OF SAFETY & HEALTH PRINCIPLES[3]

- NO CONSIDERATION FOR HEALTH & LABOUR LEGISLATION
- NO RISK EVALUATION FOR NEW COMPETITIONS
- NO PLAYER SAFEGUARDS IMPLEMENTED
- VIOLATION OF DOMESTIC LABOUR AGREEMENTS

3. Missing application of international OSH Legislation to the football sector

02

THE EXPERTS' VIEW: UNDERSTANDING HOLISTIC PLAYER WORKLOAD

Being a professional football player and to sustain a long and successful career in high-performance environment is more complex than many try to make it. Matches and minutes played on television are only a tiny part of the work a professional players has to undertake. This chapter provides a more holistic and nuanced view on player workload, as well as guidance on where workload boundaries should be set.

"We are, in the end, human. Of course, we try to be the machine on the pitch, but we cannot forget that we are the human and also, we need the time to rest properly."

ROBERT LEWANDOWSKI
(FC BARCELONA AND POLAND)

02 / THE EXPERTS' VIEW: UNDERSTANDING HOLISTIC PLAYER WORKLOAD

EXPERT OPINION: HINDERING HIGH-PERFORMANCE AND THREATENING PLAYER HEALTH

DARREN BURGESS
Chair, FIFPRO High-Performance Advisory Network
Performance Director, Adelaide FC

The sustained performance of football's key participants - the players - is fundamental to the global success of the sport. Surprisingly, this message continues to be ignored or undervalued by those in charge of governing the game. High-performance directors and coaches work closely with players on a daily basis, playing a small but significant role in supporting them to reach their maximum potential. This work, however, is being undermined by the those trusted with managing the match calendar and organising competitions.

Calendar Congestion Stressors

Players are now being engulfed by expansion of the match calendar, with both club and international matches and tournaments occurring in every month of the year. Alarmingly, the fixture congestion is set to expand further, so that tournaments, and preparations necessary for performing well in them, will begin to overlap with each other. The expanded club competition formats of the FIFA Club World Cup and the UEFA Champions League, for example, alongside expanded National Team competitions, such as the FIFA World Cup and UEFA Nations League, will lead to a greater number of games played by the leading players in the game. Significantly, these expanded tournament formats, as well as the recent introduction of additional international club competitions, such as the UEFA Conference League, means more footballers will be exposed to greater match demands and therefore face greater auxiliary stressors, including travel fatigue, mental stress, injury risk, etc.

Challenges and Risks

For high performance and medical staff charged with maintaining players' mental and physical fitness, this presents a substantial challenge. For example in the recent past, congested club seasons were followed by 4-5 weeks of player downtime allowing players to fully recover. This 'off-season' period is now consumed with important international tournaments, usually involving substantial travel and always performed in a high-stress environment. Shortened off-season breaks not only mean less recovery, but also less training time and therefore less preparation time for subsequent domestic competitions. High performance staff are left to manage residual player fatigue (both mental and physical) while attempting to physically prepare players within a dangerously limited pre-season preparation period. This cycle continues throughout the traditional season with domestic leagues overlapping with cup competitions, continental tournaments, and national team fixtures.

These scenarios undoubtedly result in increased risk of reduced performance, and possibly an increased risk of injury to players as a result of cumulative fatigue. In the absence of regulations safeguarding player health, the burden inevitably falls on the management and coaching staff to protect the welfare of these players. In turn, this becomes a difficult task, with increasing competitive scrutiny on managers and intense competition for selection amongst a host of factors that often lead to player participation, even at the expense of player health and performance, becoming the priority.

HPAN and PWM Metrics

Earlier this year, the FIFPRO High-Performance Advisory Network (HPAN) was established as the latest component of Player IQ, FIFPRO's knowledge centre. Their wealth of experience across different regions, environments and sports will enable us to provide valuable insights and support the FIFPRO team in their work.

FIFPRO Player Workload Monitoring (PWM) has also recently introduced new metrics in the latest development of the PWM tool, which tracks the match load, rest, recovery and travel of players across the globe. One such metric, is 'Squad Utilisation' to assess the impact and frequency of player rotation across selected clubs and leagues. Despite extended squads, FIFPRO's analysis demonstrated that, on average, across clubs in professional French and Portuguese leagues, 8 players were responsible for 50% of total game time, with the remaining squad members completing the other 50%. Therefore, while adjustments to squad or subs match rules may have some effect on less established players, a club's core group of players will remain largely unaffected and subject to the same workload demands. Regulation of player match load might well be the best way of effectively managing the workload of these players and alleviating competitive pressure on the decision-making of management and coaching staff.

'Managing' players with spots on the bench is one such option, however this still exposes players to travel, physical preparation, match stress and possibly late nights with disrupted sleep depending on fixture timing. Whilst in this scenario matchday minutes might be low, there is undoubtedly additional stressors placed on substitute players that has been previously unquantified. FIFPRO PWM recently introduced the 'Matchday Squad Inclusions' metric to capture this information and research into this area is ongoing.

Finally, the third new PWM metric that I'd like to mention, is perhaps the most revealing. Utilising the knowledge and expertise of players, coaches and unions, the 'Working Time' breakdown of selected players has also been integrated into the recent PWM research. During my time with the Socceroos, I experienced first-hand the commitment required of national team players, particularly those who played their club football on a different continent. The physical and mental toll of consecutive weeks in camp, long-distance travel, dramatic changes in climate, and major tournament pressures are considerable. In tandem, the importance of rest, both during the season and over the off-season, remains vitally important and this new metric highlights the scarcity for many leading players.

Looking Ahead

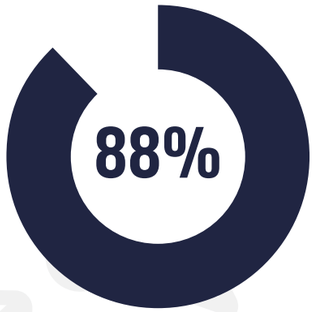
High performance staff have never been more challenged: to gather and analyse information on players relating to on and off-field stress; to advise both players and managers on player fitness and availability; to protect player welfare; and to ensure their readiness to perform. Unfortunately, the current global football calendar is simply not synonymous with these goals and a better collective solution is urgently required.

INSIGHTS FROM FIFPRO'S HIGH-PERFORMANCE COACH SURVEY

To establish clear guidelines, FIFPRO conducted a comprehensive survey during the 2021/22 season, involving almost 100 high-performance experts from around the world, including coaches, sports scientists, and medical professionals with extensive experience across both club and national team football. The experts provided their opinion on various topics related to player performance, health and workload management.

Total Match Load

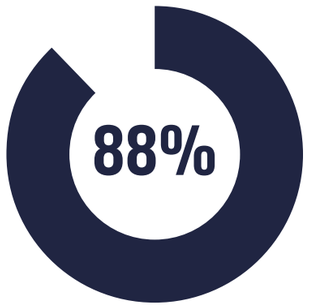
One of the most significant findings is the overwhelming consensus on the maximum number of matches a player should participate in each season. According to the survey, 88% of experts agreed that players should not play more than 55 matches per season. Exceeding this threshold significantly increases the risk of injury and burnout.



of High Performance Coaches (HPC) believe players should not play more than 55 matches per season

Rest Period

In addition to the number of matches, the survey highlighted the critical importance of rest periods. Over half of the players surveyed in the 2021/2022 PWM Global Player Survey, conducted in parallel to the high-performance coach survey, reported that their mandated breaks—both off-season and in-season—are often compromised by club or national team demands. The experts assert that to recover fully and maintain peak performance, players need at least 28 consecutive days off during the off-season and a flexible 14-day break during the season. These breaks are essential not just for physical recovery but also for mental rejuvenation.

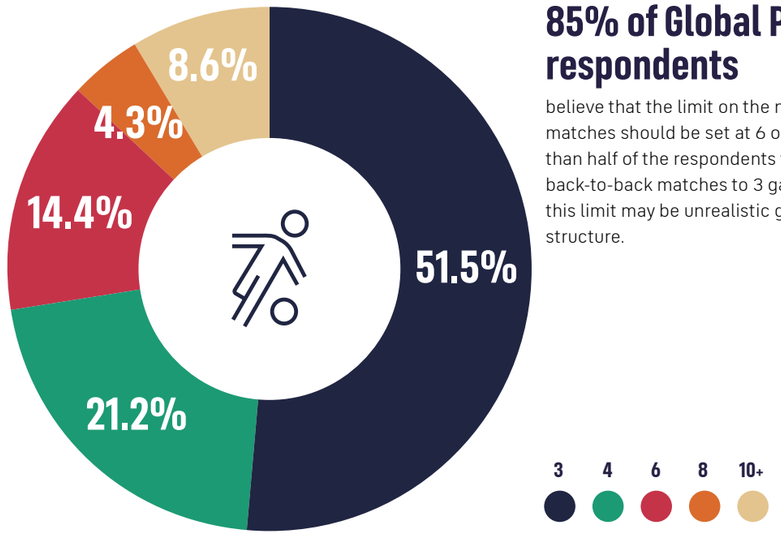


of High Performance Coaches think that 4+ weeks of off-season break are needed

Consecutive Back-To-Back Matches

Another key insight from the survey is the danger posed by exposure to long sequences of consecutive back-to-back matches. While the performance consensus suggested that players should be limited to no more than six consecutive back-to-back matches, many players are still subjected to sequences of 10 or more consecutive back-to-back games across the season. This can lead to many negative outcomes, including sleep disruption, travel fatigue, increased injury risk, and mental health challenges. The experts strongly advocate for stricter guidelines to limit consecutive match exposure, thereby reducing these risks and preserving player health.

Players' perspective



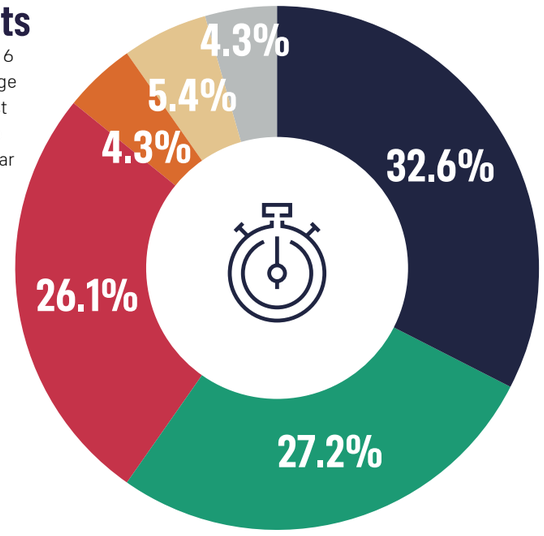
85% of Global Player Survey respondents

believe that the limit on the number of back-to-back matches should be set at 6 or fewer. Furthermore, more than half of the respondents would prefer to limit back-to-back matches to 3 games. However, achieving this limit may be unrealistic given the current calendar structure.

High Performance Coaches' perspective

Around 80% of all respondents

agree that the cap on back-to-back matches should be 6 or fewer, which is aligned with the players' view to a large extent. However, it should also be noted that the largest group of respondents believe that three is the absolute maximum that should be allowed in the current calendar setting.



A MULTI-FACTORIAL OVERVIEW OF PLAYER WORKLOAD DEMANDS

A holistic view of player workload is multifactorial and has therefore to consider many different aspects of work. only with a holistic understanding of workload in the professional football industry it is possible to identify comprehensive risk factors and develop tailored mitigation strategies.

PLAYER WORKING TIME ANALYSIS

The following analysis aims to provide an in-depth look at the working time commitment of top football players during a season. By examining the 2022/2023 season of Marquinhos, captain of Paris Saint Germain FC and the Brazilian national team, as well as the 2023/2024 season of two players from the same top European club, we aim to quantify the time these athletes dedicate to football-related activities. This includes training, traveling, matchdays, and other obligations for both their club and national teams. Our analysis considers the impact of major tournaments like the FIFA World Cup and UEFA European Championship, which significantly extend the working time for these players. The goal is to highlight the intense demands placed on elite footballers and how it affects their time for rest, recovery, and personal life.

METHODOLOGY – Each day is categorized based on the primary activity or activities that took place. Given that football schedules often involve multiple commitments in a single day — such as training and travel, or match appearance and travel — our approach assigns the most demanding activity to each day. For example, if a day includes both playing a match and traveling back home, then it is classified as a matchday.

MARQUINHOS

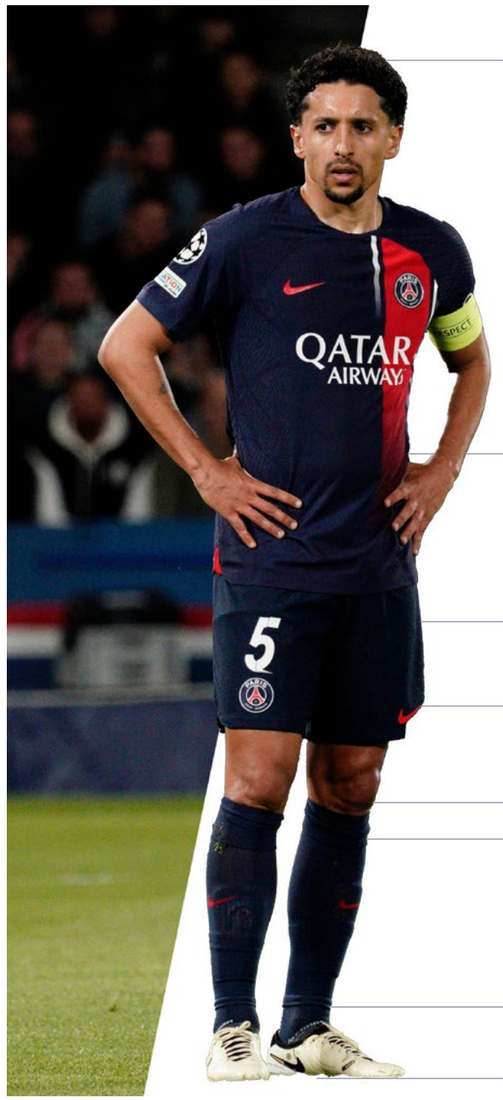
(Paris Saint-Germain FC, Brazil national team) – Overview of the 2022/23 season

The 2022/23 club season was paused midway to accommodate the FIFA World Cup in Qatar. For many (non-international) players, this break was a welcome downtime, offering a chance to rest and recuperate. However, for others, as was the case for Paris Saint-Germain FC and Brazil defender Marquinhos, it marked the start of an intense and demanding period, with busy weeks ahead.

Footballers already spend a substantial portion of the year in a workplace setting, whether it is playing matches, training, or traveling for their respective clubs. However, top players who also represent their countries face even greater demands, as they must often extend their season well beyond the typical club schedule leaving them with fewer opportunities to recuperate and rest.
During the 2022/23 season, Marquinhos spent 80% of the year in a workplace setting, either with his club or the Brazilian national team, recording 58 match appearances and having one more matchday in which he was an unused substitute. He accumulated over 4,976 minutes for club and country, with 63% of those minutes played in back-to-back matches. Over the course of the season, Marquinhos spent 74 hours in the air during international trips, travelled over 55,000 kilometres, and crossed time zones 30 times.

While he spent 80% of his days in a work setting, this ratio could have been even higher were it not for several one-off factors:

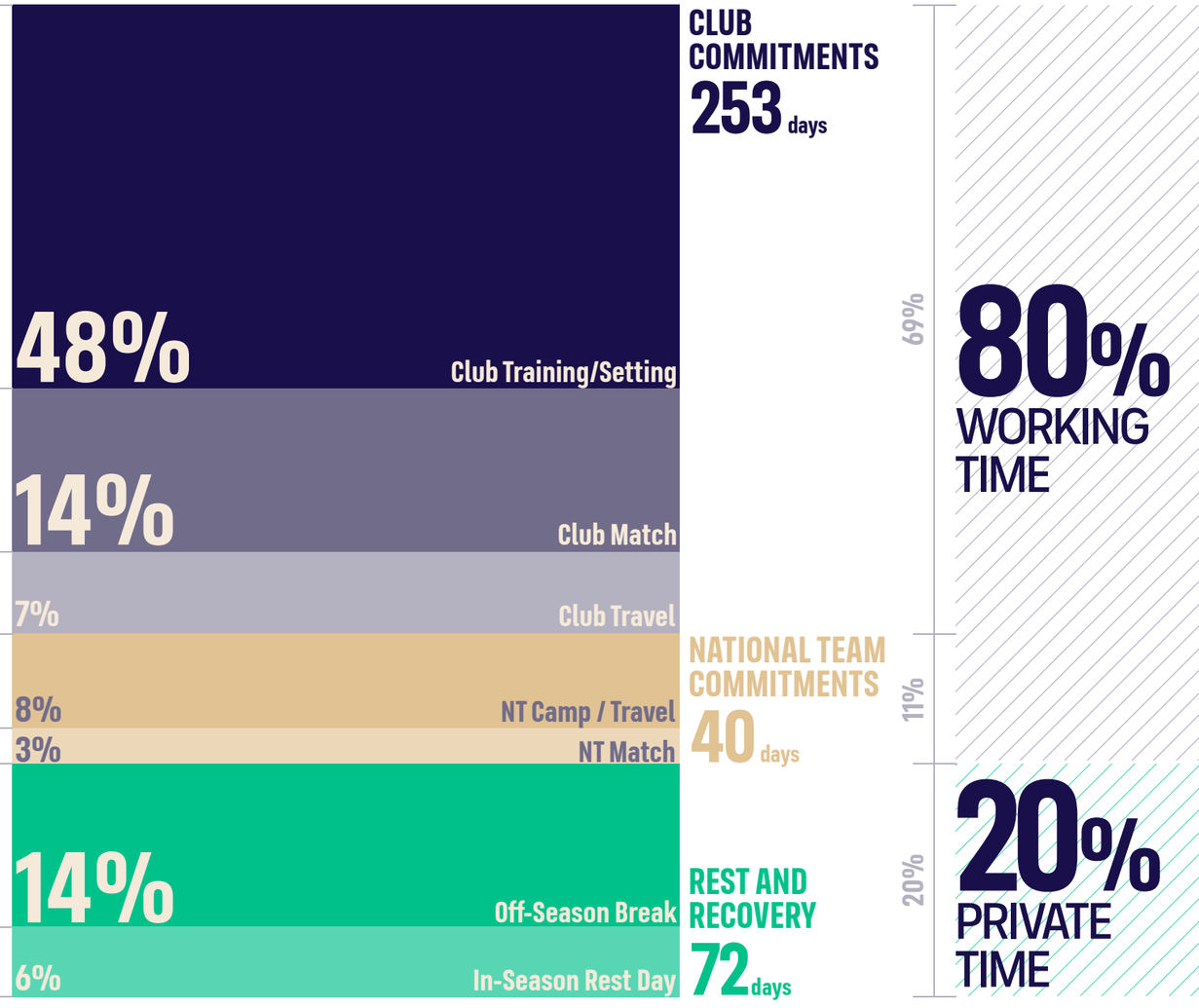
- As the 2022 FIFA World Cup took place during the club season, preparations for it with the national team had to be shorter than usual;
- Due to Brazil's early exit from the World Cup, Marquinhos was allowed 11 days off before returning to PSG.
- As there was no tournament in the summer of 2023, his off-season break could start earlier.



How did he spend his time?

The breakdown of all 365 days of the 2022/23 season by category

80% OF YEAR SPENT IN A WORKPLACE SETTING (2022/23)



Working Time Analysis – Overview of the 2023/24 season
Two Players from the Same Club and the Impact of National Team Commitments

The busy match calendar of the 2023/24 season placed significant strain on elite-level players. With international competitions such as the Africa Cup of Nations, the Asia Cup, and the Euros, many players had little opportunity for rest. This relentless pace underscored the pressures faced by top footballers, who must continually perform at their best despite the exhaustive demands.

For our working time analysis of the 2023/24 season, we compared two players from the same club participating in a leading European league and UEFA club competition. Although the schedules of the two players within the same club setting was very similar, only one of them participated at the Euros in the summer, leading to significant difference in how much time they spent in a workplace setting altogether.

Due to his participation in the Euros, Player 2 spent 88% of the year immersed in football, compared to Player 1, who spent 81%. In this context, "workplace" refers to days required for availability to either club or country, including travel days and training. In-season rest days and off-season break days are excluded from this count as those are the only periods truly spent outside the workplace setting.

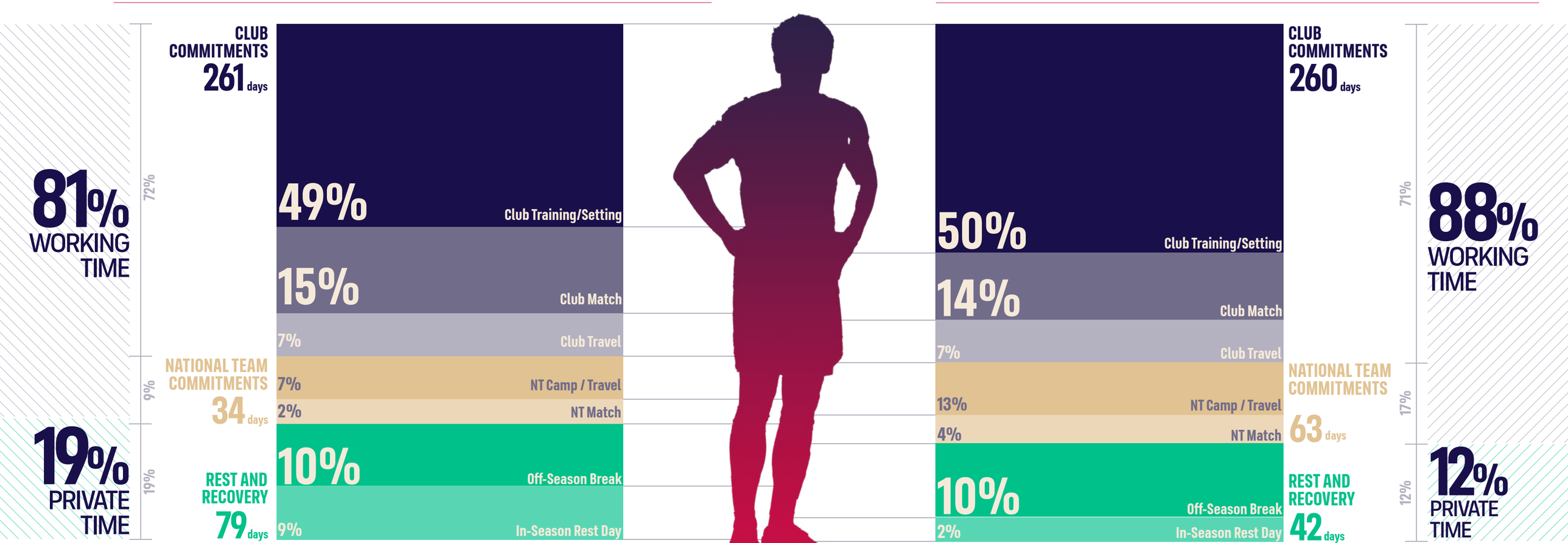
Due to his participation at the Euros, Player 2's off-season break of 4 days within the analysed period was considerably shorter than Player 1's 33 days. This substantial difference in downtime highlights the intense demands placed on players who participate in international summer competitions. In addition to the short rest periods, international travel, and acclimatization to different time zones and climates can also make players' recovery more challenging. Undoubtedly, this also increases the players' risk of injury due to physical and mental fatigue. To minimize these risks, clubs and national teams must work together to better manage player workload, ensuring that their health and performance are not compromised.

Two Players from the Same Club Setting - How Did They Spend Their Time?
PLAYER 1 - Did not participate at EURO 2024

81% OF YEAR SPENT IN A WORKPLACE SETTING (2023/24)

Two Players from the Same Club Setting - How Did They Spend Their Time?
PLAYER 2 - Participated at EURO 2024

88% OF YEAR SPENT IN A WORKPLACE SETTING (2023/24)



RISK COMPONENTS OF HOLISTIC PLAYER WORKLOAD DEMANDS

Excessive workload has many detrimental effects on players and competitions. The negative impact of individual match workload and continuous competition cycles is aggravated by the absence of individual and collective safeguards. This causes major harm to players and the game, ultimately also undermining the sporting value of competitions. Here are the most common negative effects.

BODY

- Injury risk
- Travel fatigue
- Mental burn-out
- Disrupted sleep cycle
- Inability to sustain best condition
- No time for adequate post-season recovery

PERFORMANCE

- No time for training and conditioning
- Reduced time for rest away from football
- Inability to sustain peak performance

LIFESTYLE

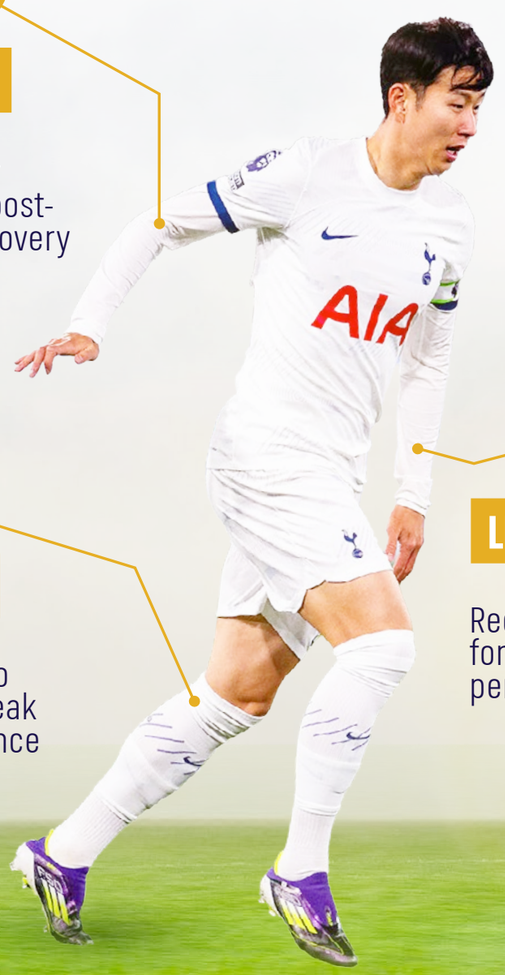
- Reduced time for family and personal life

MIND

- Stress and reduced focus

CAREER

- Financial impact of injuries
- Risk of decreasing 'sporting value'
- Risk of shortened careers



EXPERT OPINION: A HOLISTIC OCCUPATIONAL SAFETY AND HEALTH (OSH) APPROACH TO ADDRESS CALENDAR CONGESTION IN FOOTBALL

PROF. LODE GODDERIS
Professor, Centre for Environment and Health;
University of Leuven
CEO, IDEWE (Services for the Prevention
& Protection of Employees at Work)

SIMON TAES
Post-doctoral Researcher,
The Institute for Labour Law,
KU Leuven

As demonstrated in this FIFPRO annual Workload report, the calendar congestion has adverse effects on player health and wellbeing. The survey in this report refers to the experiences of the football players regarding the increasing mental and physical fatigue and the increased risk to suffer an injury due to the congested calendar.

While existing literature primarily focuses on sports performance, there is a critical need to examine these challenges from an occupational health perspective. Researchers from KU Leuven are conducting research on the medical and legal instruments on the occupational safety and health (OSH).

A systematic umbrella review was carried out to identify and analyse the demands, resources, and health outcomes associated with professional football competitions. Six primary themes have been identified: injury, fatigue, mental health, workload, monitoring practices, and lifestyle factors such as sleep and nutrition. The analysis identified key demands faced by soccer players, including high training loads, match congestion, and significant psychological stressors.

These demands are associated with various negative health outcomes, including injuries, fatigue, and mental health disorders such as anxiety and depression. The JDR model highlighted possible resources, such as advanced monitoring systems, targeted injury prevention programs, recovery time and tailored nutritional strategies, which can mitigate the adverse effects of these demands.

The findings of this study emphasise the critical need for a holistic and coordinated approach to managing the health and well-being of professional football players. Preventive measures such as workload management, mental health monitoring, sustainable competition scheduling and the implementation of comprehensive recovery and/or protective protocols are essential in reducing the risk of injury and promoting long-term well-being and performance.

With these insights, strategies and standardised guidelines that align with OSH principles and legislation need to be developed and implemented. In the second part of the study, the researchers, will conduct research on the protection provided by various international and European legal instruments on OSH.

In particular, they aim to clarify the application of this legal protection in the context of the players' workload. This innovative study aims to contribute to strengthening the protection for players, as the holistic approach in the OSH legislation requires, amongst others, to identify and assess risks related to every aspect of work. This would also include the impact assessment of extended or newly added workload demands (such as new competition formats).

This would require that football governing bodies need to assess the risks related to the increasing workload by the football calendar not only for their physical health (e.g. injuries and diseases) but also their mental health (e.g. stress and work-life balance). In addition, governing bodies, competition organisers and football clubs would be required to adopt preventive measures to avoid these risks and to safeguard their players' health.

This research focuses, moreover, on the tension between this OSH approach and the particularities of the football industry. Overall, this research aims to investigate the meaning of the OSH approach as a way to adopt effective and adequate industry-wide governance rules in football to strengthen individual protections through standardisation between different bodies competing for the working time of professional players.

03

PWM 2023/24: THE SEASON REVIEW

The 2023/24 season proved to be exceptionally demanding for many players due to the holistic demands of the match and competitions calendar. Club football and long-term national tournaments like the AFC Asian Cup, CAF Africa Cup of Nations, Copa América, and Euro 2024 created a relentless and year-round cycle. These competitions further burdened players who already had a challenging schedule. Moreover, the trend of younger players accumulating extensive playing time raises serious questions about their long-term health and performance.

"I want more time to prioritise other things than football in my life."

FREDRIK AURSNES
(SL BENFICA AND NORWAY)

03 / PWM 2023/24: THE SEASON REVIEW

KEY TAKEAWAYS

AT A GLANCE – CHAPTER 03

- Substantial group of players routinely play more than 60-70 matches each season, far above the recommended threshold of 55 total matches.
- 9 of the top 10 players by international travel time during 2023/24 were South American players playing for European clubs.
- Julián Álvarez's workload during 2023/24 was historic, accumulating 75 appearances and 83 squad inclusions during a 14-month season involving 10 different competitive competitions.

INTRODUCTION

This chapter highlights the top 10 player rankings in key workload metrics (match load, recovery and international travel) providing insights into the different pressures faced by today's players. Then this chapter will deep dive into the case of Julián Álvarez and his worrying 2023/24 workload when he practically had a 14-month-long season.

INTERNATIONAL TRAVEL

Top 10 players with the highest international travel time

Rank	Player name	Club(s)	Nationality	Date of birth	International travel time (hours)	Travel distance (km)	Total trips made
1	CRISTIAN ROMERO			27/04/1998	211	162,978	25
2	JULIAN ALVAREZ			31/01/2000	204	153,869	39
3	RODRIGO DE PAUL			24/05/1994	198	150,480	32
4	DAVINSON SANCHEZ			12/06/1996	193	147,539	29
5	JOSÉ CIFUENTES			12/03/1999	189	143,381	32
6	ALEXIS MAC ALLISTER			24/12/1998	189	143,333	32
7	EMILIANO MARTINEZ			02/09/1992	189	141,927	37
8	LAUTARO MARTINEZ			22/08/1997	188	143,158	31
9	HIDEMASA MORITA			10/05/1995	186	142,329	28
10	FACUNDO PELLISTRI			20/12/2001	186	141,686	31

Source: FIFPRO Men's Player Workload Monitoring Platform

As expected, this list includes European-based players representing different national teams outside of UEFA, given their extensive travel for international commitments. Leading are three Argentine players, each logging over 198 hours of travel. While most players are South American internationals, the list also includes Hidemasa Morita from Japan. However, many players in other confederations may suffer from the same problem, even though it might not be currently reflected in the PWM platform's sample selection.

MATCH LOAD

Top 10 players by matchday squad inclusions

Rank	Player name	Club(s)	Nationality	Date of birth	Total matchday squad inclusions	of which: club - domestic	of which: club - internat.	of which: club - friendly	of which: national team	Total appearances made	Total minutes played
1	JULIAN ALVAREZ			31/01/2000	83	46	13	3	21	75	5,364
2	PHIL FODEN			28/05/2000	77	45	13	3	16	72	6,170
-	LUIS DIAZ			13/01/1997	77	46	10	5	16	72	5,648
4	RUI PATRICIO			15/02/1988	76	40	14	6	16	30	2,703
5	VIRGIL VAN DIJK			08/07/1991	74	45	8	5	16	69	6,293
-	NIKOLA MILENKOVIĆ			12/10/1997	74	43	14	5	12	66	5,670
-	OLLIE WATKINS			30/12/1995	74	41	13	5	15	66	5,496
-	ANTÓNIO SILVA			31/10/2003	74	43	10	5	16	64	5,657
-	RÚBEN DIAS			14/05/1997	74	43	13	3	15	60	5,584
10	DARWIN NUNEZ			24/06/1999	73	45	10	5	13	72	4,694
-	CODY GAKPO			07/05/1999	73	45	9	5	14	71	4,598
-	SAUD ABDULHAMID			18/07/1999	73	40	18	2	13	68	6,371
-	KYLE WALKER			28/05/1990	73	43	12	3	15	64	5,916
-	ZEKI CELIK			17/02/1997	73	40	13	6	14	45	2,557
-	AARON RAMSDALE			14/05/1998	73	41	10	5	17	18	1,664

Source: FIFPRO Men's Player Workload Monitoring Platform

Being in the matchday squad reflects full participation in team preparations and travel and therefore provides a more accurate perspective on the holistic workload demands of players. A significant amount of players easily go above 70 match squad inclusions for the 23/24 season – a number that is far beyond the recommended limits. In the top 10 for squad inclusions, Premier League clubs are prominent, with Manchester City FC and Liverpool FC each contributing four players. Julian Alvarez leads with 83 inclusions, playing key roles in Manchester City FC's title defence, Argentina's Copa América win, and the Paris Olympics.

Top 10 players by appearances made

Rank	Player name	Club(s)	Nationality	Date of birth	Total appearances	of which: club - domestic	of which: club - internat.	of which: club - friendly	of which: national team	Total matchday squad incl.	Total minutes played
1	JULIAN ALVAREZ			31/01/2000	75	44	10	3	18	83	5,364
2	PHIL FODEN			28/05/2000	72	42	11	3	16	77	6,170
-	LUIS DIAZ			13/01/1997	72	44	7	5	16	77	5,648
-	DARWIN NUNEZ			24/06/1999	72	44	10	5	13	73	4,694
5	CODY GAKPO			07/05/1999	71	45	8	5	13	73	4,598
-	FEDERICO VALVERDE			22/07/1998	71	41	13	4	13	72	6,119
-	JOHN MCGINN			18/10/1994	71	39	14	5	13	71	6,065
8	JAN OBLAK			07/01/1993	70	44	10	3	13	72	6,851
-	KEREM AKTÜRKOGLU			21/10/1998	70	40	14	3	13	72	4,920
-	KAI HAVERTZ			11/06/1999	70	41	10	5	14	71	5,488
11	VIRGIL VAN DIJK			08/07/1991	69	43	5	5	16	74	6,293
-	ILKAY GÜNDOGAN			24/10/1990	69	41	10	3	15	72	5,847
-	ALVARO MORATA			23/10/1992	69	38	10	5	16	72	4,582
-	DECLAN RICE			14/01/1999	69	41	10	3	15	71	6,326
-	GRANIT XHAKA			27/09/1992	69	39	11	4	15	71	6,182

Source: FIFPRO Men's Player Workload Monitoring Platform

The ranking showcases the excessive Stepping onto the pitch imposes greater physical and mental performance related workload demands on players than simply being part of the matchday squad. The list closely mirrors the matchday squad inclusions, featuring the same top three players: Julian Alvarez, Phil Foden, and Luis Diaz, with the addition of Liverpool FC's Darwin Núñez. In the 2023/24 season, even the player with the fewest appearances in the top 10 played at least 69 matches, far surpassing FIFPRO's recommended limit of 55 matches (see Chapter 02).

SHORT RECOVERY PERIODS

Top 10 players by back-to-back appearances made

Rank	Player name	Club(s)	Nationality	Date of birth	Total back-to-back appearances	of which: club - domestic	of which: club - internat.	of which: club - friendly	of which: national team	Total appearances	Back-to-back %
1	FREDRIK AURSNES			10/12/1995	51	30	11	4	6	66	77.3%
2	SAUD ABDULHAMID			18/07/1999	50	31	15	-	4	68	73.5%
-	CRISTIANO RONALDO			05/02/1985	50	27	13	3	7	68	73.5%
4	JULIAN ALVAREZ			31/01/2000	49	26	10	2	11	75	65.3%
-	JOHN MCGINN			18/10/1994	49	25	11	4	9	71	69.0%
6	JAN OBLAK			07/01/1993	48	30	9	2	7	70	68.6%
-	ÁNGEL DI MARÍA			14/02/1988	48	27	9	4	8	66	72.7%
8	FEDERICO VALVERDE			22/07/1998	47	26	11	3	7	71	66.2%
-	BERAT DJIMSITI			19/02/1993	47	30	10	-	7	67	70.1%
10	ANTOINE GRIEZMANN			21/03/1991	46	28	7	3	8	66	69.7%

Source: FIFPRO Men's Player Workload Monitoring Platform

The high thresholds of back-to-back matches indicates the level of congestion in the match calendar and results in a lack of recovery and adequate training for players. Further, a high volume of such games increases the risks of fatigue and injury. Leading the top 10 in this category is SL Benfica's Frederik Aursnes, who played over 77% of his matches as back-to-back. The top three also features two Saudi Pro League players, Saud Abdulhamid and Cristiano Ronaldo, each with 73.5% of their matches played back-to-back in the 2023/24 season.

Top 10 players by longest back-to-back match streak

Rank	Player name	Club(s)	Nationality	Date of birth	Longest back-to-back match appearance streak	Streak start	Streak end	Streak length in days
1	ALEXANDER LÓPEZ			05/06/1992	19	13/09/2023	12/11/2023	60
2	BERAT DJIMSITI			19/02/1993	18	25/03/2024	26/05/2024	62
3	ERAN ZAHAVI			25/07/1987	17	14/12/2023	10/02/2024	58
-	MIGUEL ALMIRÓN			10/02/1994	17	13/09/2023	11.11/2023	59
5	BRUNO GUIMARAES			16/11/1997	16	13/09/2023	07/11/2023	55
-	TETE			15/02/2000	16	11/01/2024	08/03/2024	57
7	ÉDERSON DA SILVA			07/07/1999	15	03/04/2024	22/05/2024	49
8	HARVEY ELLIOTT			04/04/2003	14	10/03/2024	27/04/2024	48
-	CHARLES DE KETELAERE			10/03/2001	14	11/04/2024	26/05/2024	45
-	MIN-JAE KIM			15/11/1996	14	03/10/2023	24/11/2023	52
-	WILFRIED ZAHA			10/11/1992	14	11/01/2024	29/02/2024	49

Source: FIFPRO Men's Player Workload Monitoring Platform

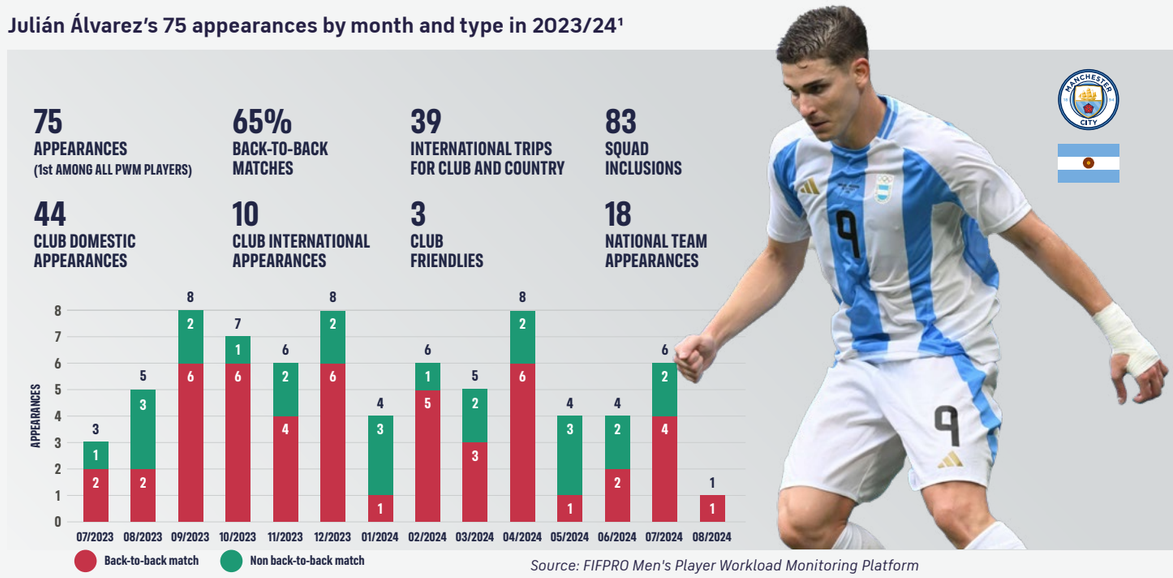
According to FIFPRO's 2022 Player and High Performance Coaches surveys, players should not exceed 4 to 6 consecutive back-to-back games at any point in the season. However, players in the top 10 longest streaks averaged 15.8 consecutive games in the 2023/24 season. It is also important to note that this list represents only the longest single streaks and does not account for multiple shorter streaks throughout the season that may exceed the recommended limits.

CASE STUDY

JULIÁN ÁLVAREZ'S 14-MONTH SEASON

Julián Álvarez has had a successful season on the pitch, heavily participating in Manchester City FC's Premier League victory and Argentina's triumph in the Copa America and journey in the 2024 Olympic Games. However, as the player with the most appearances made in 2023/24, there is a potential impact that this level of load may have negative health and career longevity impacts if repeated over the coming seasons. Interestingly, Álvarez was one of only a handful of players who participated in both the Euros or Copa America and the Olympics in the summer. Other players with this dual workload were Nicolás Otamendi (Argentina), Álex Baena (Spain), Fermín López (Spain), Antonee Robinson (USA) and Fabián Balbuena (Paraguay). This may raise questions from an employer perspective as to how many summer tournaments a player should be eligible to play in a calendar year or over a multi-year period.

Julián Álvarez's 75 appearances by month and type in 2023/24[1]



Source: FIFPRO Men's Player Workload Monitoring Platform

Across the 2023/24 season, there were three different months in which Álvarez made eight appearances, translating to approx. two per week. For September 2023, he had his first full month of league fixtures for the season, two qualifiers for Argentina and was more heavily relied upon by Manchester City FC as Kevin de Bruyne was absent due to injury. In December 2023, he played in the particularly congested Christmas period of English football and participated in both of Manchester City FC's two FIFA Club World Cup games. Finally, in April 2024, he featured heavily in the closeout of the season as the club was fighting for trophies on multiple fronts; Álvarez was barely rested during this month. Perhaps the most interesting month in the season was July 2024.

Despite this normally being a rest period for professional footballers after the club season, Álvarez played six matches for the senior Argentinian national team and the Olympic team (Under-23).

As extreme as it was, Álvarez's 2023/24 season is not unheard of amongst top-level footballers. As you will read in later chapters, workloads for these players are unarguably increasing and the impact of such congestion in the football calendar in tandem with ever-growing travel requirements can be detrimental. The players' ability to rest and recover is increasingly diminished, which in turn could impact their long-term career longevity.

1) The above graph visualises Álvarez's per month appearances across the long season and depicts how many of these were 'back-to-back. A back-to-back appearance is when a player played any minutes, and his previous match appearance ended within the preceding 5 days (or 120 hours).

04

PLAYER EXPOSURE: EVOLVING WORKLOAD DEMANDS

Professional footballers are not a homogenous group; there are several subsets within the profession that experience vastly different workload realities, both in terms of volume and type of matches. In this chapter, a sample of players is divided into four distinct segments in order to identify the key drivers behind the differences in their workload.

"You can't expect me to sprint for 70 games with over 1,000 metres of sprinting per game."

ERLING HAALAND
(MANCHESTER CITY FC AND NORWAY)

04 / PLAYER EXPOSURE: EVOLVING WORKLOAD DEMANDS

KEY TAKEAWAYS

AT A GLANCE – CHAPTER 04

- Across all player categories, the average number of appearances and squad inclusions is increasing due to calendar congestion and overlapping competitions.
- An increasingly large segment of players are subject to excessive workload demands exceeding the recommended maximum limits of 55 games per season.
- For leading players, national team football and international club football are cannibalising over 30% of their annual match calendar.
- The impact of excessive workload is increasingly evident, as the congested schedule of international fixtures is pushing more players to retire from National Team duty.

PLAYER WORKLOAD SEGMENTATION

Introduction

Professional players around the world experience varying workload demands due to differences in competitions, teams, and regional contexts, as highlighted by previous FIFPRO reports. These differences create unique challenges that affect player performance, well-being, career longevity and career opportunities.

Many professional players are forced to often work in precarious conditions that are often marked by short contracts, limited exposure and a competition structure that only supports a limited number of games or short seasons.

At the other end of the spectrum there is a group of professional players whose talent is recognised by a global audience. This segment of the football entertainment industry is driven by international consumer dynamics and an influx of new competitions. This creates an entirely different pressure on the workers in this part of the industry that are not comparable with (and should not be played against) the realities of many other players in different parts of the football industry.

This segmentation is also supported by data from FIFPRO's Player Workload Monitoring (PWM) platform which suggests that the football industry is characterised by an uneven distribution of playing time. Top-performing players are used more often at club level than their peers and are also relied upon by their respective national teams on a regular basis.

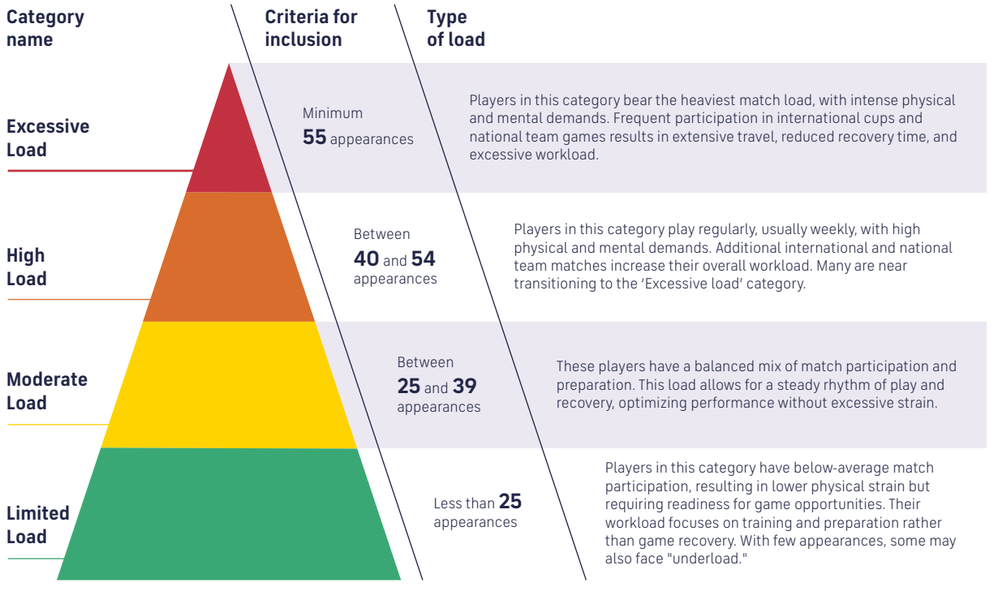
Sample Selection and Applied Methodology

This section aims to segment the players in the FIFPRO PWM platform into four distinct groups to systematically assess how their key workload metrics have evolved in recent years. This segmentation offers a structured approach to understanding the different conditions and pressures that players face. PWM focuses on the workload impact of the industry. However, it is also important to recognise the economic aspects of competition structures and its impact on players.

The following analysis focuses on a sample of 1,500 players who are currently included in the PWM platform's database. The primary criterion for inclusion is that these players must have played regularly for their teams at least once over the past five seasons. The diverse group encompasses a wide range of profiles, reflecting more than 100 leagues and 130 nationalities across the football world. The underlying data set covers matches played up until the cut-off date of 15 July 2024.

The basis of segmentation, inherently reflecting the various types of workload commitments, was the number of match appearances. This is the most visible component of a player's workload and the aspect in which the largest differences exist between players.

In order to define the thresholds, FIFPRO's Player and High-Performance Coach Surveys report of 2022 provided the guideline. Within this study the experts provided their opinion on various topics related to workload management. For the purposes of this analysis, their answers about optimal and maximum loads were considered to establish the thresholds for the different player categories. According to the survey results, an overwhelming majority (88%) of experts said that the maximum number of matches played by an individual during a season must be under 55. Consequently, players that played at least 55 matches in a season were put into the 'Excessive load' category in this report's analysis. Past this threshold of 55, a pressing danger to player health exists. Players with less than 10 matchday squad inclusions in a season were omitted from the analysis.



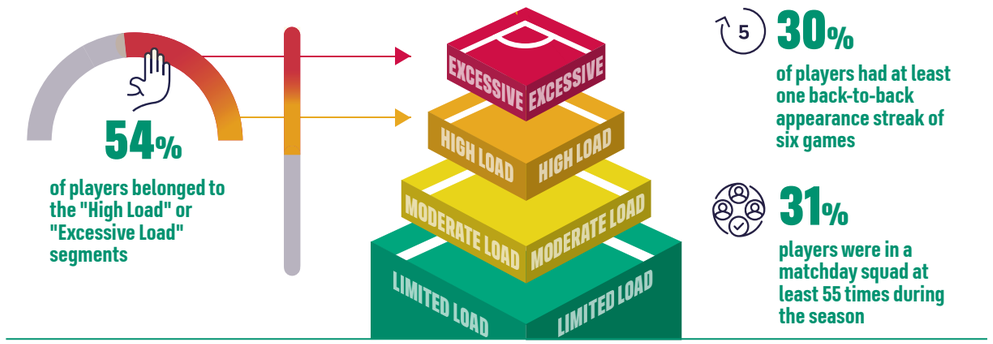
In Focus: 2023/24 Season

Looking specifically at the 2023/24 season's results from the segmentation analysis, there are a few interesting findings that illustrate the calendar congestion issues of today.

When considering the size (number of players) of each segment, it is striking to see that over half of the players sampled were in the top two player segments and thus experienced "high" to "excessive" match load (800+ players)

The consecutive, relentless nature of the calendar is also an important aspect, not just the sheet number of appearances. In 2023/24, almost one third of the PWM sample experienced a back-to-back match streak of at least six consecutive games, the FIFPRO recommended limit.

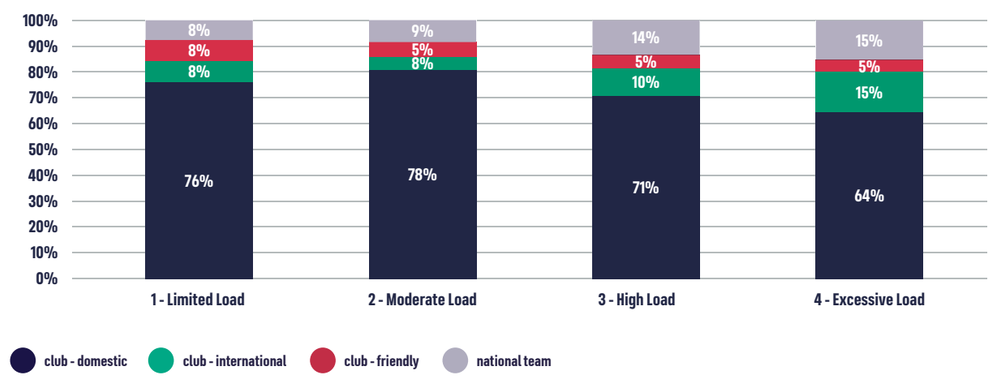
2023/24 season highlights
(PWM player sample)



What drives the high workload of certain segments?
A player's maximum total number of matches each season is influenced by several key factors: the range of competitions their club participates in, with the size of the domestic league playing a significant role; their involvement in national team games; and the team's performance in progressing deep into cup competitions, whether domestic, international, or national team competitions.

Delving into the data specifically for 2023/24, it reveals that international fixtures (for club or country) are a major source of match load and one of the key differentiators among the different player segments.

Competition mix by player segment in 2023/24



Segmentation Results

The overview table presents a detailed analysis of four player segments, highlighting the averages for key metrics such as matchday squad inclusions, match appearances, and back-to-back appearances over five seasons (2019/20 to 2023/24). These categories reflect varying levels of match involvement and provide insights into the players' overall workload.

How did the match load of an average player look like in each segment by season?

Evolution of average number of matchday squad inclusions, appearances and back-to-back appearances by segment

SEGMENT	Matchday squad inclusions					Appearances					Back-to-back appearances				
	19/20	20/21	21/22	22/23	23/24	19/20	20/21	21/22	22/23	23/24	19/20	20/21	21/22	22/23	23/24
1) LIMITED LOAD	25.0	26.6	26.7	28.2	27.5	16.6	17.0	17.0	16.6	16.9	5.0	6.1	5.6	5.1	5.3
2) MODERATE LOAD	38.3	38.2	39.2	40.1	39.2	32.3	33.1	33.2	33.4	33.0	12.4	14.4	13.1	11.6	11.1
3) HIGH LOAD	50.0	50.5	51.3	51.5	51.9	46.2	46.2	46.7	46.6	46.5	24.1	24.7	22.9	21.5	21.0
4) EXCESSIVE LOAD	62.8	63.6	63.7	64.4	66.0	59.7	59.5	60.1	60.8	61.7	36.7	39.9	36.6	36.2	36.3

How to interpret the data?
Members of the 'Excessive Load' player segment recorded 36.6 back-to-back appearances on average in the 2021/22 season."

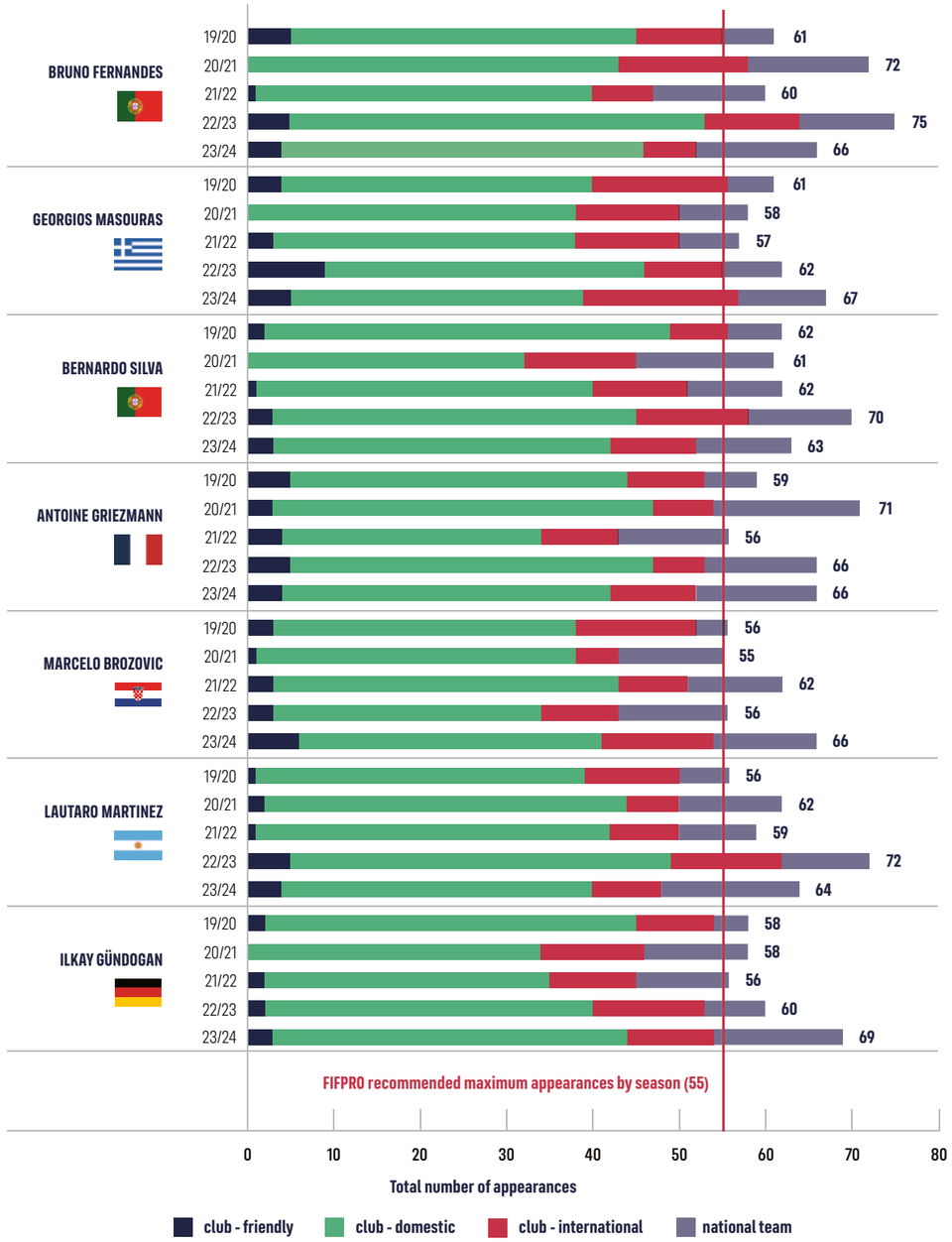
Among the three metrics, the average number of matchday squad inclusions shows an increasing trend across all categories. This trend also extends to the average number of match appearances, although to a lesser degree, except in the Excessive Load category, which highlights the growing demands on elite players.

The data also clearly demonstrates that players in the "High Load" and "Excessive Load" segments are at increased risk of physical and mental fatigue due to their heavy match involvement. Specifically, players in the "High Load" category, who have an average of 46.2 to 51.9 match appearances, are on the cusp of slipping into the Excessive Load segment. If their workload continues to increase or remains high, these players are likely to face the same pressures and potential risks associated with overuse injuries and burnout as those already in the Excessive Load category.

Always on the Edge: Excessive Workload Cases

Continuous "Excessive Load" schedules across seasons can severely impact footballers' health and performance.

Evolution of total match appearances by season



Source: FIFPRO Men's Player Workload Monitoring Platform

CASE STUDY

FREDRIK AURSNES' EARLY INTERNATIONAL RETIREMENT

On the 12th of March 2024, Fredrik Aursnes made the decision to retire from the Norwegian national team at the age of just 28. His retirement was not motivated by persistent injuries or lack of form resulting in non-inclusion in the Norwegian national team (in fact, he made 6 appearances for them in the 2023/24 season), rather, the decision to retire came from the congested football calendar.

As is illustrated by Aursnes, his decision to retire from national team football was driven by wanting to have more time outside of football and a belief that the current and future calendar would not allow him such freedom. Looking at Aursnes' past three completed seasons, Aursnes has only had 36 off-season break days which has occurred due to being included in at least 50 matchday squad inclusions, across club and national team, over the period.

Source: Football Benchmark research and analysis

It may be argued that Aursnes' case is a one-off scenario and that few players would even come close to accumulating a workload similar to that of Aursnes. However, data of the PWM platform shows that Aursnes' workload is far from an anomaly but rather a worrying trend that is being regularly more expected of elite players. In fact, across the same assessed period as Aursnes, 130 players had accumulated more squad inclusions than Aursnes, emphasising that this trend of negatively impactful workload quantities is alarmingly apparent in the current football calendar.

Aursnes' 168 squad inclusions over the period for his club and national team, place him amongst the 90th percentile of all players currently tracked in the PWM platform. This level of consistently high match load across both club (Eredivisie, Liga Portugal, Domestic Cups, UEFA UCC competitions and friendlies) and national team competitions (UEFA European Championship, FIFA World Cup Qualifying, UEFA Nations League and friendlies) has come at the expense of Aursnes' ability to rest and enjoy life outside of football in what is a virtually non-existent off-season.

CASE STUDY
ILKAY GÜNDOGAN'S RECENT MATCH LOAD

Nearly a month after Germany's quarter-final exit from EURO 2024 to eventual winners Spain, Ilkay Gündoğan announced his retirement from national team football.

The player earned his first senior cap for the Nationalelf on 11th October 2011, in a EURO qualifier against Belgium. Unfortunately, injuries marred his early international career, forcing him to miss major tournaments such as the 2014 FIFA World Cup in Brazil and EURO 2016 in France. Despite these setbacks, Gündoğan was appointed as Germany's captain in September 2023 and led the team in 19 matches out of his 82 total appearances for the national team.

His decision to retire follows his admission after the EUROs that *"even before the tournament I felt some tiredness, not only physically but mentally as well, which gave me reason to think. The number of games at club level, as well as internationally, also aren't getting any less."*

Gündoğan's comment is hardly surprising, given that he ranked in the 98th percentile for appearances among all players included in the PWM over the last two seasons.

Overview of Ilkay Gündoğan's last two seasons (July 2022 – July 2024)

143
Total matchday squad inclusions for club & country

10,662
Total minutes played for club & country

82.3
Average minutes played per match

129
Total appearances for club & country

75
Total back-to-back matches

9,290
Total minutes spent travelling on international trips for club & country

CASE STUDY
RAPHAEL VARANE'S TIME WITH THE FRENCH NATIONAL TEAM

After enduring significant physical and mental strain over multiple seasons, Raphaël Varane made headlines after the 2022 World Cup in Qatar by announcing his retirement from international football at 29. By prioritizing his well-being and health, Varane's decision to leave the international stage at the peak of his career is unusual, yet it may signal a growing trend as players increasingly face the pressures of an ever-congested football calendar. In this case study, the evidence of the intense workload that influenced his decision is presented.

One of the key factors influencing his decision revolved around the significant amount of time committed to national team duties. Between the start of the 2018 World Cup and the 2022 World Cup Final, Varane dedicated over **240 days to the French national team**, accounting for nearly 15% of the days within this period. While retiring from the national team would reduce his commitments and could offer more time away from football, a luxury he scarcely enjoyed in the seasons leading up to his decision, he would still face significant responsibilities at the club level throughout the season.

240+ DAYS
TO THE FRENCH NATIONAL TEAM
(2018 - 2022)

As such, another key driver in his decision was the limited time afforded for rest and recovery. Evidence from the PWM platform indicates that, during the analysed period, Varane only had sufficient off-season break days twice, meeting FIFPRO's recommended minimum of 28 days. The off-seasons before the 2018/19, 2020/21, and 2021/22 seasons were also disrupted by external factors, such as the World Cup, the pandemic, and the postponement of EURO 2020. Moreover, it is concerning that he had almost no in-season break days while playing in both La Liga and the English Premier League. All the above aligns with his comparison of football at the highest level to a "washing machine," characterized by relentless play and limited breaks.

In a recent interview he reinforced the relevance of his decision to retire from international duty, highlighting the need for a more balanced approach that ensures players' well-being and maintains the quality of the sport:

"International footballers are underwater all year round and the summer of 2024 will be non-stop for those who go far in all competitions. If we want to defend football, preserve the high intensity of matches and see the best players at their best, we must take care of them and simply make them play less."

05

THE MATCH CALENDAR: CONGESTION, REST, RECOVERY

With top players involved in several different competitions in a single season, their right to sufficient rest and recovery time is often infringed upon. The next intense period is always just around the corner and the lack of proper squad rotation only makes matters worse. In this chapter player calendars and squad management concerns are discussed in detail.

> "You start in August and until May you don't stop. Then in June, there is the national team and after that a Club World Cup. They will finish up in July and then, a few weeks later, the league starts again. It needs to be turned back, but it is not up to us."

MIKEL OYARZABAL
(REAL SOCIEDAD DE FÚTBOL AND SPAIN)

05 / THE MATCH CALENDAR: CONGESTION, REST, RECOVERY

KEY TAKEAWAYS

AT A GLANCE – CHAPTER 05

- Players' rest and recovery is significantly impeded by calendar congestion, with many enduring reduced off-season breaks, followed by insufficient re-training periods.
- Misguided scheduling of in-season National Team tournaments like the AFC Cup and AFCON, leads to insufficient recovery periods for players post-tournament.
- Adjustments to match rules (i.e. 5-subs) have been ineffective in stimulating effective rotation of leading players. A small group of core players is generally responsible for over half of the total minutes played each season, highlighting the imbalance in squad utilisation.

INTRODUCTION

The modern football calendar is increasingly unforgiving, demanding that many footballers balance multiple competitions simultaneously throughout the year. This relentless schedule, characterised by back-to-back fixtures, overlapping tournaments, and high appearance numbers, severely limits their time for essential rest and recovery. The high volume of minutes played not only intensifies fatigue but also exacerbates injury risks. Coupled with inadequate squad rotation, this constant pressure can take a serious toll on both their physical and mental health.

Optimizing workload distribution and player rotation is crucial; however, current practices have proven insufficient in addressing these demands. The imbalance in playing time distribution, driven by factors such as managerial preferences, financial incentives, and uneven squad depth, further complicates effective workload management. Considering these complexities, finding a balance between competitive demands and player well-being remains a pressing concern.

PLAYER CALENDAR MAPPING: LIMITED OPPORTUNITIES FOR OFF-SEASON REST AND RE-TRAINING

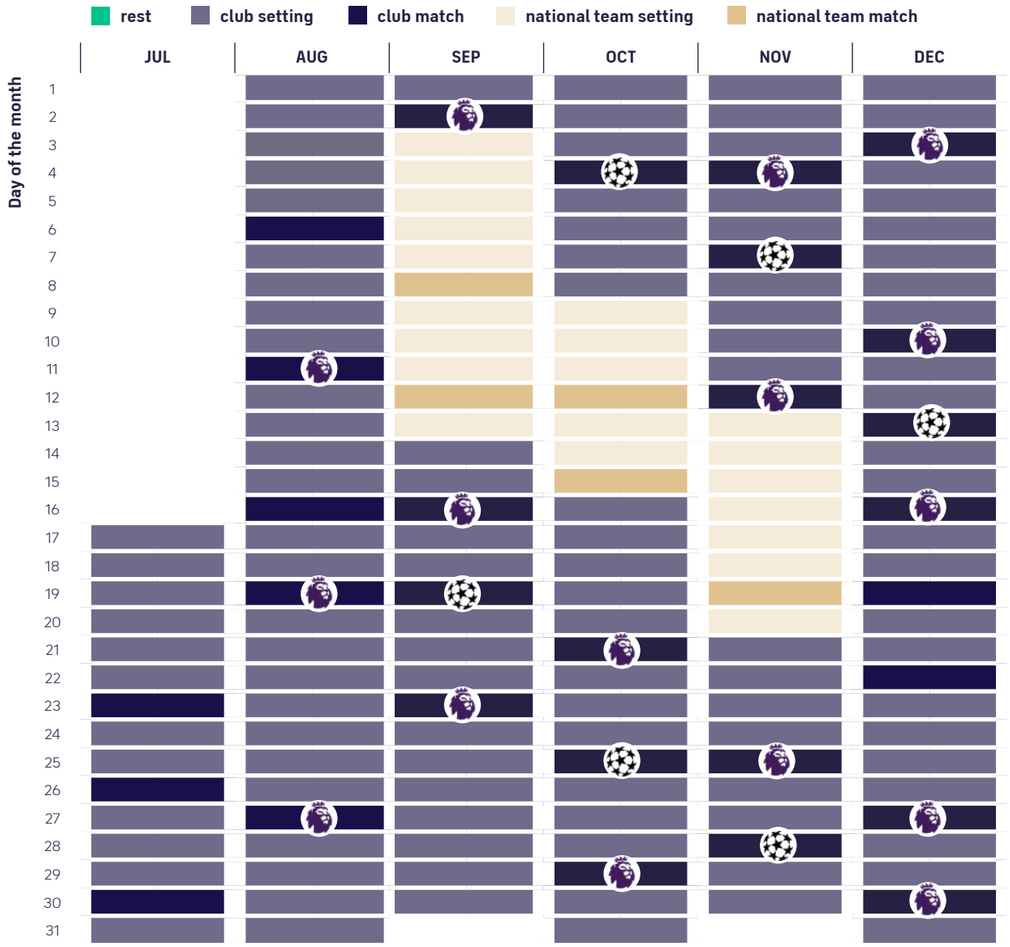
Top players, juggling both club and national duties, endure a relentless cycle of high stakes matches with minimal rest. This crowded schedule heightens injury risk and results in considerable mental and physical fatigue.

The 2023/2024 season proved exceptionally challenging for Manchester City FC and its players, as the team played 59 matches across seven competitions: the English Premier League, FA Cup, EFL Cup, FA Community Shield, UEFA Champions League, UEFA Super Cup, and FIFA Club World Cup. Despite the gruelling schedule, City successfully defended their EPL title and triumphed in both the UEFA Super Cup and FIFA Club World Cup.

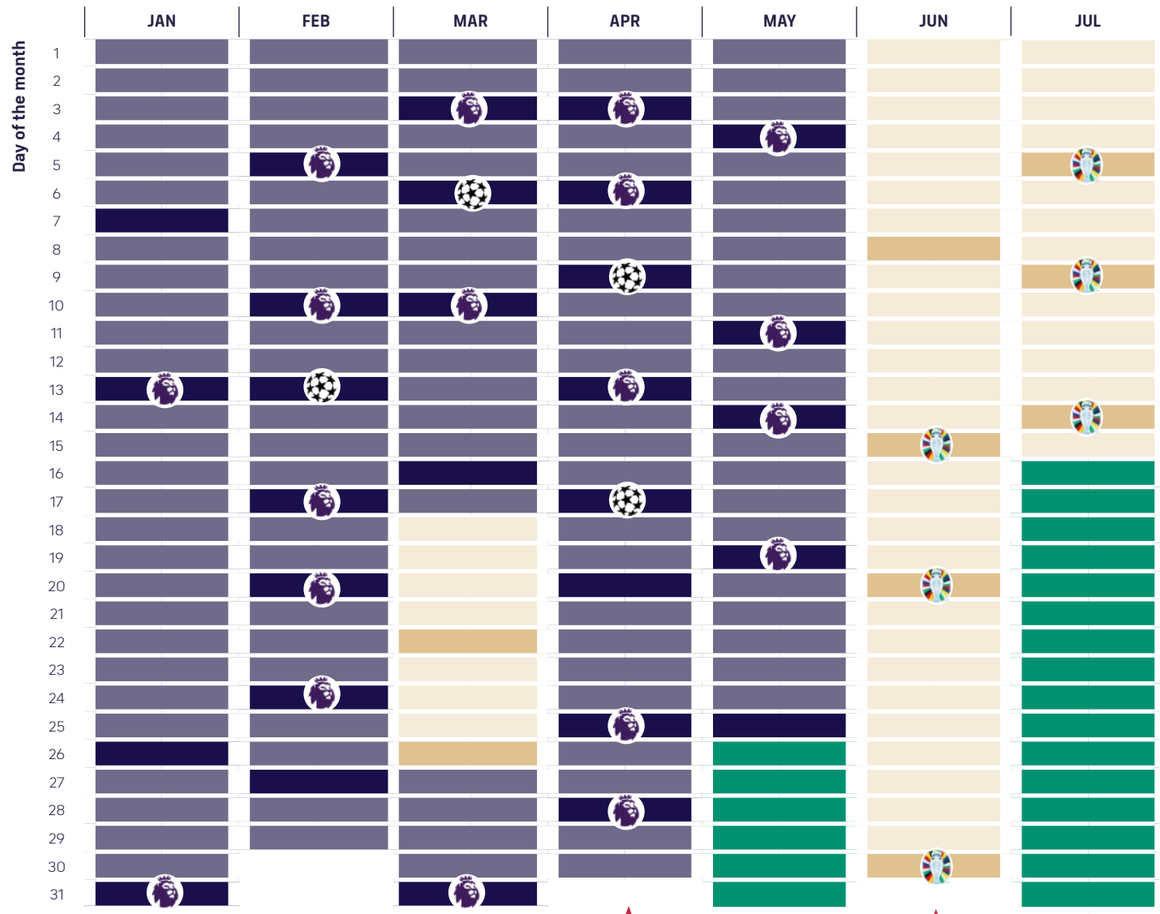
One of the key figures in the season was Spanish midfielder Rodri, who was instrumental not only in Manchester City FC's success but also in Spain's victory in the European Championship in July. Over the course of the season, Rodri was included in 72 matchday squads for club and country, making 66 appearances and totalling 6,107 minutes on the pitch. Remarkably, 36 of those appearances were in back-to-back matches, leaving minimal recovery time and averaging just 127.7 hours between games throughout the entire season.

The calendar presented below showcases Rodri's workplace commitments throughout the season by assigning all days into one five categories: club matchday with Manchester City FC, other days spent in club setting, national team matchday with Spain, other days spent in national team setting, and rest & recovery days. It is important to note that the latter category is an estimation based on various elite footballer's schedule.

Rodri (Manchester City FC, Spain national team) - 2023/24 Season Overview – Breakdown of Days



Source: Football Benchmark research and analysis



Source: Football Benchmark research and analysis

- In December, Rodri played in eight of Manchester City FC's nine matches, missing only the Premier League game against Aston Villa FC due to suspension. The team also made a trip to Serbia for a UCL match and then to Jeddah (Saudi Arabia) for the FIFA Club World Cup, increasing travel load.
- By April, as Manchester City FC entered their final push, Rodri made seven appearances in eight matchday squads, with an average of just 94 hours between matches. Five of these appearances were in back-to-back fixtures, underscoring the intensity of his schedule as the team advanced in the Premier League, UEFA Champions League, and FA Cup.

- Rodri's EURO 2024 preparation began on 1st June at Ciudad del Fútbol in Madrid, shortly after Manchester City FC's final Premier League game. During the tournament, he played over 550 minutes before being substituted at halftime in the final due to injury.

The Euros had a lingering effect on the player as Rodri had to miss the opening rounds of the 2024/25 Premier League season due to the injury he sustained. As a result, Rodri was one of the few players who was able to achieve a sufficient post-tournament break period.

RECOVERY AFTER IN-SEASON NATIONAL TEAM TOURNAMENTS

The latest editions of the AFC Asian Cup and the CAF Africa Cup of Nations were both held during the 2023/24 club season, resulting in many players returning to their clubs mere days after their last appearances at the tournaments. It is important to recognise the impact of travel on a player's recovery.

Source: FIFPRO Men's Player Workload Monitoring Platform

Takumi Minamino, for example, played for AS Monaco FC less than 24 hours after representing Japan in their 2-1 loss to Iran at the AFC Asian Cup in Qatar. Within 24 hours of that match ending, Minamino had to fly 4,446 km—close to 6 hours—back to Monaco for a 1 pm kick-off versus Le Havre. Throughout the tournament, Minamino appeared for Japan in five matches, totalling 240 minutes. Playing two competitive matches within such a short period, including a long-haul flight, undoubtedly affects the player's performance and recovery.

Similarly, Tottenham Hotspur FC captain **Son Heung-min** played every minute (600 minutes) of South Korea's six matches in Qatar before their exit in the semi-finals against Jordan. Four days later, he appeared Albion in the Premier League against Brighton & Hove Albion FC. Following the tournament, Son took an almost seven hours flight, covering 5,206 km, back to London.

Democratic Republic of Congo and Olympique de Marseille defender **Chancel Mbemba** played over 660 minutes across the 2024 Africa Cup of Nations held in Ivory Coast. Five days later, he was back in the Marseille squad set to face off against FC Shakhtar Donetsk, in Germany, in the Europa League. Mbemba spent approximately 6 hours traveling the 4,322 km back to Marseille.

In addition to a short rest period, international travel, and acclimatisation to different time zones and climates also made players' recovery more challenging. Undoubtedly, this increased the players' risk of injury due to physical and mental fatigue. To minimise these risks, clubs and national teams must work together to better manage player workloads, ensuring their health and performance are not compromised.

RECOVERY AFTER SUMMER NATIONAL TEAM TOURNAMENTS

During the summer of 2024, two significant national team tournaments took place: EURO 2024 for qualified UEFA member associations and Copa América 2024, which featured qualified teams from both CONMEBOL and CONCACAF member associations. These tournaments presented unique challenges from a rest and recovery perspective for players, particularly because domestic leagues in UEFA operate on an autumn-to-spring schedule, whereas leagues in CONMEBOL and CONCACAF typically follow a spring-to-autumn schedule.

In terms of UEFA, calendar congestion significantly impacted players and teams involved in UEFA Club Competition qualifiers. Due to calendar misalignment, some players who participated in EURO 2024 had less than a week between their national team commitments and the start of pre-season training with their clubs. For example, three Romanian players of FCSB reported back to club training just three days after their Round of 16 exit against the Netherlands at EURO 2024, while other players of Slovakia, Hungary and Slovenia also had mere days between the tournament and the official start of their 2024/25 season back home. For more details, please refer to Chapter 08.

This misalignment led to some players missing crucial matches in their club season. For instance, some players from the national team that played the last match at EURO 2024 on 2nd July, reported to training at their club on 5th July, which considering travel resulted in a single day of rest between the two seasons.

For CONMEBOL and CONCACAF, many participating nations' domestic competitions continued without interruption during the tournament. Consequently, participating players from these leagues had also limited time for rest and recovery. A more detailed analysis of the players and competitions in question is available in Chapter 08.

PLAYER UTILISATION: WHY VOLUNTARY WORKLOAD ROTATION IS INSUFFICIENT

Optimizing workload distribution and player rotation is crucial for maintaining player health, enhancing team performance, and mitigating injury risks. In addition, workload management and player rotation also allows to guide the flow and availability of talent across different competitions.[2]

In a perfect world management could ensure on an informed basis that all squad members can contribute effectively while preventing over-reliance on a select few players. The recent introduction of the five-substitution rule was aimed at addressing the challenges of increased match intensity and fixture congestion. However, this sections shows that while such changes offer theoretical benefits, they have proven inadequate in fully addressing the growing demands on player workload.

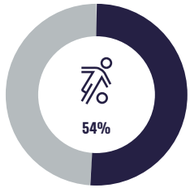
In the absence of more comprehensive regulations, a significant burden continues to fall on a core group of players in most squads. In addition, there is an economic threat that player availability will guide from one competition type to the other.

Management is forced to make sub-optimal decisions

The football industry operates in a unique eco-system that puts its decision-makers under immense pressure. Sporting success and career necessities create unique demands on coaches and their decision to field players. This includes:

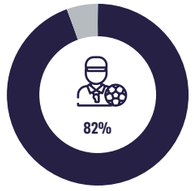
- Demands by executive management
- Demands by media
- Demands by players
- Demands fans

This is also supported by a recent player and coaches survey in France that was carried out by the French players union, UNFP. In total, 359 professional players and 67 coaches completed the survey that included questions related to workload issues and potential regulations that pertain to the 2023/24 season.



54%

OF PLAYERS SURVEYED
have been forced to play when already carrying an injury



82%

OF COACHES SURVEYED
have fielded players who they know need rest, due to pressure to achieve results

One of the key topics was the pressure put on players to perform even when they were not in the best condition. Crucially, more than half of the surveyed players (54%) said that they have been forced to play injured at one point, while the majority of coaches admitted that they have fielded players in need of rest due to the pressure of on-pitch success.

This is a first indicator why voluntary rotation often does not work – especially when the stakes are high and the pressure mounts. A situation that basically always exist in elite football competitions.

The recent comments made by the coach of Real Madrid CF are symbolic for the pressure workload demands are putting on everybody in the industry. However, a voluntary club-by-club approach to mitigate the risks without the implementation of common principles will lead to insufficient risk mitigation.

2) Metrics such as squad utilisation rates have to be analysed in the context of each club. While an uneven distribution of playing time is generally a risk factor, in the case of clubs that only play domestic competitions it might not be..

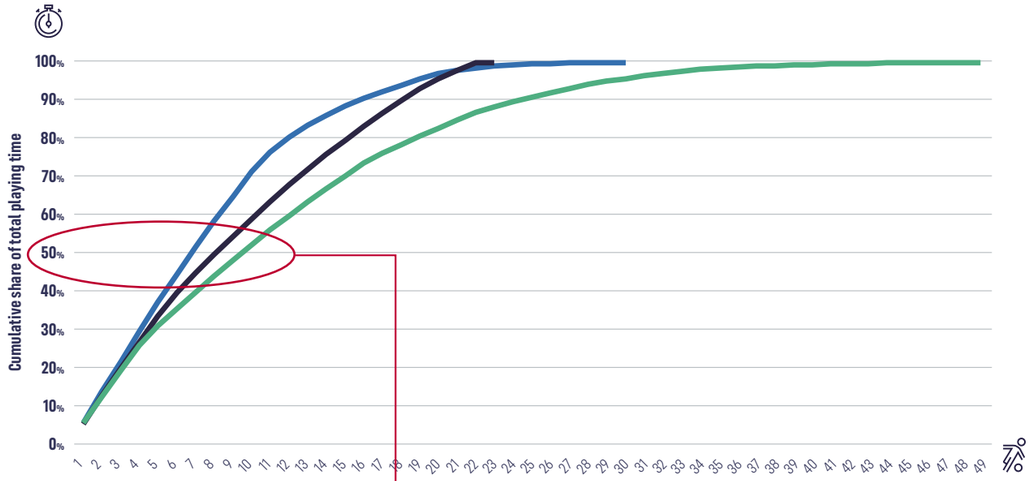
Imbalance in playing time distribution

In analysing the allocation of playing time within clubs, it becomes evident that a significant imbalance often exists in how playing opportunities are distributed among squad members.

Several factors could contribute to such imbalances. Often, clubs become heavily dependent on a few standout players whose consistent performance makes them seem indispensable, leading to the sidelining of others. Managerial preferences and tactics further influence this distribution, as coaches might favour certain players based on their past performance or specific tactical needs, thus limiting opportunities for others. Additionally, uneven squad depth could also lead to lack of rotation, as managers may fear that substituting players could negatively impact performance. This can be intensified by injuries and fitness issues. Lastly, financial and contractual factors can also play a role, with star players often getting more game time to justify their contracts as well.

Within this section, the playing time distribution for the 2023/24 season is showcased for three selected clubs: **SS Lazio** (51 competitive matches), **GNK Dinamo Zagreb** (53), and **Al-Hilal** (53). Only playing time in competitive matches was included in the calculation.

Percentage of minutes played by players from their club's total minutes in the 2023/24 season



Source: Football Benchmark research and analysis

Number of players responsible for 50% of the total competitive playing time of the squad:

Al-Hilal SFC
● 7 players

SS Lazio
● 8 players

GNK Dinamo Zagreb
● 10 players

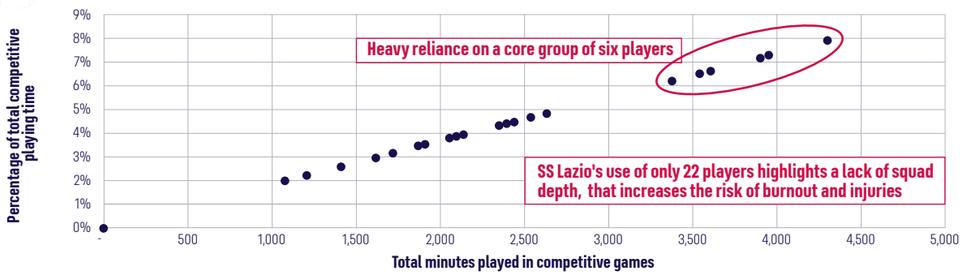
An analysis of the three selected teams reveals a notable imbalance in minutes played. On average, around 8 players account for 50% of the total playing time within this sample. Additionally, there is considerable variation in the number of players utilised. Despite competing in a similar number of matches, SS Lazio used only 23 players, Al-Hilal relied on 30 different players, while Dinamo Zagreb significantly exceeded the others with 49 players appearing in their colours in the 2023/24 season.

Every players' competitive minutes played and their share of total competitive playing time of the squad

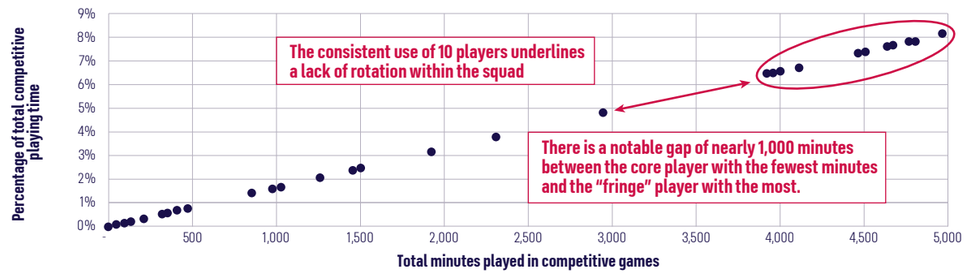
While there can be considerable variations between clubs in how playing time is distributed, it is equally important to examine the dynamics within individual squads. Such level of detail can provide insights on over-reliance on key players and insufficient squad rotation. The following analysis highlights how different teams apply different strategies to workload distribution. The data reveals that Lazio and Al-Hilal depend significantly on a core group of players, while Dinamo Zagreb emphasises broader player rotation with a focus on youth.

It is important to emphasise that this analysis is limited to the competitive club setting and does not account for the additional demands placed on players through national team commitments. Many players balance their club responsibilities with international duties, which can significantly impact their overall workload and injury risk.

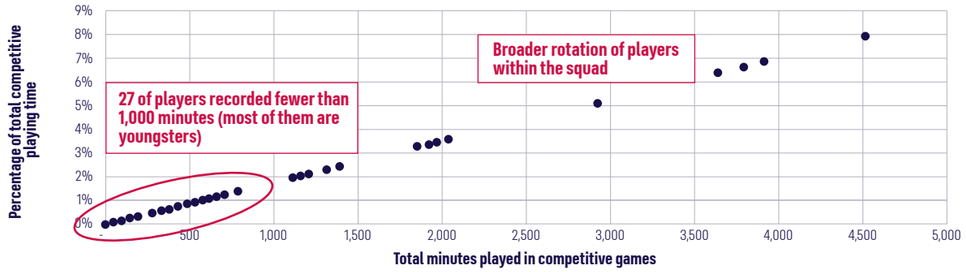
SS Lazio



Al-Hilal SFC



GNK Dinamo Zagreb



Source: Football Benchmark research and analysis

06

LOOKING AHEAD: THE MATCH CALENDAR POST-2024

The cannibalisation of the international match calendar and future competition design continues to increase workload demands on players for international club and national team competitions. Consequently, players are being tasked to service a longer and more saturated football calendar without any evaluation being undertaken to assess the impact on workload demands and associated risks. In the absence of any holistic analysis no mitigation measures have been foreseen to protect players health, domestic competitions and overall performance.

> "It is impossible for us to maintain an optimal level and maximum performance while having to travel for the FIFA Intercontinental Cup and the FIFA Club World Cup. When the season ends, you're taken away from home for a month, crossing continents with FIFA dates in between.

DANI CARVAJAL
(REAL MADRID CF AND SPAIN)

06 / LOOKING AHEAD: THE MATCH CALENDAR POST-2024

KEY TAKEAWAYS

AT A GLANCE – CHAPTER 06

- The expansion of major competitions, including the UEFA Champions League, FIFA Club World Cup and FIFA World Cup will further endanger player health, without any consideration of relevant occupational safety and health principles.
- Leading clubs will likely have 15+ more matches in 2024/25, predominately due to the expansion of international competitions.
- Leading players will likely face 80+ total matches, across club and national team, in 24/25 and 25/26.

INTRODUCTION

The following chapter takes a deep dive into the number of fixtures that top-level teams and professional players have been expected to fulfil over the last two seasons (2022/23 and 2023/24), as well as projecting the number of fixtures teams could be required to play in the following two (2024/25 and 2025/26) which will be impacted by the reformatting and expansion of various of competitions. For consistency, a series of assumptions in this chapter have been made (see footnotes).[3]

Overall, the projected increases in team and in turn player appearances resulting from primarily global competition expansions will mean that holistic player workload demands, especially those who will play the new competition formats, will continue to increase with any introduction of risk mitigation measures or tailored safeguards. Two such competition expansions are evident in the FIFA World Cup ('WC') and the FIFA Club World Cup ('CWC'), the details of which can be seen on the following page. In addition, regional competition formats such as the new UEFA Champions League design also significantly increase holistic player workload demands.

Competitions

Region	Competition	Type	Last Competition	Next Competition			Δ in # of Max Possible Games
			Period	Period	# of Participating Teams	Max Possible Games Per Team	
Global	FIFA WORLD CUP **FIFA World Cup**	National Team	Nov - Dec 2022	Jun - Jul 2026	48	8	1
	FIFA Club World Cup	Club	N/A	Jun - Jul 2025	32	7	7

The two headline tournaments of FIFA, the WC and the CWC, are set for expansion and reformatting in their next iterations. For the WC, the timing has been extended from 28 to 38 days and the event has been moved back to the traditional June/July timing as the 2026 edition no longer requires adjustments to deal with the heat of a Middle Eastern summer. For the CWC, the 2025 edition of the competition is a complete change from the previous iteration which will be rebranded as the 'FIFA Intercontinental Cup' from 2024 onwards. Due to this, the new version of the CWC (commencing in June 2025) is being treated like a new competition, rather than an expansion of the previous version.

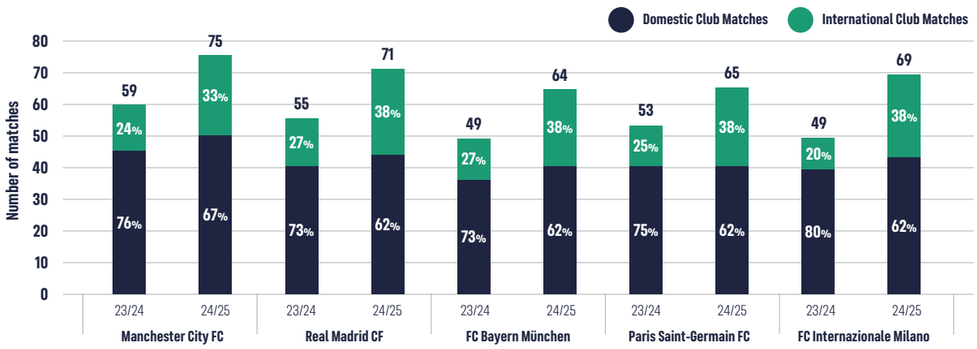
The WC & CWC are both set for increases in the number of participating teams as the WC will expand from 32 to 48 teams and the CWC from 7 to 32. Similarly, the maximum number of fixtures a team can play in each competition has grown with the WC rising to 8 (from 7). For the newly created competition format, the CWC, the maximum number of fixtures a team can theoretically play is 7 if they advance to the final.

Overall, the changes in competition format for the WC and CWC will impact workload as their additional fixtures will require players to play and travel more whilst having less opportunity for rest. For the CWC specifically, the revamped competition being played in the European summer means that players participating in the competition will not get a break between their league seasons, a notion that is already present in most summers due to the presence of other international competitions. The detailed impact of these competition changes (and others) is explained throughout the rest of this chapter.

3) Analysis Assumptions:
1a. Projections around the potential future fixtures of players rely on the appearance proportions of the selected players' 2023/24 season appearances. There have been some slight manual edits to these proportions to ensure the projected numbers are realistic and no one is assumed to play all possible games.
1b. It is assumed that the club and national teams mentioned in this section will progress to the finals of all competitions, thus we calculate the potential maximum number of games to be played.
1c. Competitions linked to the results of the previous season (e.g. UEFA Super Cup or Community Shield) and friendlies are also included in the analysis. However, youth and reserve team matches have not been included.
Cut-off date: The data for this section was taken on 15th July 2024 (after the finals of Euro 2024 and Copa America 2024).
Source: FIFA - International Match Calendar: 2023-2030 and Football Benchmark research

CLUB-LEVEL CALENDAR IMPLICATIONS

How much did top clubs play in 23/24 and how many could they end playing in 24/25? Increase in club fixtures partially stemming from expansions of the UEFA Champions League and the FIFA Club World Cup



Note: only competitive fixtures are considered in this analysis, thus friendly club matches are excluded

Source: Football Benchmark research and analysis

When comparing the most recent season's (2023/24) total number of fixtures for Manchester City FC, Real Madrid CF, FC Bayern München, Paris Saint-Germain FC and FC Internazionale Milano to the number of fixtures each club could theoretically end up playing in the 2024/25 season if they advance to the finals of every competition, there is a very apparent trend: a substantial increase in the potential number of matches. The reason for this is primarily due to the expansion of key club competitions, namely the FIFA Club World Cup (expanding from a maximum of 2 games to potentially 7 per club) and the UEFA Champions League (expanding from a maximum of 13 games to potentially 17), as both competitions' organisers are looking to take an even prominent role in the football calendar.

While a few more games here or there might not look significant from an external perspective, the impact on players and other competitions is significant given the overall demands and knock-on effects from additional match days. Especially considering the already crowded and exhausted match calendar. The consequence of these additional fixtures is a far higher workload for a significant group of players. Furthermore, the opportunity for players to rest and recover during and after the season is being diminished as an ever more congested football calendar is requiring them to perform more often whilst also travelling further and spending significant time periods in a workplace and team setting to satisfy these workload requirements. A breakdown of the number of matches that have been/ are projected to be played by each of the above teams is in the supporting tables.

MANCHESTER CITY FC

Competition	2023/24	Projected games – 2024/25	Projected games – 2025/26
Premier League	38	38	38
FA Cup	6	6	6
EFL Cup	1	6	6
Community Shield	1	1	1
UEFA Champions League	10	17	17
FIFA Club World Cup	2	7	0
UEFA Super Cup	1	0	1
Total Club Matches	**59**	**75**	**69**

REAL MADRID CF

Competition	2023/24	Projected games – 2024/25	Projected games – 2025/26
La Liga	38	38	38
Copa del Rey	2	6	6
Supercopa	2	2	2
UEFA Champions League	13	17	17
FIFA Club World Cup	0	7	0
UEFA Super Cup	0	1	1
Total Club Matches	**55**	**71**	**64**

FC BAYERN MÜNCHEN

Competition	2023/24	Projected games – 2024/25	Projected games – 2025/26
Bundesliga	34	34	34
DFB-Pokal	2	6	6
DFL-Supercup	1	0	1
UEFA Champions League	12	17	17
FIFA Club World Cup	0	7	0
UEFA Super Cup	0	0	1
Total Club Matches	**49**	**64**	**59**

PARIS SAINT-GERMAIN FC

Competition	2023/24	Projected games – 2024/25	Projected games – 2025/26
Ligue 1	34	34	34
Coupe de France	6	6	6
Trophée des Champions	1	1	1
UEFA Champions League	12	17	17
FIFA Club World Cup	0	7	0
UEFA Super Cup	0	0	1
Total Club Matches	**53**	**65**	**59**

FC INTERNAZIONALE MILANO

Competition	2023/24	Projected games – 2024/25	Projected games – 2025/26
Serie A	38	38	38
Italy Cup	1	5	5
Supercoppa Italiana	2	2	2
UEFA Champions League	8	17	17
FIFA Club World Cup	0	7	0
UEFA Super Cup	0	0	1
Total Club Matches	**49**	**69**	**63**

PLAYER-LEVEL CALENDAR IMPLICATIONS

In previous sections, the report emphasised the need to analyse and understand a holistic workplace setting when considering workload demands for players in the football industry. The following section breaks down the calendars of three prominent footballers of the 2023/24 season (Phil Foden, Federico Valverde and Nicolò Barella) and their number of appearances and matchday squad inclusions. Using their utilisation in 2023/24 as the starting point, their potential 2024/25 and 2025/26 seasons have been projected. This estimation helps us understand the potential implications of competition expansions on player calendars as the likely total number of appearances and matchday squad inclusions are calculated. Even this only represents a conservative assessment as detailed training plans, travel requirements and other activities are not being projected here.

The projections assume that the same proportion of appearances and squad inclusions will be made in the projected seasons as in 2023/24 in order to provide a conservative and realistic estimate. However, in the case of new or completely revamped competitions (such as the FIFA CWC), it is assumed that the player will play in all but one match. Additionally, it is assumed that each player's team in the projected seasons will make the finals of all competitions to provide consistency across the projections.

Finally, as of the writing of this report, club friendlies in preparation for the 2024/25 season had already taken place and as such the number of those matches in the 2024/25 season are actual figures, not projections. Moreover, the projected number of club friendlies for the 2025/26 season were calculated on the basis of the past three seasons (2022/23 - 2024/25).

PHIL FODEN

(Manchester City FC, England)

A conservative approach to projecting increasing workload demands (based on appearances and squad inclusions[4]

Phil Foden made 72 appearances and 77 squad inclusions across his Manchester City FC and England games during the 2023/24 season. If he were to play the same proportion in 2024/25 and 2025/26 as he did in the 2023/24 season, then his appearances and squad inclusions would increase to 77 and 83 in the 2024/25 season and 83 and 90 in the 2025/26 season. This increase primarily stems from the additional games in the expanded FIFA Club World Cup ('CWC') and UEFA Champions League ('UCL') that Foden would likely be required to play. Additionally, at the end of the 2025/26 season, Foden will likely play in the expanded, 48-team FIFA World Cup ('WC'), should England qualify. All these extra fixtures will add to his already substantial workload burden requiring the player to have less rest between compact seasons and travel further and more frequently to fulfil fixture requirements.

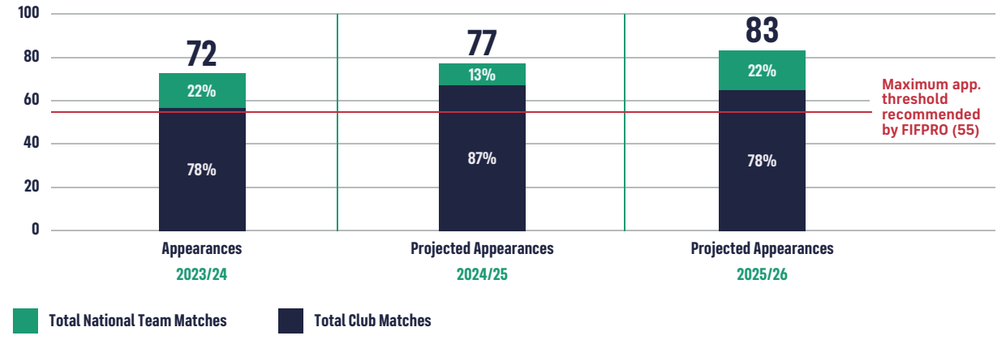
Note: The multifactorial impact of this additional increase on the player has at no point been assessed and evaluated from an occupational safety and health perspective. Respectively no risks for the player have been identified and no mitigation measures have been added.

	2023/24		2024/25		2025/26	
Competition	**Appearances**	**Squad Inclusions**	**Projected Appearances**	**Projected Squad Inclusions**	**Projected Appearances**	**Projected Squad Inclusions**
Club						
Premier League	35	37	35	37	35	37
FA Cup	5	6	5	6	5	6
EFL Cup	1	1	6	6	6	6
Community Shield	1	1	1	1	1	1
UEFA Champions League	8	10	14	17	14	17
FIFA Club World Cup	2	2	6	6	0	0
UEFA Super Cup	1	1	0	0	1	1
Club Friendlies	3	3	0	0	3	3
Total Club Matches	**56**	**61**	**67**	**73**	**65**	**71**
National Team						
UEFA Euro Qualifiers	4	4	0	0	0	0
UEFA European Championship	7	7	0	0	0	0
UEFA Nations League	0	0	6	6	0	0
FIFA World Cup Qualifiers	0	0	4	4	6	6
FIFA World Cup	0	0	0	0	8	8
National Team Friendlies	5	5	0	0	4	4
Total National Team Matches	**16**	**16**	**10**	**10**	**18**	**18**
Total						
Total Matches	**72**	**77**	**77**	**83**	**83**	**89**

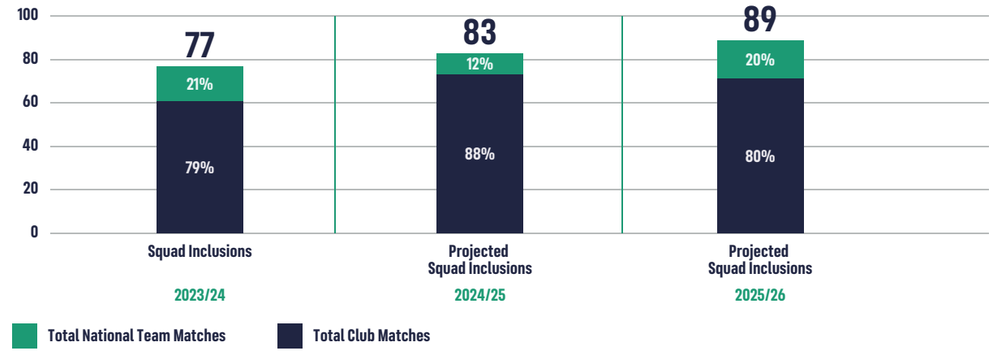
Source: Football Benchmark research and analysis

4) This is a conservative assessment as the exercise does not project working time and specific workload demands such as travel, time spent in workplace settings and others.

Appearances

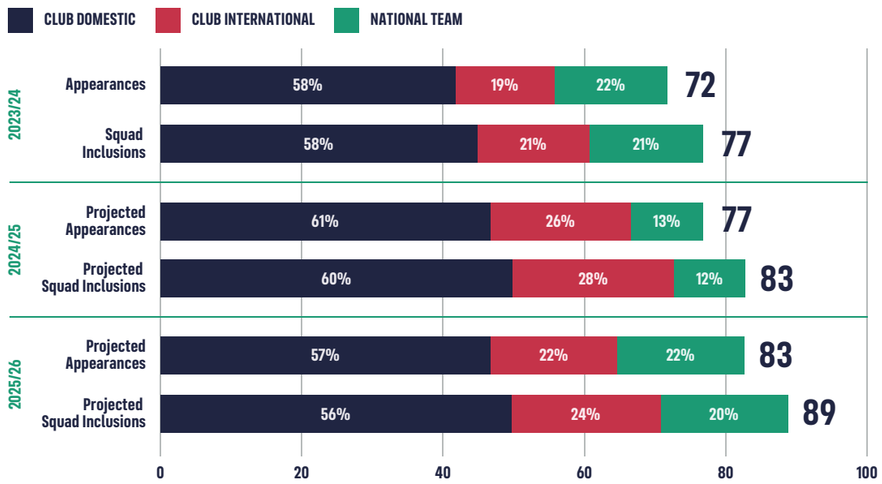


Squad Inclusions



Source: Football Benchmark research and analysis

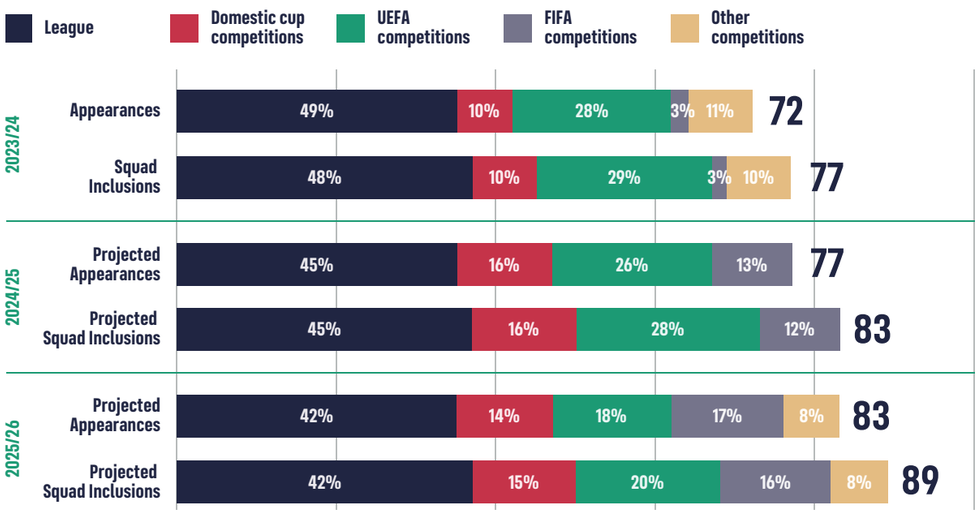
Foden's Match Load by Competition Type



Source: Football Benchmark research and analysis

When exploring deeper and looking at Foden's matches split by club (domestic and international) and national team, a growing proportion of his projected appearances and squad inclusions come from club international and national team matches. This increase partly stems from the expanded UCL and the revamped CWC in the next two seasons which will both add further fixtures to his calendar.

Foden's Match Load by Competition Organiser



Source: Football Benchmark research and analysis

From a competition organiser's perspective, the most significant increase in appearances and squad inclusions for Foden is from changes in FIFA-governed competitions. Specifically, the increase stems from the revamped CWC and the expanded format of the WC which will mean Foden will have 10 and 14 matches in FIFA competitions during the 2024/25 and 2025/26 seasons, respectively.

> **"During 11 months it is games, games, games. Before, pre-season was four or five weeks. Now we have 10 days. We want to play football and enjoy it, but we have to reduce it. It's too much. I'm not saying you have to eliminate national teams, or the Champions League, or the Premier League, or all the cups, but we have to find a solution."**
>
> **PEP GUARDIOLA**
> **(MANCHESTER CITY FC, MANAGER)**

FEDERICO VALVERDE

(Real Madrid CF, Uruguay)

A conservative approach to projecting increasing workload demands (based on appearances and squad inclusions)[5]

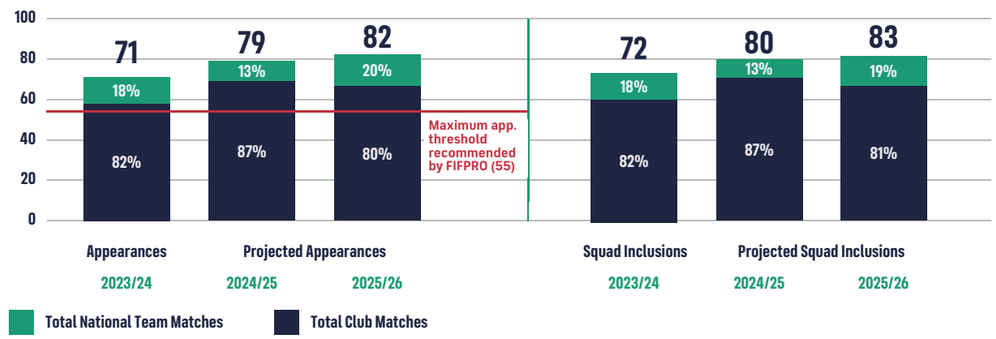
Federico Valverde's 2023/24 season consisted of 71 appearances and 72 squad inclusions across his club and national team commitments. Looking forward to his 2024/25 and 2025/26 seasons, it is projected that if he plays a similar proportion of games for his current club and national team, then his appearances will rise to 79 and 82 and his squad inclusions will rise to 80 and 83, respectively. Like Foden, the projected increase in Valverde's appearances comes from the expanded CWC and UCL on the club level and the expanded WC on the national team level. These extra fixtures will mean a greater workload. However, in Valverde's case, many of his national team games will require extensive travel as he will likely play FIFA World Cup qualifiers in South America, which adds a further burden alongside his increasing match load in future seasons.

	2023/24		2024/25		2025/26	
Competition	**Appearances**	**Squad Inclusions**	**Projected Appearances**	**Projected Squad Inclusions**	**Projected Appearances**	**Projected Squad Inclusions**
Club						
La Liga	37	38	37	38	37	38
Copa del Rey	2	2	6	6	6	6
Supercopa	2	2	2	2	2	2
UEFA Champions League	13	13	17	17	17	17
FIFA Club World Cup	0	0	6	6	0	0
UEFA Super Cup	0	0	1	1	1	1
Club Friendlies	4	4	0	0	3	3
Total Club Matches	**58**	**59**	**69**	**70**	**66**	**67**
National Team						
CONMEBOL Copa América	6	6	0	0	0	0
FIFA World Cup Qualifiers	6	6	9	9	2	2
FIFA World Cup	0	0	0	0	7	7
National Team Friendlies	1	1	1	1	7	7
Total National Team Matches	**13**	**13**	**10**	**10**	**16**	**16**
Total						
Total Matches	**71**	**72**	**79**	**80**	**82**	**83**

Source: Football Benchmark research and analysis

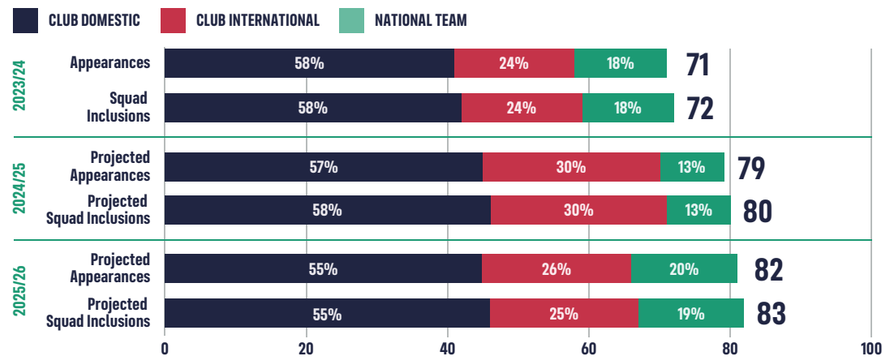
Appearances

Squad Inclusions



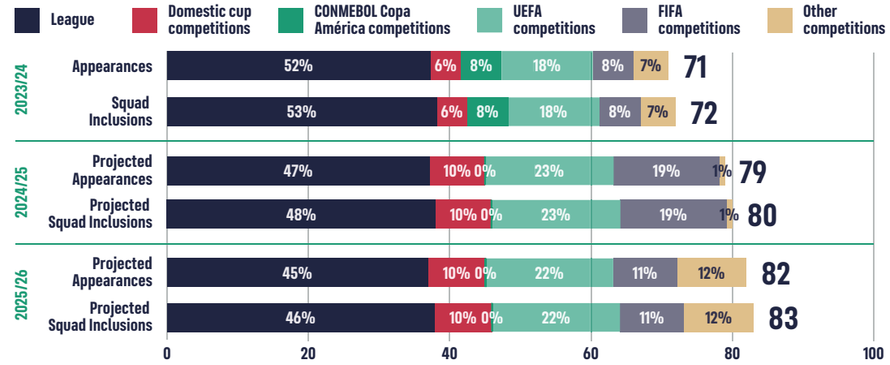
5) This is a conservative assessment as the exercise does not project working time and specific workload demands such as travel, time spent in workplace settings and others.

Valverde's Match Load by Competition Type



Valverde is projected to see an increase in his appearances and squad inclusions in the 2024/25 and 2025/26 seasons. When looking at his projected future seasons, there is a trend of increasing international club matches in the 2024/25 season and national team matches in the 2025/26 season. Like Foden, these increases stem from the expanded UCL and revamped CWC in the 2024/25 seasons and the presence of the expanded WC in the 2025/26 season. These competition changes will further congest Valverde's already-packed match calendar.

Valverde's Match Load by Competition Organiser



Source: Football Benchmark research and analysis

Valverde will see a rise in the number of matches he will be required to play in FIFA competitions in the 2024/25 season. This rise is due to the revamped CWC occurring at the end of the 2024/25 season. Additionally, a rise can also be seen in the 2025/26 season attributed to the presence of the expanded WC at the end of the season. These competition reforms mean that Valverde will have 15 and 9 matches from FIFA competitions during the 2024/25 and 2025/26 seasons, respectively. It should be noted that some matches within the national team calendar slots for the 2025/26 season have not yet been determined. For a fair assessment, all these matches within these national team calendar slots have been allocated as 'other competitions' matches.

NICOLÒ BARELLA

(FC Internazionale Milano, Italy)

A conservative approach to projecting increasing workload demands (based on appearances and squad inclusions)[6]

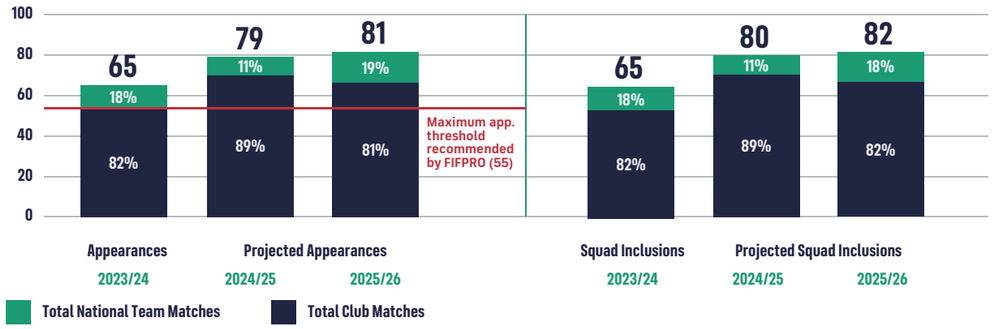
In the 2023/24 season, Nicolò Barella accumulated 65 appearances and squad inclusions across his time playing for his club and national team. If Barella were to play a similar proportion in 2024/25 and 2025/26 as he did in 2023/24, then his appearances and squad inclusions would increase to 79 and 80 in the 2024/25 season respectively. Similarly, in the 2025/26 season, his number rises to 81 appearances and 82 squad inclusions. Like other top-level footballers playing in Europe, this increase in games is mostly attributed to the expanded CWC, UCL and WC in 2024/25 and 2025/26 seasons. For Barella, these extra fixture requirements will stack up and his typically high utilisation by FC Inter will mean his workload will continue to be at a concerning level.

	2023/24		2024/25		2025/26	
Competition	**Appearances**	**Squad Inclusions**	**Projected Appearances**	**Projected Squad Inclusions**	**Projected Appearances**	**Projected Squad Inclusions**
Club						
Serie A	37	37	37	37	37	37
Coppa Italia	1	1	4	6	5	6
Supercoppa Italiana	2	2	2	2	2	2
UEFA Champions League	8	8	17	17	17	17
FIFA Club World Cup	0	0	6	6	0	0
UEFA Super Cup	0	0	0	0	1	1
Club Friendlies	5	5	4	4	5	5
Total Club Matches	**53**	**53**	**70**	**71**	**66**	**67**
National Team						
UEFA Euro Qualifiers	6	6	0	0	0	0
UEFA European Championship	4	4	0	0	0	0
UEFA Nations League	0	0	9	9	0	0
FIFA World Cup Qualifiers	0	0	0	0	5	5
FIFA World Cup	0	0	0	0	7	7
National Team Friendlies	2	2	0	0	3	3
Total National Team Matches	**12**	**12**	**9**	**9**	**15**	**15**
Total						
Total Matches	**65**	**65**	**79**	**80**	**81**	**82**

Source: Football Benchmark research and analysis

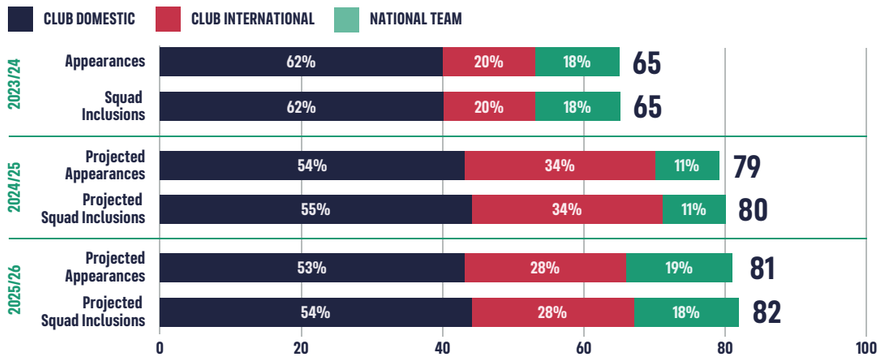
Appearances

Squad Inclusions



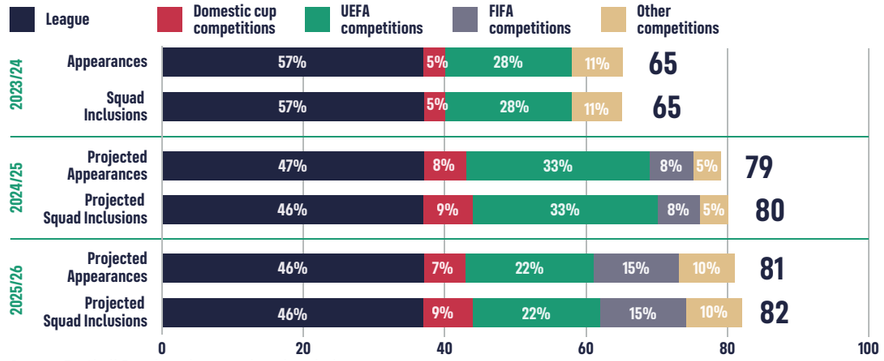
6) This is a conservative assessment as the exercise does not project working time and specific workload demands such as travel, time spent in workplace settings and others.

Barella's Match Load by Competition Type



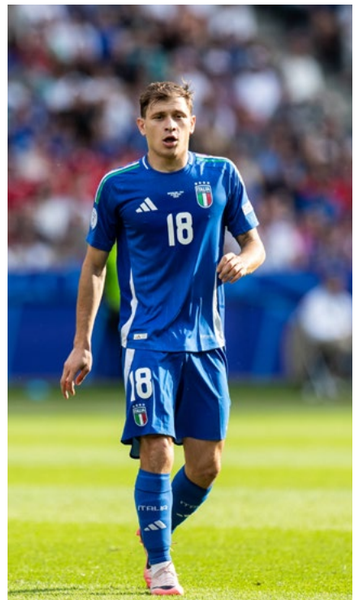
Barella's projected 2024/25 and 2025/26 seasons, compared to his 2023/24 season, are set to have increases in the number of international club and national team matches. Much like many other top-level European-based footballers, this increase in matches will be mostly due to the expanded UCL and revamped CWC which for Barella will mean an increase in match load as he will be required to satisfy more fixtures with fewer opportunities for rest and recovery.

Barella's Match Load by Competition Organiser



Source: Football Benchmark research and analysis

Barella, from a competition organiser's perspective, will play in an increased proportion of UEFA-governed matches in the 2024/25 season compared to the 2023/24 season due to the expanded UCL competition format and return of the UEFA Nations League into his calendar. In addition, Barella in the 2024/25 and 2025/26 seasons will play in an increased share of FIFA competition matches due to participating in the revamped CWC as well as the WC and its qualifiers.



07

YOUNG PLAYERS AT RISK: CAREER LONGEVITY & HISTORICAL COMPARISONS

As has been explored in early chapters, workload requirements on players have been escalating as the football calendar continues becoming more congested. This is disproportionately apparent for those players whose teams place enormous importance on playing them.

"It's so tough with crazy schedules and then coming together for the end of the season for one last tournament. It's difficult on the body — mentally and physically you are exhausted"

JUDE BELLINGHAM
(REAL MADRID CF AND ENGLAND)

07 / YOUNG PLAYERS AT RISK: CAREER LONGEVITY & HISTORICAL COMPARISONS

KEY TAKEAWAYS

AT A GLANCE – CHAPTER 07

- Leading young players from across each region are playing significantly more than their historical predecessors.
- Jude Bellingham has accumulated more club and national team appearances than all past English counterparts at the same age. Should this trend continue, Bellingham is likely to play significantly more matches over his career than any past England player.
- The unprecedented match load now being placed upon the game's leading young players presents a clear and pressing danger to their health and career longevity.

INTRODUCTION

In this following chapter, an array of different historical workload comparisons has been presented that showcase that there is a concerning trend that today's top-tier players are subject to workloads far higher than some of their similarly talented compatriots when they were playing at the same age. More specifically, historical workload comparisons have been undertaken between current and former players from England, Germany, France, Spain, Brazil, Japan, Algeria, Argentina & the United States.

Particular emphasis has been given to Jude Bellingham's workload and English comparisons as his consistently high minutes and appearances both at club and national team level have the potential to derail his career longevity.

POTENTIAL RISK FACTORS FOR THE PLAYER	
Excessive Match Load	Reduced Rest Periods
Insufficient Recovery Time	Frequent International Travel
Increased Mental Fatigue	Greater Number of Tournaments

"Players get overloaded and can't bring the performances anymore."

ERIK TEN HAG
(MANCHESTER UNITED FC MANAGER)

CASE STUDY

JUDE BELLINGHAM'S CAREER SO FAR AND APPEARANCE PROJECTION

As has been explored in earlier chapters, workload requirements for players have been escalating as the football calendar continues to be crammed with more games. This is disproportionately apparent for those players top-level players whose teams place enormous importance on playing them, regardless of any injury or over-fatigue that could potentially impinge upon their career longevity.

In the following section, a deep dive has been undertaken on Jude Bellingham to understand whether his career match load so far is comparable to that of iconic English players at a similar age. Then, a comparison is made between the actual workload of renowned English players across their careers and Bellingham's potential career workload to discern whether Bellignham's workload is likely to be at a "sensible" level by the end of his career.

Match Load Before Turning 21 - Comparison with Past England Players

Source: Football Benchmark research and analysis

By the age of 21, Bellingham's appearances across his club and national team already exceeded that of many prominent benchmarked English midfielders/forwards. In fact, he has almost 40 more appearances than the second-highest appearances maker, Wayne Rooney, who had 212 competitive club and national team games under his belt by the same age.

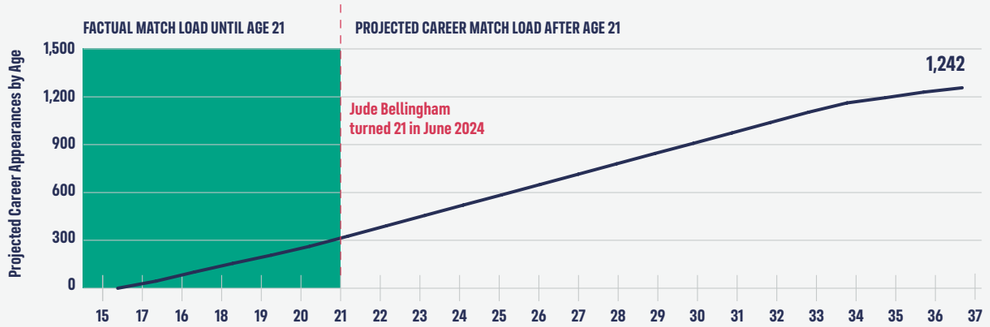
From a minutes perspective, Bellingham has played 3,500+ minutes more than Rooney. This level of game time has stemmed from Bellingham playing so many games at such a young age after making his professional debut at Birmingham City at 16. Coincidently, the second and third players with the most combined club and national team appearances before 21 in our analysis (Wayne Rooney and Michael Owen) also broke into their respective first teams very young, subsequently playing a lot of minutes early on in their careers. However, both Rooney's and Owen's careers tailed off due to injuries and both suffered a perhaps quicker physical decline compared to the other assessed English players.

What to Expect for the Rest of His Career?

Jude Bellingham in recent seasons has grown from a promising talent to a bona fide superstar in world football as he is now playing a pivotal role for England and greatly contributing to the European and domestic success at Real Madrid CF in the 2023/24 season. However, this rise has also been reflected in Bellingham's workload demands. By the end of the 2023/24 season, Bellingham had played over 250 first-team appearances across club and national team (over 19,000 minutes). It should not be forgotten that Bellingham only turned 21 on the 29th of June 2024 and his remarkable number of appearances made so far in his career has stemmed from not only playing a lot in each season but also receiving substantial first-team minutes at 16 whilst at Birmingham City.

This over-exposure at an early age not only has a risk of physical burnout, but the pressure to constantly perform at a high level can impact a young player's mental health, as well. Career longevity is also an issue, with injuries and the related "wear and tear" on a player's body often impacting these footballers at an earlier stage. It is challenging to anticipate how Bellingham's future career will pan out in terms of longevity, fitness and performance. However, a conservative projection has been created to understand what Bellingham's future career could look like in terms of total club and national team career appearances.

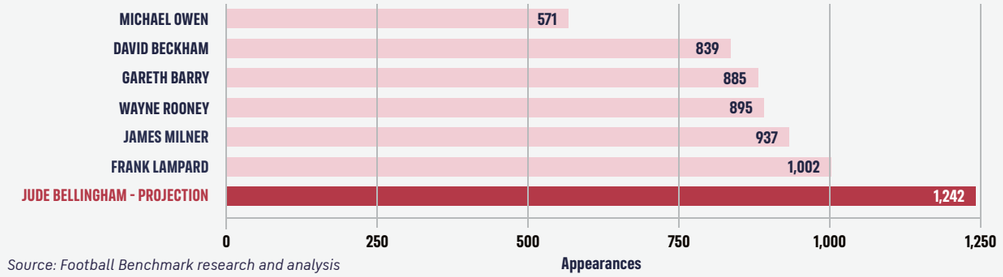
Bellingham's career appearances projection



Source: Football Benchmark research and analysis

Bellingham's projected career model assumes Bellingham will play for Real Madrid CF well into his thirties before moving to another club and retiring at the end of the 2040/41 season (just before his 38th birthday). Another key assumption that he will be selected for the England national team until the age of 36, adding to his international match load. The model also assumes Bellingham will not have a major career-ending injury. The projected appearances by season are based on his recent, factual workload with a gradual decline assumed in later years.

England player comparison - career club and national team appearances combined



Source: Football Benchmark research and analysis

When factoring in all of Bellingham's already factual appearances until the end of 2023/24 and his projected accumulated appearances throughout the rest of his career, it is projected that Bellingham will have accumulated 1,242 career appearances across his club and national team career. This is a substantial figure even compared to past England greats who had notable and successful careers. This comparison highlights that if a scenario like the above projected model comes into fruition, Bellingham's career will be another evidence that today's players have a significantly higher workload burden then the players of the past.

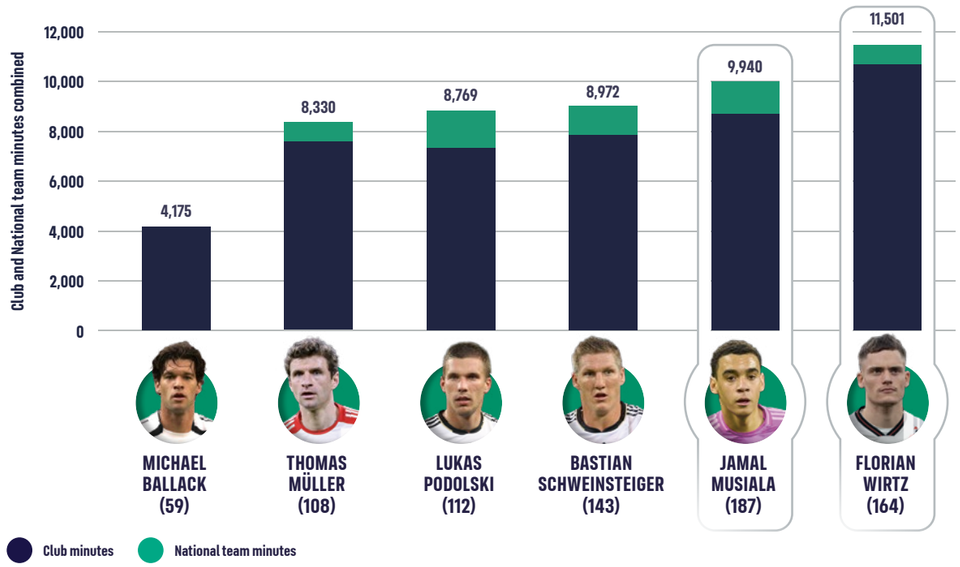
HISTORICAL WORKLOAD COMPARISONS

Comparison of players from different eras is an often-debated topic. Who was the better player? Could the great players of the past thrive in the modern game? While the comparative assessment of quality across eras is difficult, comparing them in terms of playing time is readily possible.

In this section, a selection of active players is compared to their older compatriots to put the modern workload into perspective. How many minutes or appearances they had by the same age?

The nations that have been selected for this assessment are Germany, France, Spain, Brazil, Argentina, Japan, Algeria and the USA. Only competitive club matches and senior national team games have been considered.

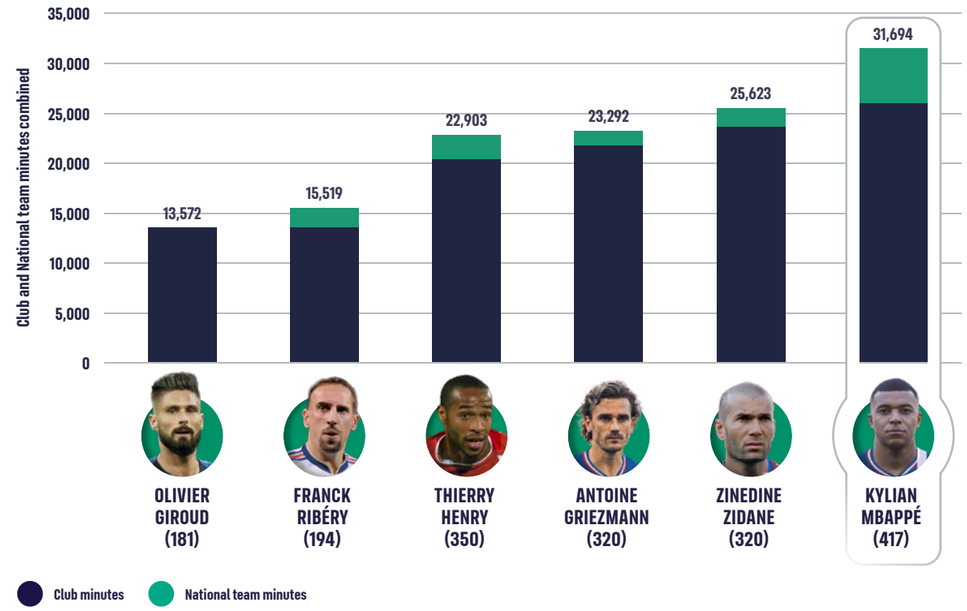
Germany players before turning 21 - club and national team mins



Source: Football Benchmark research and analysis

Before 21, both of Germany's young promising superstars, Florian Wirtz and Jamal Musiala, had each accumulated more than 1,000+ minutes across their club and national team compared to an esteemed list of German midfielders/forwards. This is despite Musiala initially playing rotational first-team minutes in his first few seasons at FC Bayern München and Wirtz suffering a significant long-term injury early in his career at Bayer 04 Leverkusen. From an appearance perspective, both Musiala and Wirtz have accumulated 20+ more compared to their compatriots. Both Musiala and Wirtz's elevated number of appearances and minutes played, compared to the benchmark players, is a result of both players making their first team debut at 17. This young start of course shows their immense talent and potential but such a workload at a young age could result in more injuries later in their career.

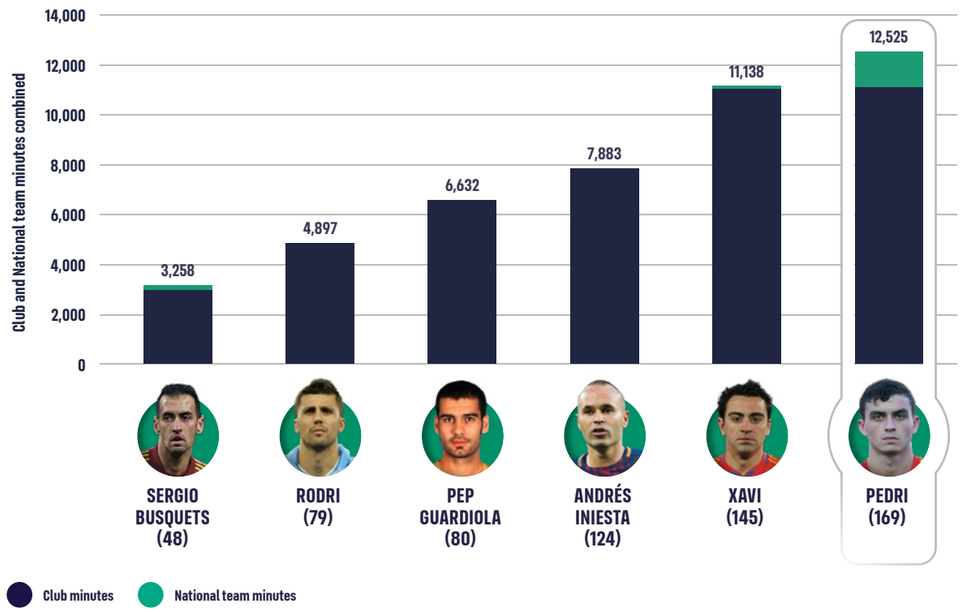
France players before turning 25 - club and national team mins



Source: Football Benchmark research and analysis

Kylian Mbappé, before turning 25, had far exceeded the minutes played across club and national team than many iconic French attacking players. In fact, Mbappé had played 6,000+ more minutes by his 25th birthday than any of the benchmarked players. This trend is also present when considering appearances as he accumulated nearly 60 more than his comparative French attacking players. This sheer quantity of minutes and appearances played stems from Mbappé debuting at a young age (aged 16 at AS Monaco FC) as well as his rapid ascent to becoming a first team regular, making 29 league appearances in the 2016/17 season (aged 17 at the beginning of the season). Although Mbappé has had a relatively clean bill of health throughout his career so far, it would not be unrealistic to project that his performances may decline quicker than some of the benchmark players due to the large volume of minutes and appearances played at such a young age.

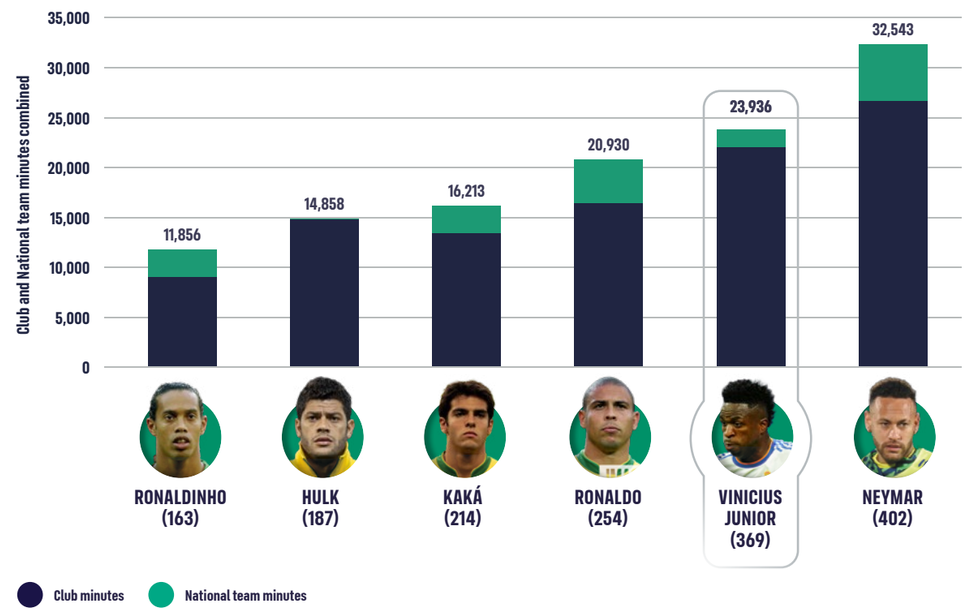
Spain players before turning 21 - club and national team mins



Source: Football Benchmark research and analysis

Pedri, prior to turning 21, had amassed a significant amount of club and national team minutes that surpass many highly celebrated Spanish midfield players at the same age, playing 1,000+ minutes more than Xavi and 4,500+ minutes more than the other benchmarked players. Similarly, Pedri has also accumulated 20+ more total appearances than any of the other players. The reason for this is partly due to Pedri not being eased into first-team team club football but rather playing significant minutes (+2800) and appearances (36) straight away in his first season at UD Las Palmas. The other reason for Pedri's considerable minutes and appearances is due to his early inclusion into the Spanish national team (debuting at age 18). This elevated workload at such a young age is highly suspected to have been the reason why the player has sustained so many soft tissue injuries in his career (336 days missed due to soft tissue injuries - 2023/24 season and prior). This is particularly evident in the infamous 2020/21 season where Pedri's 73 appearances for club and national team was followed by a series of soft tissue injuries allowing the player to only make 22 club appearances in the following season and 35 in the year after.

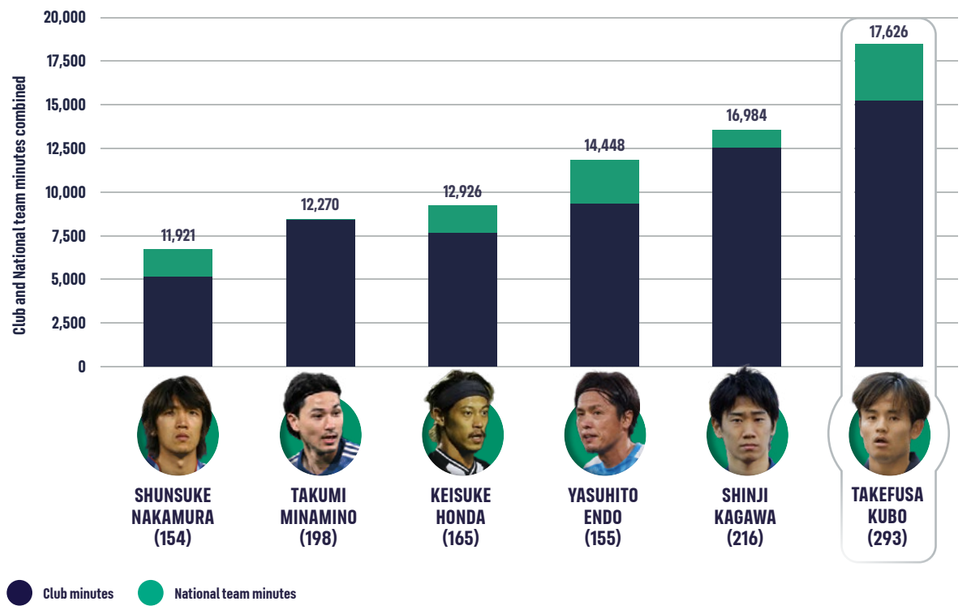
Brazil players before turning 24 - club and national team mins



Source: Football Benchmark research and analysis

Vinicius Junior ('Vini Jr'), prior to his 24th birthday had amassed 23,936 minutes across his club and national team career. This places Vini Jr only behind Neymar (32,543) from a selection of illustrious Brazilian attacking players when it comes to total minutes at such a young age. On top of that, Vini Jr (369) had accumulated 110+ appearances more than any player, not named Neymar, from the benchmarked Brazilian group. Neymar's quite frankly ludicrous number of appearances and minutes accumulated at such a young age has often been thought to have contributed to his persistent injuries later in his career. Additionally, of the assessed Brazilian players, the 3rd Brazilian in terms of total accumulated minutes and appearances, Ronaldo, also suffered significant injury lay-offs. Both Neymar and Ronaldo's careers should serve as a stark warning to Vini Jr about the consequences of such an intense player workload at a young age.

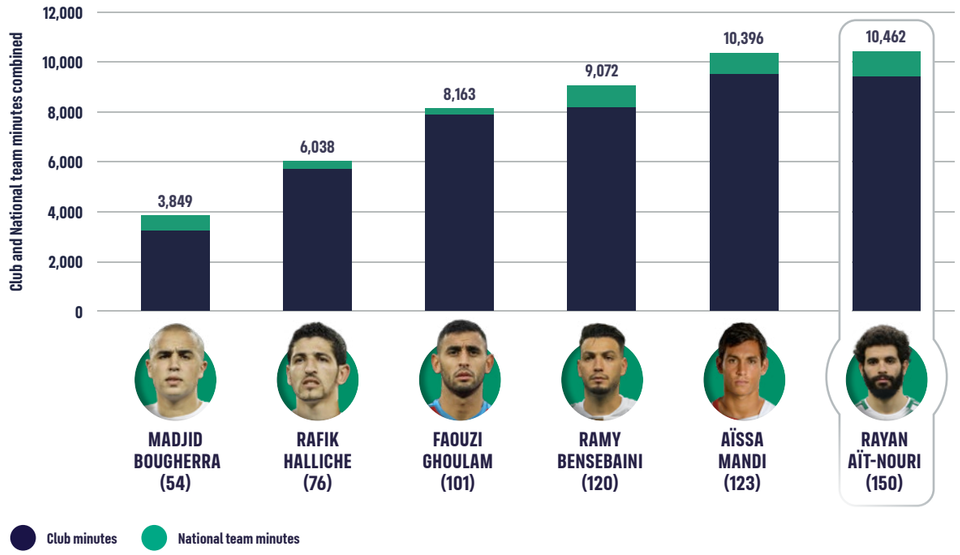
Japan players before turning 23 - club and national team mins



Source: Football Benchmark research and analysis

The trend of today's players having a greater workload can also be seen in Asia as Japan's very promising winger, Takefusa Kubo, has racked up more club and national team minutes (17,626) than other prominent Japanese forward players prior to their 23rd birthday. This trend is also present when it comes to total appearances as Kubo has garnered a whopping 70+ appearances more than any of his assessed compatriots. This increased level of appearances stem from Kubo's early professional debut (aged 15) and the consistent number of games he received once moving to RCD Mallorca at age 18.

Algeria players before turning 23 - club and national team mins



Source: Football Benchmark research and analysis

Increases in workload at a young age are also being experienced in Africa as one of Algeria's current defensive stalwarts, Rayan Aït-Nouri, has accrued more club and national team minutes than other prominent Algerian defenders prior to their 23rd birthday. This trend becomes more pronounced when considering total appearances, where Aït-Nouri has accumulated 25+ more appearances than the benchmarked Algerian players. A key reason for Aït-Nouri's elevated number of minutes and in particular appearances was his early inclusion into first-team football, making his professional debut at 17 for Angers SCO in Ligue 1. This early career start has meant a greater workload at a young age for Aït-Nouri which may impact his physical longevity at the highest level.

From a national team perspective, Aït-Nouri debuted for the Algerian national team at age 21, despite being born in France. This is a feature that is present with 4 out of 6 benchmarked players (Bougherra, Ghoulam, Mandi and Aït-Nouri). As such, these four players made their initial domestic league debuts in the French leagues (either in Ligue 1 or Ligue 2) with the other two benchmarked players (Bensebaini and Halliche) making their initial domestic league debuts in Algeria. Despite only making his national team debut at age 21, Aït-Nouri had accumulated the most national team appearances and minutes of the benchmark group. This rapid national team workload accumulation suggests that young players are increasingly required to play more not just for their clubs but also for their national teams.

Argentinian forwards' number of appearances during the season of their 24th birthday

Source: Football Benchmark research and analysis

As mentioned in Chapter 03 of this report, Julián Álvarez's 2023/24 season was staggering in terms of the number of club and national team appearances he accumulated. When comparing his 2023/24 season, in which he turned 24 years old, to other Argentinian forward players in the season that they turned 24, it is clear that from an appearance perspective, Álvarez stood above his notable fellow countryman.

For the sake of consistency, friendlies have not been included in this particular analysis as some of the older Argentinian players do not have accessible recorded data of their pre-season friendlies (hence Álvarez's total appearances in the 2023/24 season will look different here compared to other chapters). Additionally, to maintain a level playing field, players who had a major injury as part of their 24th birthday season have not been included e.g., Diego Maradona.

As depicted in the above graphic, Álvarez's appearance number in the 2023/24 season is the highest amongst the players assessed. Even Lionel Messi's in the 2010/11 season, a season where Messi was prominent for FC Barcelona which won the Champions League, La Liga and the Spanish Supercopa, had fewer appearances than Álvarez. His high number of appearances in the 2023/24 season is because of the numerous competitions he was required to participate in for his club and national team, such as the FIFA Club World Cup, UEFA Super Cup, Copa America and Olympics. His 2023/24 season is a stark warning of the increasing required workload of today's top-level players and with this increased burden, the chances of injury and impacts on a player's career longevity become increasingly likely.

Landon Donovan vs. Christian Pulisic – season by season appearances

Landon Donovan	Age	Christian Pulisic
10	17th - 18th Birthday	22
23	18th - 19th Birthday	57
40	19th - 20th Birthday	41
38	20th - 21st Birthday	43
40	21st - 22nd Birthday	32
46	22nd - 23rd Birthday	50
49	23rd - 24th Birthday	56
34	24th - 25th Birthday	37
280	**Total Club and National Team Appearances Until Age of 25**	338

Source: Football Benchmark research and analysis

Finally, the trend of today's players having a greater workload is also present in the USA as Christian Pulisic had registered more (50+) club and national team appearances than the USA legendary forward, Landon Donovan, prior to their 25th birthday. This is despite Pulisic being synonymous with having numerous injury problems in his career so far. The reason for such a discrepancy between the two generational USA forwards and their accumulated appearances stems from Pulisic's early break into the Borussia Dortmund first team, initially breaking into the first team at 17 but then receiving substantial first-team appearances at 18. In comparison, Donovan, who also had an early club career in Germany, didn't start receiving substantial appearances until he left Bayer 04 Leverkusen, where prior he made sporadic appearances for the reserve team in the third/fourth tier in Germany, and then moved to the San Jose Earthquakes in the MLS at 19. Pulisic, if not for injuries, would have an even greater distance, in terms of appearances, compared to Donovan. This is particularly evident between Pulisic's 21st and 22nd birthdays, where he missed numerous club and national team games due to a long-term ankle injury, COVID-19 and general illness. Overall. Pulisic's incredible number of appearances at such a young age has likely contributed to his worrisome injury record, having had the misfortune of missing close to 100 games since the 2017/2018 season through various injuries.

Summary

Overall, across the selected nations and players there appears to be a clear trend in workload when comparing the current young top-level players and their historic compatriots. Namely, today's players are tasked with having more laborious match load, requiring them to play more minutes and make more appearances. This increased workload for today's young stars has the strong potential of hampering their careers as their likelihood of injury and early physical deterioration increases. This is despite advancements in medical practices, rehabilitation, injury prevention and nutrition which can help current players deal with greater workload, however, as per FIFPRO's 2022 survey of players and high-performance coaches, such advancements are not keeping up with the rate of workload increases of today's players.

08

GLOBAL WORKLOAD: REGIONAL ANALYSIS

The football calendar is always evolving with competition organisers vying for more space for their own products. In the following chapter all recent and upcoming major competition changes across club and national team football is explored, together with potential player workload implications.

"When you see the data on paper and in statistics you are surprised. Mostly because of the schedule changes. You don't realise it, but the body takes its toll with mini injuries"

NICOLÁS TAGLIAFICO
(OLYMPIQUE LYONNAIS AND ARGENTINA)

08 / GLOBAL WORKLOAD: REGIONAL ANALYSIS

INTRODUCTION

This chapter explores all major competition changes across club and national team football in recent and upcoming years. The focus is thus on the 2022-2026 period and on competition changes that have led to an increase in the number of participating teams or in the potential number of games to be played by them.

It should be noted that not all competitions in the world have been assessed, rather only those that are played on a regular basis and are considered to be the most important ones in the match calendar of a confederation. Thus, competitions that are semi-regular, 'Super Cup' style, related to pre-season tours and/or international club friendlies have not been included.

Every FIFPRO region is discussed in individual sections. Each section opens with a graphic of the region's players with the highest match and travel load in the 2023/24 season, illustrating the top-end of workload requirements. This is followed by a detailed overview of competition changes, their expected impact on player workload and additional segments that shed light on region-related workload topics.

ASIA & OCEANIA

KEY PWM METRICS (2023/24 SEASON)

SAUD ABDULHAMID

73 (68)
Top player by matchday squad inclusions
(appearances)

HARRY SOUTTAR

74%
Top player by share of back-to-back appearances

157,000 km (18 trips)
Top player by international travel distance
(# of international trips)

Source: FIFPRO Men's Player Workload Monitoring Platform

SUMMARY OF COMPETITION CHANGES IN ASIA & OCEANIA

Competitions							
Region	Competition	Type	Last Competition	Next Competition			Δ in # of Max Possible Games
			Period	Period	# of Participating Teams	Max Possible Games Per Team	
Asia	**CAFA Nations Cup**	National Team	Jun 2023	TBC	7	4	4
	AFC Champions League Elite	Club	Sep 2023 - May 2024	Sep 2024 - May 2025	24	13	-1
	AFC Challenge League	Club	May - Sep 2024	Oct 2024 - May 2025	18	8	4

Asia has seen changes in its CAFA Nations Cup ('CAFA'), AFC Champions League Elite ('AFC Elite') and AFC Challenge League ('AFC Challenge') competitions. In terms of timing, the AFC Challenge re-emerged after 10 years of not being played. Compared to the previous iteration, the competition is now in line with the other Asian continental club competitions and spanned across a full league season, now being played between Sep/Oct to May. Regarding the number of participating teams and the maximum number of matches a team may have, CAFA, as a new competition will have its number of participating teams grow to 7 and its maximum number of matches a team will face to four. The AFC Elite competition has reduced its number of teams, from 40 to 24 as part of the AFC's wider continental club competition reformatting where the inclusion of a third tier (AFC Challenge; now with 18 teams but originally having 11 back in 2014) has meant teams are more spread throughout the 3 levels of Asian continental competition. Similarly, the maximum number of games a team can play in the AFC Elite has reduced from 14 to 13 whereas the AFC Challenge has risen from four to eight.

ASIA & OCEANIA

FIFPRO DIVISION ASIA / OCEANIA RESEARCH REPORT: AFC CHAMPIONS LEAGUE ANALYSIS

Early in 2024, FIFPRO's Asia/Oceania Division released a report analysing the AFC Champions League (ACL) competition, ahead of its relaunch with a new format in 2024-25. The report found that both the old and new formats present significant workload challenges for players in the region, compounded by Asia's vast geography.

Under the 'legacy' ACL format, the average travel distance for an away match in the group stage was 3,670km. The AFC's travel subsidy did not cover the cost of flights above economy class.

In a case study, a K League 1 player with ACL duties was shown to have spent around half of their season's match minutes in the 'critical zone', defined by FIFPRO as playing at least 45 minutes in consecutive matches with less than five days rest in between.

In a survey of ACL players, 72% had felt at risk of injury due to the time between matches and/or travel requirements. Two thirds felt that they or their team had performed below their best in a league fixture following a continental match due to fatigue.

The new ACL Elite format will have a mixed impact on the workload requirements for players. The league-style group stage guarantees that every team will play at least eight fixtures, up from six. This increase in fixtures is partially offset by the fact that the average travel distance is projected to be less than in the legacy format, due to the make-up of qualified clubs.

The last eight will now gather in a centralised location (initially Saudi Arabia) to play out the final stages. Compared to the legacy format, more clubs will have to make a particularly long journey to attend this meet, but those that make the final will experience less back-and-forth travel overall.

The centralised bracket will require teams to be away from home for up to two weeks, potentially creating the need to rearrange several domestic fixtures, adding to fixture congestion.

The report did not incorporate lower tier AFC club competitions or international football, but the travel requirements for national team players in the region are extreme. The report's key recommendation was that the AFC take a more collaborative approach to competition design, so that players and clubs can help shape a format which mitigates some of these challenges.

ASIA & OCEANIA

REGION IN FOCUS: EVOLVING WORKLOAD LANDSCAPE OF SAUDI ARABIA

Over the past 15 seasons, the Saudi Pro League (SPL) has undergone a significant growth. While in 2009/10 only 12 teams competed (132 matches in 22 rounds), the size gradually increased, reaching 18 teams in 2023/24 and extending to 34 rounds (306 games). With the expansion, the competitiveness and the physical demands have also increased as players had longer seasons and shorter off-season breaks, raising concerns about workload.

In addition to the SPL, teams also compete in the King Cup, the country's primary cup competition. The competition which was limited to SPL teams since the COVID-19 pandemic, once again included teams from the Saudi First Division League for the 2023/24 season, doubling the total number of matches compared to the previous season, adding further strain on players. Top-performing teams in the SPL or the King Cup qualify for the Saudi Super Cup. Initially a two-team format from its inception in 2013 until 2022, the last two editions have expanded to include four teams, further increasing the match load of top teams.
The 2023/24 season marked a significant shift with SPL clubs spending over EUR 950 million, emerging as a key player in the transfer market and intensifying the league's competitiveness. As highlighted earlier, the 2023/24 also set new benchmarks in terms of match load. Reigning champions Al-Hilal, along with their challengers Al-Nassr and Al-Ittihad, each surpassed 50 competitive matches in 2023/24, reflecting the heightened intensity of their schedules. Besides competitive fixtures, clubs played several pre-season and in-season friendlies further increasing their workload.

Number of games played by clubs in recent seasons

Team	2020/21	2021/22	2022/23	2023/24
Al-Hilal SFC	42	49	38	53
Al-Ittihad Club	32	33	35	52
Al-Nassr FC	43	32	34	51

Source: Football Benchmark research and analysis

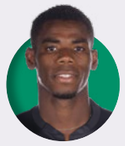
It is important to highlight that leading players frequently participate in additional matches due to regular call-ups by their national teams. With top clubs attracting elite talent and major continental tournaments such as the AFC Asian Cup, CAF Africa Cup of Nations, European Championship, and Copa América taking place in the 2023/24 season, players could end up playing in well over 55 matches. In the database of the PWM platform, there are no fewer than 12 players who exceeded this 55-game threshold last season, including the likes of Saud Abdulhamid (68 appearances), Cristiano Ronaldo (68), Rúben Neves (67) and Sadio Mané (62).

As the Saudi Pro League continues its growth, regulatory changes for the 2024/25 season introduces significant adjustments aimed at optimising squad management. Despite more fixtures, clubs must trim their matchday squad sizes from 30 to 25 registered players to avoid "overly-deep benches," necessitating more strategic player rotation to balance performance and fatigue. Additionally, clubs are now permitted to register 10 foreign players, up from eight, with the stipulation that the additional two must be born after 2003, and only eight can participate in any game. Furthermore, the adjustment of the country's under-19 league to an under-18 league aims to provide an earlier entry point for young talent, enhancing long-term player development.

It remains to be seen how the new regulations will impact player workload, but clubs will need to be more strategic in managing workload distribution among their players, which is often sacrificed to achieve sporting success.

AFRICA

KEY PWM METRICS (2023/24 SEASON)



RAPHAEL ONYEDIKA

70 (59)

Top player by matchday squad inclusions
(appearances)

SADIO MANE

71%

Top player by share of back-to-back appearances

PERCY TAU

127,000 km (32 trips)

Top player by international travel distance
(# of international trips)

Source: FIFPRO Men's Player Workload Monitoring Platform

SUMMARY OF COMPETITION CHANGES IN AFRICA

Competitions							
Region	Competition	Type	Last Competition	Next Competition			Δ in # of Max Possible Games
			Period	Period	# of Participating Teams	Max Possible Games Per Team	
Africa	**CAF Africa Cup of Nations**	National Team	Jan - Feb 2024	Dec 2025 - Jan 2026	24	7	0
	COSAFA Cup	National Team	Jul - 2022	Jul - 2023	12	5	-1
	African Football League	Club	Oct - Nov 2023	TBC	24	21	15

From an African perspective, there have been region-specific competition format changes in the CAF Africa Cup of Nations ('AFCON'), COSAFA Cup ('COSAFA') and the African Football League ('AFL'). In terms of timing changes specifically, AFCON has altered its dates moving from a Jan – Feb timing to a Dec – Jan timing. The rationale for this seemingly minor change is due to changes in UEFA's calendar and more specifically the UCC group stages in which many African players usually participate. A clash in these two competitions could have occurred as the number of UCC group stage matches has increased with the inclusion of matchdays #7 and #8. These matchdays are scheduled to take place sometime between 20 – 30 January 2026, a period that was "traditionally" a time for AFCON games.

Moving the start of the next AFCON to December increases the negative impact on domestic competitions (e.g. English Premier League) and infringes on the few rest days players may have in other domestic competitions while many players will be expected to play for their clubs just days after finishing their national team duty.

This is not the first time that AFCON has had to adjust its timing due to the impacts of other expanding competitions. It was reported that CAF had been planning to move their flagship national team tournament to the European summertime. Yet, much like the clash with the new UCC format, their plans had to change following the announcement of a revamped CWC, which will take place in June 2025. This meant that AFCON was forced to adapt to an increasingly congested football calendar.

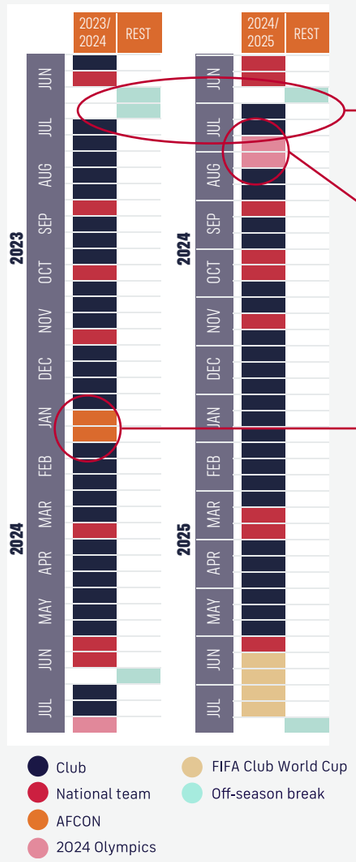
African football competitions are sometimes an afterthought in the minds of global competition organisers with seemingly little consideration given to their impact on them. This means that African competitions are not organised until the very last moment (e.g. AFL) or are forced to adjust their scheduling (e.g. AFCON) which impacts player schedules.

AFRICA

CASE STUDY

ACHRAF HAKIMI'S BUSY MATCH CALENDAR

Achraf Hakimi is a hugely accomplished and highly utilised fullback for PSG and the Moroccan national team. In fact, during the 2023/24 season, Hakimi played in multiple club competitions, national team friendlies, qualifiers, AFCON and the Paris Olympic Games. Additionally, the 2024/25 season will have Hakimi playing a variety of club competitions (including the expanded UEFA Champions League), national team friendlies and qualifiers, and the new FIFA Club World Cup at the end of the season. The problem for him (and many other players with similar workloads) with playing in so many competitions is the resulting congested calendar, which limits a player's potential rest periods. In Hakimi's case, playing in the 2024 Olympics and likely playing in the 2025 FIFA Club World Cup will mean that the player could end up playing in club and national team matches from July 2024 to July 2025 without a proper break.



The numbers behind Achraf Hakimi's 2023/24 and 2024/25 calendars

In the 2023/24 season, Hakimi participated in the 2024 AFCON, departing for National Team duty after his last PSG game (03/01/2024), and then preparing with the squad ahead of the start of AFCON (17/01/2024).

Following the tournament, Hakimi was not afforded adequate recovery time due to the congested nature of the calendar and competition timings. He was back in training with PSG within days, with only 8 days between the end of AFCON (30/01/2024) and his next PSG match (07/02/2024).

Hakimi's off-season break and pre-season training period with PSG was then interrupted as he was on international duty with Morocco at the 2024 Olympics in late-July and early-August. Following the tournament, once again, he did not receive sufficient physical and mental recovery, as 5 days after Morocco had its last Olympics match), Hakimi was back to PSG for training (13/08/2024).

Looking ahead, Hakimi's next two seasons look incredibly congested, with the player likely to play for PSG in the expanded UEFA Champions League, FIFA Club World Cup, and FIFA World Cup 2026 with Morocco. This will mean he will once again, not receive the sufficient rest and recovery to safeguard his health and career longevity.

Source: Football Benchmark research and analysis

What the above numbers suggest is that the match calendars of players, such as Hakimi, are already near the bursting point with rest time being kept to a minimum. In Hakimi's case, after playing a packed season scattered with international matches and an AFCON, all of which require significant travel, he was also tasked with playing for Morocco in the 2024 Olympics. Moreover, once the Olympics were over, Hakimi was then expected to report back to PSG and undertake another long and gruelling season.

The holistic workload demands are a consequence of a congested match calendar that provides no macro-level safeguards for players. The negative impact on players such as Hakimi as well as the associated risks have been outlined in earlier chapters.

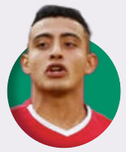
NORTH AND CENTRAL AMERICA

KEY PWM METRICS (2023/24 SEASON)

GERARDO ARTEAGA

66 (54)

Top player by matchday squad inclusions
(appearances)



DANIEL CHACON

81%

Top player by share of back-to-back appearances

CÉSAR BLACKMAN

131,000 km (31 trips)

Top player by international travel distance
(# of international trips)

Source: FIFPRO Men's Player Workload Monitoring Platform

SUMMARY OF COMPETITION CHANGES IN NORTH AND CENTRAL AMERICA

Competitions							
Region	Competition	Type	Last Competition	Next Competition			Δ in # of Max Possible Games
			Period	Period	# of Participating Teams	Max Possible Games Per Team	
N/C America	CONCACAF Nations League	National Team	Jun 2022 - Jun 2023	Sep 2023 - Mar 2024	41	8	2
	CONCACAF Champions Cup	Club	May - Jun 2023	Feb - Jun 2024	27	9	1
	Leagues Cup	Club	Aug - Sep 2022	Jul - Aug 2023	47	7	6
	CONCACAF Central American Cup	Club	N/a	Aug - Dec 2023	20	12	12
	CONCACAF Caribbean Cup	Club	May - 2022	Aug - Dec 2023	10	8	4

More so than other regions, competitions in the North and Central America region have typically seen more expansion as the popularity and investment into football have grown exponentially (primarily driven by the United States). Specifically, the CONCACAF Nations League ('CNL'), CONCACAF Champions Cup ('Champions Cup'), Leagues Cup, CONCACAF Central American Cup ('CA Cup') and CONCACAF Caribbean Cup ('Caribbean Cup') have all been reformatted in recent years with expansion as the key theme of these changes.

As a result, the timing of most competitions has also changed. The latest CNL took place from September 2023 until March 2024, which was shorter than the previous iteration. This was necessary in order not to clash with the Copa America in which six CONCACAF nations took part as teams invited by CONMEBOL. Alternatively, the Champions Cup, Leagues Cup and Caribbean Cup have all increased in length to include more teams and fixtures over the last two years.

In terms of the number of participants, only the CNL has not had an increase. The Champions Cup (going from 16 to 27), Leagues Cup (8 to 47), Caribbean Cup (6 to 10) and the new CA CUP (0 to 20) have all grown in size. In a similar vein, the maximum number of fixtures a team can play in all these competitions has increased, as well.

The growth of the game in the North and Central American region is clear from recent competition changes. However, with such expansion comes the risk of player welfare and player workload as it is the players that bear the physical and psychological strain of satisfying the additional matches. Moreover, the vast geographical distances within the region mean that players must also contend with excess travel which impacts their workload as well as their ability to rest.

NORTH AND CENTRAL AMERICA

REGION IN FOCUS: TRAVEL LOAD IN CONCACAF LEAGUES

One of the most significant challenges faced by footballers in North America is the extensive travel required due to the continent's size. This issue is particularly pronounced in leagues such as Major League Soccer (MLS) and the Liga MX. Players frequently travel thousands of miles across multiple time zones for league matches, which can affect their performance, recovery, and overall well-being. If you've ever taken a long-haul flight, you understand that the day of flying feels like an intensive workout. The extensive travel reduces their rest time, limits training sessions, and provides less opportunities for improvement.

USA – Major League Soccer

Travel impacts the MLS the hardest out of the three leagues. Many teams, notably those located on the West coast, can hit travel figures of over 75,000 km over a single season. To put that in perspective, one away day for many MLS teams such as the Vancouver Whitecaps or Orlando City FC, can equate to a larger travel distance than most English Premier League club do in a full season.

To reduce the number of trips, teams regularly play two road games within a congested week. This consequently leads to players facing a multitude of concurrent challenges, managing back-to-back match recovery alongside extensive travel fatigue and varying climate conditions (e.g., playing away in Atlanta on Saturday night, away in New York on Wednesday, and then returning home for game on Saturday/Sunday).

In addition to league matches, MLS players also participate in the CONCACAF Champions Cup, the Leagues Cup and in national team matches, as well, significantly increasing their overall workload. It should be noted that MLS teams have perennially struggled in the Champions Cup, in part due to calendar misalignment, with the timing of early-round games occurring prior to the start of the MLS season. In more recent years, teams have been granted permission to begin training early to prepare for these games.

Mexico - Liga MX

Although domestic travel in Liga MX is less extreme than in the MLS, international competition travel can be more demanding, particularly in the Leagues Cup. This competition involves 47 clubs from the U.S., Mexico, and Canada, participating in a nearly month-long event that pauses both leagues' regular seasons. In the 2023 edition, Liga MX clubs raised complaints as Mexican teams travelled an average of 3,860 km to their matches, while MLS teams only had to move an average of 1,172 km.

In response, the format was reworked to introduce a tiered Leagues Cup Ranking system, as well as hubs for the highest-ranked Liga MX clubs. The Leagues Cup ranking is now strictly based on the combined performance of MLS and Liga MX clubs, determined by points earned in the last 34 regular season matches. The Liga MX champion and the three top-ranked clubs are granted hub privileges that are designed to minimise travel. This allows them to play as the home team in pre-determined venues based on their Leagues Cup ranking.

While the Leagues Cup promised less travel for Liga MX clubs this year, the schedule shows many will still face extensive travel for group stage matches on little rest. Apart from those Mexican teams with "hub privileges", all MLS clubs will host their group stage matches against Liga MX opponents. This means most Liga MX clubs will be traveling from city to city for their games, like in 2023. For instance, Club León, ranked as the strongest team in their group by the Leagues Cup metrics, will be at a significant disadvantage. Despite being a top seed, they must travel between matches in Portland and Denver just six days apart, in addition to potential knockout round locations.

NORTH AND CENTRAL AMERICA

EXPERT OPINION: PROTECTING THE PLAYERS PROTECTS THE PRODUCT

DR. GARRISON DRAPER
Member, FIFPRO High-Performance Advisory Network
Performance Director, Inter Miami CF
Teesside University

DR. DAVID TENNEY
Member, FIFPRO High-Performance Advisory Network
Performance Director, AUSTIN FC

PROF PAUL CHESTERTON
Teesside University

Life as an elite soccer player, or club staff, in North America is not for the feint of heart. While not boasting the fixture congestion of Topflight European and Brazilian Leagues, though close at times, the North American soccer calendar is a beast unto its own. Strategically modelled upon North American sports leagues, a successful team's calendar can span almost the entire calendar year. The season begins with the first days of training in early/mid-January with the league final scheduled for early December. The season is dissected with additional tournaments from the CONCACAF Champions Cup in the opening weeks of competition, the US Open Cup in late spring and summer, add in a season halt for the Leagues Cup, which presents more challenging matches in the dead of summer in a world cup style tournament. The increased popularity and appetite for North American Soccer has seen the rise of 'marketing tours' across the globe, whilst promoting the league and those who serve it, further contributes to the heavy demand already placed its elite players. Successful teams could endure 5-6 months straight of congested schedules, with a flight log to rival a professional pilot.

Elite North American soccer boasts athletes from 81 different countries. For those players representing their national teams on a different continent, the best case is a 7hr flight (for example: Europe to New York City or Northern/Central South America to Miami) to and from their respective national team matches. To alleviate some of the stress, the league offers the ability to "play through" FIFA Windows, though that decision risks playing without your top talents for periods of the season.

What makes elite North American soccer truly unique, is through all the congestion, teams are competing across an entire continent, which spans almost 8,000,000 sqkm, with vast climatological considerations which support staff must account for throughout the year. Players may need to travel for 4-6 hours by plane, endure extreme temperature and humidity variations, and navigate a 3-hour time zone difference prior to a ball being kicked. This complex workload reality is often simplified or overlooked when the focus is placed primarily on an analysis of minutes or matches played.

Whilst player demands increase, the challenge for practitioners is to mobilise impactful, player-centered interventions to meet the challenges head-on. While performance management and medical capabilities have improved, physiological limits and risks continue to exist, which even the best player-care cannot mitigate. Ultimately, the football eco-system and the match calendar in which performance specialists must operate, should embed occupational safety principles to support the protection of player health and performance. In turn, this will then enable the performance experts to analyse future developments, to understand the impact of the unique demands of North American soccer and to provide evidence-informed/athlete-centered solutions. These can help ensure player health and wellbeing.

Protecting the players protects the product.

> "The wheel has been turned too far. I sometimes feel guilty about inviting players to the national team. 70 games is a bit much."

DOMENICO TEDESCO
(BELGIUM NATIONAL TEAM MANAGER)

SOUTH AMERICA

KEY PWM METRICS (2023/24 SEASON)

JULIAN ALVAREZ

83 (75)

Top player by matchday squad inclusions
(appearances)

FRANCO CRISTALDO

77%

Top player by share of back-to-back appearances

CRISTIAN ROMERO

163,000 km (25 trips)

Top player by international travel distance
(# of international trips)

Source: FIFPRO Men's Player Workload Monitoring Platform

SUMMARY OF COMPETITION CHANGES IN SOUTH AMERICA

Competitions							
Region	Competition	Type	Last Competition	Next Competition			Δ in # of Max Possible Games
			Period	Period	# of Participating Teams	Max Possible Games Per Team	
South America	CONMEBOL Copa America	National Team	Jun - Jul 2021	Jun - Jul 2024	16	6	-1
	CONMEBOL Copa Sudamericana	Club	Apr - Oct 2022	Apr - Oct 2023	24	15	2

In South America, there have been two international competitions that have had major format changes. Namely, the CONMEBOL Copa America ('Copa America') and the CONMEBOL Copa Sudamericana ('Copa Sudamericana'). Looking at the Copa America more closely, although its own scheduling has not changed, it had a knock-on effect on another region. As six CONCACAF nations were invited to take part in Copa America 2024, the CONCACAF Nations League had to be pushed back and shortened.
The maximum number of games a team can play in the Copa America has been reduced from 7 to 6 as the new competition format meant moving from two groups of five teams to four groups of four. Despite this, the number of games played in the tournament, as a whole, has still risen from 28 to 32 due to the additional six teams participating in the competition compared to 2021. Comparably, the Copa Sudamericana has seen a rise in the maximum number of matches a team can play, from 13 to 15.
The changes in these competitions highlight the region's ambition to have more matches, whether by increasing the number of rounds or participants. Consequently, these additional matches mean more travel for the players.

Short recovery period post-Copa America 2024

For Copa América 2024, most players came from leagues operating on a spring-to-autumn schedule, placing the tournament in the middle of their season. According to Football Benchmark research:

- **19%** of participating players came from leagues that did not pause at all for Copa América 2024 and had several gameweeks scheduled during it.
- **37%** of participating players represented leagues that had some games during Copa América 2024.
- **50%** of the participant nations' first division leagues (8 out of 16) had scheduled games during Copa América 2024.

These findings provide further evidence of the congested scheduling that significantly jeopardises player well-being. For many participants of these tournaments, the current schedule affords very little time for rest and recovery after enduring a gruelling and physically demanding competition. Adequate rest periods are essential not only for physical reconditioning but also for mental recuperation.

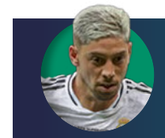
SHORT RECOVERY FOR EUROPE-BASED PLAYERS DURING INTERNATIONAL BREAKS

For many elite professional footballers, travelling across continents and multiple time zones is an integral part of the job. However, extensive travel can negatively impact both player performance and well-being. Moreover, after traversing several time zones, players are often required to perform immediately, with little time for rest and recovery before repeating the journey in the opposite direction.

The travel demands for national team duties, such as FIFA World Cup qualifiers, can create significant disparities in travel workloads among players. This is particularly challenging for South American internationals playing club football in Europe. On average, CONMEBOL World Cup qualifiers require journeys exceeding 6,000 km. Across a season, this can amount to players accumulating 100,000 km of international travel.

Cross-competition scheduling rarely considers this issue, as there is often no time for rest after extensive travel. Until 2026, FIFA has set five international windows for national team matches, each lasting nine days, during which two matches are played in quick succession. These dedicated periods typically begin just a day after club matches, and similarly, after the window closes, players are expected to represent their clubs within 48-72 hours.

Darwin Núñez's October 2023 travel schedule



FEDERICO VALVERDE
REAL MADRID CF, URUGUAY

"The schedule is very tough, especially for those of us from South America because we have 12-hour flights there and 12-hour flights back, and then play the next day. Obviously, it's very complicated."

Source: FIFPRO Men's Player Workload Monitoring Platform

A prime example of this issue is Darwin Núñez's October 2023 schedule. On 8th October, Darwin played 90 minutes in the Premier League against Brighton & Hove Albion FC, with the international window starting the following day. Just 101.5 hours after his match in Liverpool FC, Darwin played in a World Cup qualifier against Colombia, despite having travelled 7,825 km between the two games shortly before. For the second match, he had slightly more time to recover (121.5 hours) but had to travel another 5,467 km from Colombia to Uruguay for it.

Despite covering nearly 25,000 km during the international window, Darwin was back in action for his next Premier League match against Everton FC on 21st October. Due to the excessive travel load, he was unable to start this match, but still played around 30 minutes as a substitute. Over this period spanning 14 days, Darwin played a total of 200 minutes across two continents and three countries, with an average recovery time of 96.9 hours, while flying more than half the length of the Equator.

EUROPE

KEY PWM METRICS (2023/24 SEASON)

PHIL FODEN

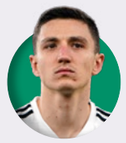
77 (72)

Top player by matchday squad inclusions
(appearances)

FREDRIK AURSNES

77%

Top player by share of back-to-back appearances



BARTOSZ SLISZ

127,000 km (28 trips)

Top player by international travel distance
(# of international trips)

Source: FIFPRO Men's Player Workload Monitoring Platform

Competitions							
Region	Competition	Type	Last Competition	Next Competition			Δ in # of Max Possible Games
			Period	Period	# of Participating Teams	Max Possible Games Per Team	
Europe	UEFA Nations League	National Team	Jun 2022 - Jun 2023	Sep 2024 - Jun 2025	54	10	2
	UEFA Champions League	Club	Sep 2023 - Jun 2024	Sep 2024 - May 2025	36	17	4
	UEFA Europa League	Club	Sep 2023 - May 2024	Sep 2024 - May 2025	36	17	2
	UEFA Conference League	Club	Sep 2023 - May 2024	Oct 2024 - May 2025	36	15	0

The format changes for Europe's international club and national team competitions are well-known with the UEFA Nations League ('UNL'), UEFA Champions League ('Champions League'), UEFA Europa League ('Europa League') and UEFA Conference League ('Conference League') all experiencing a degree of reforms. In the case of the UNL, the competition was pushed back (starting in September as opposed to June), despite the maximum number of possible games a team can play increasing from 8 to 10 due to the inclusion of a two-legged quarter-final for League A as well as two-legged play-off matches between teams from League A/B, League B/C and League C/D.

Interestingly, the pushback to September 2024 means a return to the "original" scheduling of the UNL as the 2020-21 version also kicked off in September. The 2022-23 competition in-between the two now looks like the odd one out: it had to be adjusted due to the winter World Cup of 2022 and started in June instead. This pendulum-like adjustment highlights the tightrope nature of football calendar management in which one competition's scheduling change could result in other major tournaments having to adjust, as well.

In comparison, UEFA club competitions didn't significantly change their timings or length. However, they all did change their competition structure, now implementing the 'Swiss model' as part of their respective group stages. As a result of the format change, all three will now have 36 teams competing in them and the maximum number of matches a team could face increases to 17.

These European competitions have some of the most talked about format changes in football as their impact is typically on top-level players. This impact on top-level players is important to note as it is these top-level players who are typically the ones whose football calendars are already the most congested and thus the changes to these European competitions (which are typically increasing the number of matches that these players will play) will further congest their football calendars. As a result, these top players will experience an even greater workload whilst being afforded fewer opportunities to rest.

EUROPE

SHORT RECOVERY PERIOD POST-EURO 2024

Despite the European Championship still in progress, the qualification process for UEFA club competitions (UCC) already kicked off in early July 2024. Among the squads of teams involved were several players who represented their national team at EURO 2024, resulting in extremely short rest periods of rest for these players. These matches are crucial for the teams involved, and playing without their top players can be difficult.

The table below summarises players from teams involved in UCC who had extremely short periods between the end of EURO 2024 and their return to club training. Off-season days are calculated on the assumption that players spent the day after their last EURO match traveling, which is not considered as an off-season day. A unique situation involved Hungary, whose players remained at their base camp following their final group stage match in anticipation of possible qualification, only traveling back home on the fourth day after their game against Scotland.

Player	National team	Last day at summer tournament with national team	Club	Return to club training	Time between tournament and club return (days)
Ștefan Târnovanu	Romania	03/07/2024	FCSB	05/07/2024	2
Adrian Șut	Romania	03/07/2024	FCSB	05/07/2024	2
Darius Olaru	Romania	03/07/2024	FCSB	05/07/2024	2
Péter Szappanos	Hungary	28/06/2024	Paksi FC	02/07/2024	4
Josip Ilicic	Slovenia	02/07/2024	NK Maribor	07/07/2024	5
Guram Kashia	Georgia	01/07/2024	Slovan Bratislava	07/07/2024	6
Juraj Kucka	Slovakia	01/07/2024	Slovan Bratislava	07/07/2024	6
David Strelec	Slovakia	01/07/2024	Slovan Bratislava	07/07/2024	6
Zan Karnicnik	Slovenia	02/07/2024	NK Celje	08/07/2024	6
Ivica Ivusic	Croatia	25/06/2024	Pafos FC	01/07/2024	6
Jakub Piotrowski	Poland	26/06/2024	PFK Ludogorets Razgrad	05/07/2024	9

Source: Football Benchmark research and analysis

Players from FCSB who represented Romania at EURO 2024 had the shortest off-season, with only two days of "rest". Their team had to play the Romanian Super Cup final without them before the first round of the UEFA Champions League qualifying phase.

These examples clearly highlight the necessity for adequate safeguards to protect off-season breaks and illustrate the increasing congestion of the football calendar. According to FIFPRO's 2022 Player and High Performance Coaches surveys, 88% of high-performance coaches believe that players require at least four weeks of off-season break, a standard that seems increasingly unattainable under current conditions.

09

INJURY: THE IMPACT OF EXCESSIVE WORKLOAD

The congested football calendar now unarguably contributes to an increased incidence of injuries. Even though players are the key driving force of a club's on-pitch and financial success, the provisions and safeguards for their safety and recovery continue to be insufficient. In this chapter, we explore the impact of workload on injury.

"To ignore that proper preparation and rest are fundamental to improving games is absurd. To ignore the consequences of the number of games and amount of travelling will end in injuries for any player."

MARCELO BIELSA
(URUGUAY NATIONAL TEAM MANAGER)

09 / INJURY: THE IMPACT OF EXCESSIVE WORKLOAD

KEY TAKEAWAYS

AT A GLANCE – CHAPTER 09

- The increasingly congested match calendar continues to heighten the physical and mental demands on players, significantly raising the likelihood of injuries, particularly so when combined with shortened rest and recovery periods.
- Research shows that higher match workload and extensive international travel are strongly correlated with increased injury rates among top players.

INTRODUCTION

As the football calendar becomes increasingly saturated each season, the physical and mental demands on players continue to escalate. The relentless pressure to perform, often coupled with inadequate rest and recovery, significantly increases the risk of injuries. These injuries can have far-reaching effects, impacting not only the players' careers but also the success of clubs and the interests of competition organisers. As such, this chapter examines the potential impact of workload demands on injury occurrences. It also includes a detailed analysis of injury data from the Premier League for the 2023/24 season, building on insights from last year's report. Additionally, it addresses the financial and operational consequences of injuries for players, clubs, and rights holders.

THE COST OF INJURIES

Player injuries extend beyond immediate on-field impacts, carrying substantial financial and operational consequences for players, teams and competition organisers. These issues are multifaceted, affecting player careers, team performance, and the overall economic stability of the sport.

For players, injuries can be a major setback both personally and professionally. They often require a long recovery period, which can disrupt a player's form and impact their career. This disruption can have long-term effects on their career trajectory, including decreased market value, decreased contractual stability and reduced sponsorship deals. Psychologically, the stress and frustration of rehabilitation can impact mental health, further affecting performance and potentially extending the time needed to return to optimal condition.

For teams, injuries to key players create significant operational and financial challenges. Operationally, the absence of these crucial players disrupts team dynamics and performance, often resulting in poorer results and negatively impacting standings in domestic and international competitions. This can lead to missed revenue opportunities. Additionally, the financial impact can extend to lower ticket sales and reduced matchday revenues as fans may be less inclined to attend games when key players are unavailable.

At the competition level, player injuries have broader economic implications, affecting the overall appeal and commercial value of tournaments. Major competitions rely heavily on the presence of star players to attract global audiences and secure lucrative sponsorship deals. Injuries to these high-profile athletes can diminish the excitement and marketability of these tournaments, impacting viewership and sponsorship revenues.
The expansion of competitions, which increases calendar congestion, further exacerbates these issues by adding to player workload and injury risk. Consequently, governing bodies and rights holders must therefore prioritise strategies to manage player health effectively, ensuring the continued attractiveness and financial success of competitions.

EXPERT OPINION: THE IMPACT OF MATCH WORKLOAD AND INTERNATIONAL TRAVEL ON INJURIES IN PROFESSIONAL MEN'S FOOTBALL

PROF. DR. VINCENT GOUTTEBARGE
Chief Medical Officer,
FIFPRO

DR. STEVE DEN HOLLANDER
Data and Sport Scientist,
University of Cape Town

As football becomes increasingly commercialised, players face increased physical demands, leading to a higher susceptibility to injuries, particularly in the lower limbs. A recent study by Dr. Steve den Hollander and Prof. Dr. Vincent Gouttebarge examined the correlation between match workload, international travel, and injury rates among elite male footballers.

Overview of the Study

In a context where players often face over 70 matches per season due to a congested international match calendar (IMC), it remains essential to investigate how this fixture overload impacted players' physical well-being. The study compared match workload and international travel between injured and non-injured players across the Bundesliga, La Liga, Ligue 1, Premier League, and Serie A, during the 2021/2022 and 2022/2023 seasons. The findings highlighted the significant influence of match congestion and travel on injury risk in professional men's football. Additionally, they underscored the urgent need for better workload management strategies to safeguard players' health and maintain peak performance at the highest levels of the sport.

Key Findings

- **Higher Match Workload in Injured Players:** Injured players had significantly higher match workloads in the 28 days preceding their injuries compared to non-injured players. This included more match appearances, fewer rest periods, and more "critical zone" matches (back-to-back games with fewer than five rest days).
- **Impact of International Travel:** Injured players also faced greater international travel demands, including more hours spent flying, more kilometres travelled, and crossing more time zones.
- **Hamstring Injuries:** Players who suffered from hamstring injuries were particularly affected by higher match workloads and international travel in the month leading up to their injury, further underscoring the link between these factors and injury risk.

Key Recommendations

The study advocated for a more balanced match calendar, limiting back-to-back matches, and ensuring adequate rest periods, including off-season breaks without international travel, to protect players' physical and mental health.

Beyond this chapter, the findings from in Dr. Steve den Hollander and Prof. Dr. Vincent Gouttebarge align closely with the broader themes of this annual report:

- **Risk to Career Longevity:** Excessive workload threatens to shorten players' careers, especially with the rapid expansion of match workloads for younger players.
- **Calendar Congestion & the Need for Regulation:** Recovery is compromised after in-season national team tournaments, especially with travel to distant continents and time zones with extreme climate conditions.

The full study is available **here**.

INJURY STATISTICS OF THE ENGLISH PREMIER LEAGUE

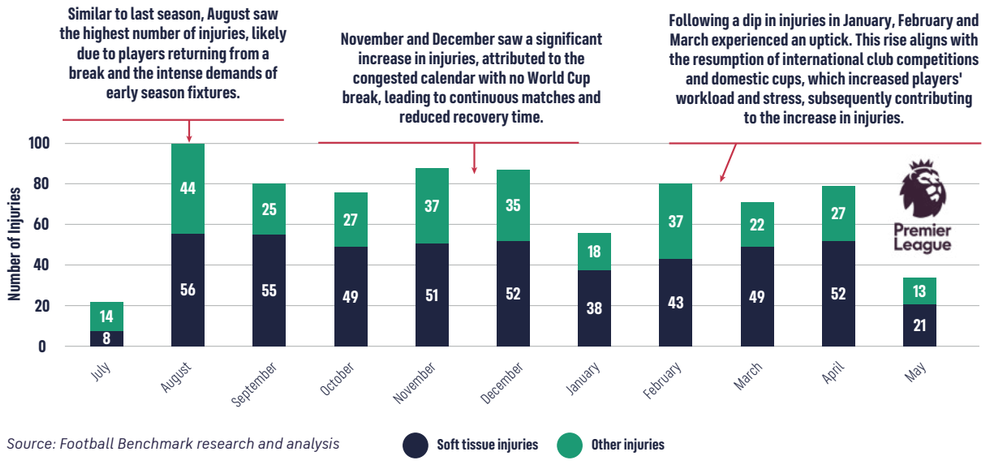
The demands of modern football are becoming increasingly intense, both physically and mentally. As highlighted in last year's edition of this report the 2022/2023 season was particularly challenging due to the FIFA World Cup™ being held in the months of November and December. The unusual timing resulted in a congested calendar at the beginning of the season to accommodate the tournament that contributed to a spike in injuries. Although during the World Cup break in November and December, the frequency of injuries decreased in the so called “Big Five” leagues, there was a resurgence in injuries as these leagues resumed.

What happened in the 2023/24 season, and how does it compare to the previous one in terms of injuries?
To address these questions, a comparable analysis was conducted on the English Premier League, following the approach used in last season's report. Despite mid-season national team tournaments like AFCON and the AFC Asian Cup, this season involved fewer players from the “Big Five” European leagues compared to the FIFA World Cup last year.

From a methodological perspective, the analysis in this section focuses on player injuries sustained by members of English Premier League (EPL) squads during the 2023/24 season. The dataset includes injuries sustained during both club activities and national team duties, with each injury categorised by the date it occurred. To maintain a clear focus on injury-related absences, illnesses, including Covid-19 and other viral conditions, are excluded from this analysis. Similar to last year, soft-tissue injuries, which affect muscles, ligaments, and tendons, are analysed separately due to their significant impact on player availability and performance. These injuries are particularly relevant in professional football as they are often linked to factors such as physical overload, accumulated fatigue, and insufficient recovery time. Given their prevalence and the potential for recurring issues, soft-tissue injuries are a critical focus of this analysis.

Accurately capturing the full scope of injuries is inherently difficult, given that clubs are not required to disclose all injury-related information. This analysis relies on Football Benchmark research, which uses data from injuries reported in the media. As such, it is important to consider that this data may not represent a complete record of all injuries.

Reported injuries among players of English Premier League clubs during the 2023/24 season by month

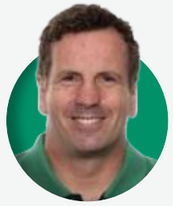


Source: Football Benchmark research and analysis

When looking at the types of injuries, the distribution is very similar to last season. Soft tissue injuries accounted for 61% of all reported injuries, which is only slightly less than last year's 64%. This suggests a consistent pattern in the type of injuries players sustain, likely due to the intense physical demands of modern football.

In conclusion, the 2023/24 season reflected similar injury trends to the previous year at the beginning of the season and exhibited more injuries during the months when the competition did not have a mid-season break. The high rate of soft-tissue injuries, accounting for 61% of all reported injuries, underscores persistent challenges related to physical overload and insufficient recovery.

EXPERT OPINION: THE INVISIBLE DRIVERS OF PERFORMANCE AND INJURY: HOW INTERNAL AND EXTERNAL LOADS SHAPE PERFORMANCE AND DRIVE INJURY RISK



DR. JOHN KIELY
Associate Professor in Human Performance and Innovation,
University of Limerick & Orreco

Professional footballers habitually face multiple stressors impacting every dimension of their physical, psychological, and emotional health. Such stressors are commonly segregated into two buckets: external (high-speed running, abrupt decelerations, tackling, and so on) and internal (the invisible neural and biological consequences of physical exertions) loads. Although concepts of internal and external loads are well understood, how both conspire to directly regulate movement behaviours, and modify injury risk, are less commonly discussed.

The Bi-directional Nature of Internal and External Loads

Persistent and/or excessive external loading drives tissue damage and energetic crises. These challenges generate discomforting sensations designed to trigger proportionate remedial and protective responses. For example, when intense movement inflicts tissue micro-trauma, inflammatory responses alter local biochemical environments to promote healing and protect tissues from additional damage. Subsequently the expression of biochemical markers facilitating repair and regeneration –such as high-sensitivity C-reactive protein (hsCRP)– surge.

This modified biochemical cocktail also upregulates local sensitivity to sensory stimuli. Perceptions of fatigue, pain, discomfort, and distress are amplified. Subsequently, our thoughts and emotions change. We become more anxious, less confident and more cautious as our sense of movement competence declines. Our estimation of risk shifts. Collectively, these disruptions exacerbate movement error, diminish energetic efficiency, erode performance, and mitigate against effective movement decision-making.

How Internal and External Loads Conspire to Escalate Injury Risk

Consider a player facing a congested schedule: games every three days, travel across multiple time zones, media stress, selection pressures, disrupted sleep, and excessive game time with inadequate recovery. This blend of external loads and internal psycho-emotional challenges creates a Perfect Storm; driving inflammation, escalating tissue sensitivities, generating energetic waste products serving to disrupt neuromuscular signalling and distort our evaluations of capacity and competence.

At the micro-level, practiced movements become more irregular. Movement smoothness deteriorates. Errors accumulate. At the macro-level, habituated movement behaviours change as movement quality degrades and our perception of risk becomes less reliable.

Until recently there was no accurate means of characterising movement behaviours during match-play. Currently, however, the emergence of advanced optical tracking systems, machine learning techniques and innovative analytical approaches provide a means of capturing and characterising players' movement preferences, predispositions, biases, and aversions. Preliminary analyses (conducted by bio-analytics company Orreco) suggests players deviations from this personalised bundle of movement habits is indicative of escalating injury risk. This analysis successfully predicted 85% of elite hamstring injuries, with an unprecedented 86% specificity (indicating a remarkably low incidence of false alarms).

Crucially, as loading increased (propelled by either chronic or acute factors), movement behaviours changed as habituated behaviours become less and less tenable. Players were forced to adopt unhabituated, unpractised, and unaccustomed behaviours. Players who deployed unhabituated movement choices (which were invisible to the naked eye, but detectable under analysis) were significantly more exposed to subsequent injury.

What can we do?

Excessive load clearly drives injury risk. Monitoring both biochemical and subjective internal loads, alongside external loads, is essential. Enhanced injury mitigation, however, also demands we understand how external and internal loads blend to interfere with movement coordination and negatively impact movement behaviour.

Key Takeaways

1. Combining internal and external load measures with personalized movement analysis may provide a comprehensive understanding of athlete's performance status and risk profile

2. Innovative technologies, capable of identifying deviations from normal movement behaviours, may offer previously unavailable predictive insights

3. Holistic management of multi-source stress is crucial for optimizing player performance and reducing injury risk.

10

METHODOLOGY

The findings presented in this report are largely based on the methodology and metrics of the FIFPRO Player Workload Monitoring (PWM) platform covering the match, rest & recovery, travel, and other workload statistics of professional footballers from around the world.

MEN'S PLAYER WORKLOAD MONITORING (PWM) PLATFORM

The PWM platform illustrates workload and match scheduling across different competitions, maximising data and knowledge to address the growing information needs in football. The tool supports decision-makers to make informed decisions about the next generation of sustainable and integrated competitions in men's football.

Mission statement & objectives

Originally launched in 2021, the Men's Player Workload Monitoring Platform illustrates player workload and match scheduling across different competitions, maximising data and knowledge to address the growing information needs of the football industry on aggregated player load across multiple competitions.

The platform supports decision-makers to make informed decisions about the next generation of sustainable and integrated competitions. The core objectives of the platform are:

- Prioritise player health, career and performance;
- Enable workload and match schedule monitoring;
- Provide scientific data analysis across competitions;
- Support evidence-based decision-making.

About Player Workload Monitoring

The Men's Player Workload Monitoring Platform provides transparent and regular player workload updates to the football industry, covering a global sample of men's professional footballers.

The platform allows multi-level analysis with the purpose of improving the integrated management of match calendars and player workload. It includes metrics such as general match schedules, basic player match load information, a break-down of competition formats, season-by-season analysis, accumulated duration of international travel, as well as the duration of rest and recovery periods.

The digital platform enables an objective analysis of a player's workload, supporting the development of player-centric competition calendars that convey a commitment to peak performance and sustainable career paths. The Men's Player Workload Monitoring Platform is an ongoing and cutting-edge monitoring tool that is scalable, open and able to address the entire match schedule and related workload of players across competitions at a global level.

About Football Benchmark

Football Benchmark Group are the global leaders in serving those investing and operating in the football industry. Our expertise lies in generating unparalleled value through our advisory services, powered by our world-renowned football business intelligence solution. We have been working together with FIFPRO on various projects since 2019 with the PWM platform at the centre of the cooperation.

REPORT PREPARATION NOTES

In order to put the analyses carried out for this report into context, it is important to understand the key characteristics of the underlying dataset sourced from the PWM platform.

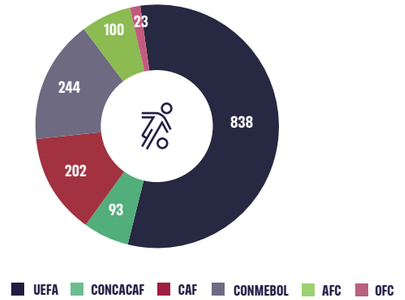
Player Sample & Profiles

There are currently 1,500 professional men's football players in the PWM platform, representing a wide range of nationalities. The visual shows the breakdown by the confederation of the players' nationality.

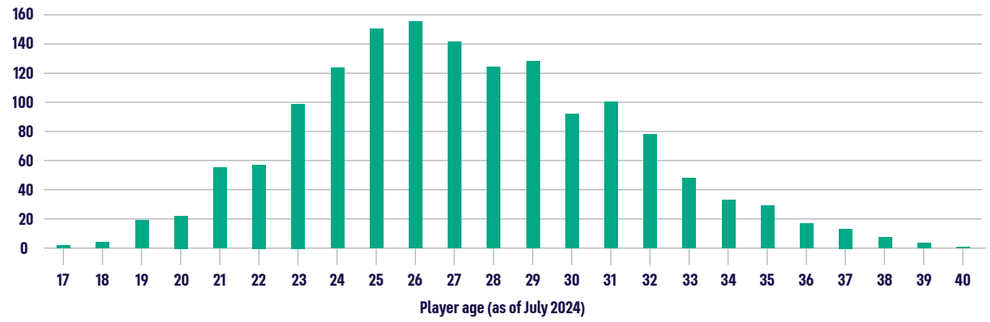
Over 100 different domestic leagues and close to 500 different football clubs are represented by the players of the database as of the 2024/24 season.

Footballers of all ages between 17 and 40 are in the sample. Players aged between 25 and 27 make up almost one-third of the database.

Players by nationality



Number of players by age



Seasons and matches covered

In total, close to 400,000 player match records are currently available in the PWM platform, providing a strong basis for this report's analysis. The matches analysed for the purposes of most chapters took place between July 2023 and June 2024, covering the entire 2023/24 football season. Certain sections also include the statistics related to the football tournament of the Paris Olympic Games that took place in July-August 2024. Finally, Chapter 04 takes a longer-term view as it assesses matches played between the 2019/20 and 2023/24 seasons to identify trends with regards to player segments.

As a general principle, all competitive and friendly matches for (first-team) club and (senior) national team are included in most analyses and projections of the report. There are a few exceptions for which club friendlies are not considered: club-level calendar implications in Chapter 06 and Jude Belllingham's case study and other historical match load comparisons in Chapter 07.

Additional sources

In addition to the PWM platform and new research undertaken for this report, certain sections utilise findings from other FIFPRO reports and surveys of third parties. These include the player and coaches survey carried out by the UNFP in 2024, as well as the 'Player & High Performance Coach Survey' report of FIFPRO from 2022.

TERMS & DEFINITIONS

The following terms are used throughout the report to illustrate the workload situation of professional football players. The same principles are applied within the FIFPRO PWM platform.

WORKLOAD STANDARDS

PLAYER WORKLOAD – the term refers to all applicable workload indicators such as match load, rest & recovery, and international travel. The concepts of overload and underload are related to the imbalance between the load induced on players and their recovery. It is important to note that it is the cumulative exposure to over or underload that constitutes an issue for player health, performance and career longevity.

MATCH LOAD

MINUTES PLAYED – number of minutes spent on the pitch by a player in a match. Added times at the end of the two halves are included in the calculation, as well as the extra time in competitions where it is applicable.

APPEARANCES MADE – an appearance is when a player has any minutes played in a match, either as a starter or after being substituted on.

MATCHDAY SQUAD INCLUSIONS – the number of times the player was part of a matchday squad. It is the sum of appearances made and the number of times the player was an unused substitute. As the player must be on stand-by even if they do not end up playing any minutes during the game, these occasions are also considered to be a crucial part of their workload.

MATCH FORMAT – matchday squad inclusions, appearances and minutes on the pitch are divided into various categories based on the format of the match: domestic league, domestic cup, international club competition, national team matches and friendlies.

BACK-TO-BACK LOAD – a match is considered to be in the "back-to-back" category if the player made an appearance (played any minutes) in it and his previous match appearance ended within the preceding 5 days (or 120 hours). Back-to-back minutes refer to minutes recorded in back-to-back matches.

UTILISATION RATE – the number of minutes played by a player divided by the total number of minutes of their team over the same period. This metric is generally calculated only in the case of club matches. A high utilisation rate means that a player is an important and often relied upon member of the team.

REST & RECOVERY

TIME BETWEEN MATCHES (RECOVERY TIME) – the period between two inclusions in the matchday squad. It is calculated as the number of hours that passed between the end of a player's match in which he was in the matchday squad and the kick-off time of the next one. Even if the player did not play a single minute, he is required to be on standby, thus his inclusion in the matchday squad constitutes a part of his workload. According to FIFPRO's 'At the Limit' study, players need at least 120 hours between games to perform at their best over a season and manage injury risk. To exclude outliers, the time between matches is capped at 336 hours in our calculations.

OFF-SEASON BREAK – the period (expressed in calendar days) without matches or training a player is provided by their club between two seasons in order to recover and regenerate. Off-season breaks are mandatory, should last at least 5 weeks and must take place outside of the club and national team environment.

IN-SEASON BREAK – the period (expressed in calendar days) without matches or training a player is allowed during a season. Should last at least 2 weeks and must take place outside of the club and national team environment.

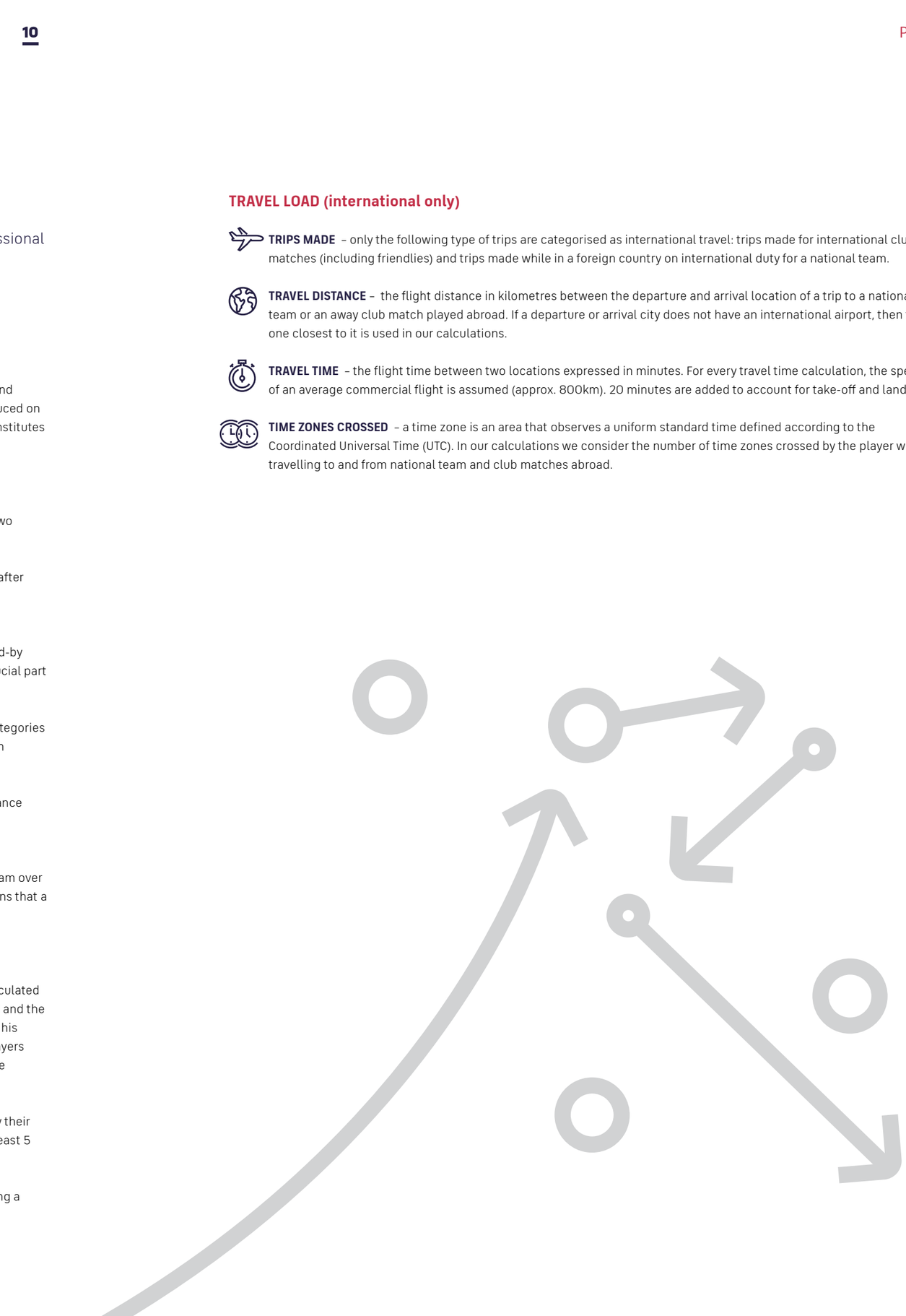
TRAVEL LOAD (international only)

TRIPS MADE – only the following type of trips are categorised as international travel: trips made for international club matches (including friendlies) and trips made while in a foreign country on international duty for a national team.

TRAVEL DISTANCE – the flight distance in kilometres between the departure and arrival location of a trip to a national team or an away club match played abroad. If a departure or arrival city does not have an international airport, then the one closest to it is used in our calculations.

TRAVEL TIME – the flight time between two locations expressed in minutes. For every travel time calculation, the speed of an average commercial flight is assumed (approx. 800km). 20 minutes are added to account for take-off and landing.

TIME ZONES CROSSED – a time zone is an area that observes a uniform standard time defined according to the Coordinated Universal Time (UTC). In our calculations we consider the number of time zones crossed by the player while travelling to and from national team and club matches abroad.



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