BUSINESS INTELLIGENCE IN THE FUNCTION OF STRATEGIC DECISION-MAKING IN FOOTBALL

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Abstract

This paper explores the role of artificial intelligence (AI) in strategic decision-making in professional football clubs, using Luka Modrić's 2012 transfer to Real Madrid as a case study. A qualitative approach is applied, based on the analysis of secondary sources and one semi-structured expert interview. The aim is to show how contemporary AI tools could improve processes of player evaluation, future value simulations and transfer risk reduction. The results indicate that today's AI systems would significantly rationalise decision-making related to Modrić's transfer. The paper also highlights methodological limitations and offers recommendations for future research.

Key Words

Artificial intelligence; sports management; transfers; strategic decision-making.

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INTRODUCTION

According to Gabrijelić (1964), team sports require comprehensive engagement of bodily movements and psychophysical attributes such as speed, agility, strength and endurance. In addition, games place specific demands on the player's psyche. It is necessary to combine temporal and spatial relations in the movement of one's own players – one or more of them – with the movement of the ball and opponents. In such circumstances, the player must make quick and correct decisions that arise from the previous action while simultaneously directing the subsequent flow of the game. Ultimately, the player must choose the best possible solution at a given moment.

According to estimates by Encyclopædia Britannica, drawing on sources from FIFA's website, there are approximately 250 million football players worldwide in over 200 countries and territories. According to the Inside FIFA Professional Football Report (2023), approximately 128,694 active professional male footballers are playing in 3,986 clubs worldwide. It is also worth noting that the International Federation of Professional Footballers (FIFPRO) represents around 65,000 professional players.

In the contemporary context, technological development strongly influences the way decisions are made within sports clubs. Football clubs, which increasingly operate as professional organisations, are more and more reliant on data-driven systems to reduce risks and increase the efficiency of their investments. One of the most prominent areas in which these technologies are applied is the process of player selection and recruitment, i.e. transfers.

This paper aims to examine how the use of artificial intelligence tools would affect strategic decision-making in football clubs, with a special focus on the example of Luka Modrić's transfer to Real Madrid, and to compare how the decisions at that time were based on subjective assessments and media perceptions, and how modern tools could transform such decisions by grounding them in analytics, predictive models and simulations.

This article uses a qualitative research approach, with a case study as the primary method. The research focuses on Luka Modrić's transfer from Tottenham to Real Madrid in 2012, analysed as an example of strategic decision-making in modern football management. The key primary source is a thematic interview with Giovanni Branchini, a prominent international football agent and sports management expert actively involved in numerous high-level transfers in European football. The interview was conducted on 11 August 2025 and structured around topics of business intelligence, the use of artificial intelligence in transfer strategies, and player evaluation through advanced metrics and analytics. Alongside the interview, the article draws on secondary sources: archival sports reports, media analyses, expert commentaries from the time of the transfer itself, and current academic and professional literature on the use of artificial intelligence, big data analytics, sports metrics and business intelligence in the sports context. The methodological approach aims to provide a multidimensional view of the process of strategic decision-making in professional football, encompassing sporting, financial and communication aspects of management. Branchini's interview serves as a valuable source of insight into the changes that have occurred in this field over the past decade.

The research employs a qualitative methodological framework based on a case study. The primary data source is a semi-structured thematic interview with international football agent Giovanni Branchini, conducted on 11 August 2025. The interview lasted 48 minutes, was audio-recorded and transcribed for analysis. The questions were organised into three thematic blocks: (1) the use of business intelligence and AI in sports management, (2) the evolution of the transfer market, and (3) analysis of the Modrić–Real Madrid case.

Secondary sources include sports archives, media analyses, academic literature on AI, scouting and sports metrics, as well as available historical statistical databases. Data analysis was conducted using thematic analysis, identifying key patterns in the interviewee's narrative and comparing them with the relevant literature.

Methodological limitations include reliance on a single interview, the retrospective nature of the interpretation, and the inability to obtain confidential financial and technical internal data from clubs.

IMPORTANCE OF ARTIFICIAL INTELLIGENCE

Artificial intelligence has broad application across various sectors (economy, education, services), but in the context of this paper, its role in data analysis, prediction and decision-making is particularly important, as this is directly applicable to football transfers and sports management.

Recent studies on the application of artificial intelligence in sports management emphasise the importance of data and algorithms in processes such as scouting, player assessment, injury prevention and financial analysis (Davenport & Ronanki, 2018; Wamba-Taguimdje et al., 2020). Sports organisations increasingly use AI models to predict market trends, optimise tactical decisions and evaluate players through advanced metrics (StatsBomb, Opta, Wyscout). Research also points to challenges in the implementation of AI, including a lack of model transparency, ethical dilemmas and the risk of algorithmic bias (Sandvig et al., 2016). This theoretical framework allows for a better understanding of the case study findings presented below.

Before defining the concept of artificial intelligence, it is necessary to understand the meaning of the word intelligence. Singbo (2008) states that intelligence represents an individual's ability to cope successfully with new and unfamiliar situations, and it can also be defined as a general capacity for thinking, which is crucial for problem-solving and adapting behaviour in specific circumstances. On this basis, artificial intelligence (AI) seeks to replicate such a capacity.

The concept of artificial intelligence (AI) appeared in 1943 in a scientific paper by Warren McCulloch and Walter Pitts. Although their contribution was crucial, the development of modern artificial intelligence is most often associated with mathematician Alan Turing and his concept of an abstract machine from 1936, which laid the theoretical foundations for the development of computer science and AI (Warwick, 2012).

The term "artificial intelligence" was first used by John McCarthy, an American computer scientist and cognitive scientist, at the only academic conference dedicated to this topic (Smith et al., 2006). According to Prister (2019), "artificial intelligence is a branch of computer science that develops the ability of computers to perform tasks that require intelligence, such as coping with new situations, learning new concepts, drawing conclusions and understanding natural language."

AI tools are already being used in areas such as dynamic attribution and online targeting. Tiautrakul and Jindakul (2019) also identify key-user identification as one of the fields in which artificial intelligence is taking over in digital marketing.

Nevertheless, it is difficult to translate informal knowledge into a precise formal sense suitable for logical notation, because it often involves subjective, contextual and implicit aspects, and a theoretical solution will not necessarily solve a concrete problem in practice (Eriksson, Bigi & Bonera, 2020).

On the other hand, according to Korteling et al. (2021), the amount of cognitive information a human can consciously process is very limited – the capacity of working memory is approximately ten to fifteen bits per second. Moreover, cognitive knowledge and related skills, such as memory, decline over time significantly more than perceptual-motor abilities, which means that we easily forget a large part of what we have learned. For machines, natural language processing systems enable them to read and understand written human language through semantic indexing (Shabbir & Anwer, 2018). Human information processing is prone to cognitive biases that manifest as systematic and recurring tendencies, inclinations or emotional states, often resulting in inaccurate or erroneous decisions (Korteling et al., 2021).

Despite these early theoretical contributions, attempts to build machines that truly think and communicate with humans have not fully realised Turing's vision. As Deutsch (2011) notes, in the 65 years since Turing's paper, the search for "thinking machines" has not yielded concrete results. At the same time, computer science and technology as a whole have made remarkable progress.

The characteristics that distinguish human from artificial intelligence can be divided into several groups. The ability to think, for example, is limited in machines by the absence of emotions, which can be detrimental in emotionally demanding situations; machines attempt to compensate for this through statistical approaches based on neural networks (Shabbir & Anwer, 2018).

According to Eriksson, Bigi and Bonera (2020), for a computer to successfully pass the Turing test, it must possess a set of specific capabilities such as natural language processing, knowledge storage, automated reasoning and machine learning that enable it to recognise patterns and adapt to new circumstances. In this context, ChatGPT – a chatbot based on the large language model GPT-4 developed by the US company OpenAI – represents a significant step forward in the development of this technology and is described as a broad discipline concerned with creating and modifying intelligent machines, whose ability is to perform tasks that typically require human intelligence (Marr, 2023).

Wamba-Taguimdje et al. (2020) define AI as a set of theories and techniques that enable the creation of machines capable of simulating intelligent behaviour with minimal need for human intervention. Copeland (2014) adds that AI implies the ability of a digital computer or computer-controlled robot to perform tasks that are usually associated with human beings.

Although artificial intelligence evaluates human thought through a cognitive modelling approach, this approach rests on the assumption that it is possible to understand how humans think. Furthermore, by defining a theory of human thinking in this way, it can be translated into a computer program that imitates mental processes. Consequently, the reasoning of such a program can be compared with the way a human approaches the solution of the same problem. On the other hand, machines can perform much faster and more complex tasks than humans – for example, an ordinary calculator in a mobile phone can carry out calculations that are a million times more complex in a significantly shorter time (Korteling et al., 2021).

According to Shabbir and Anwer (2018), AI today can imitate human intelligence by performing various tasks requiring reasoning, learning, problem-solving and decision-making. The same authors argue that planning and creativity enable humans to solve problems by combining available elements, but there is still no efficient way to transfer this capability to machines. Human actions are based on feelings and deep reflection, while artificial intelligence can operate only within the limits of prior programming and training. Machines do not have the ability to learn independently without predefined data and algorithms and cannot recognise objects, images, sounds or play games in the way humans do. Their perception is based on processing signals from sensors such as cameras and microphones, which is fundamentally different from human perception. While humans learn quickly and easily apply knowledge in new situations, computers struggle to generalise from limited samples.

Jordan (2019) considers artificial intelligence to be the “mantra of the current era” and argues that, regardless of whether we fully understand it soon or not, humanity faces the challenge of aligning computers and people in order to improve human life.

Davenport and Ronanki (2018) argue that human intelligence surpasses artificial intelligence in complexity, but at the same time is extremely effective in solving complex tasks, and its impact on the world and organisations is undeniably significant.

Therefore, the United Kingdom attaches great importance to ethics in the application of AI, emphasising innovation and creating an environment with the human being as the central factor in the development and application of artificial intelligence. This strategy, despite the UK’s exit from the EU, remains pro-European, highlighting the importance of ethical guidelines and mutual cooperation in the development of AI.

Adibi (2020) suggests that this would enable AI to develop its own values based on its own learning, and thus the ability to define its own feelings and needs.

When discussing ethics in the use of artificial intelligence, Sandvig, Hamilton and Langbort (2016) emphasise that one of the fundamental human rights is the right to enjoy human rights and fundamental freedoms without discrimination. Although algorithmic decision-making can offer advantages in speed and the volume of processed data, there is a danger that algorithms embed biases that are difficult to detect and/or correct.

It is therefore to be expected that artificial intelligence will increasingly change football – from how matches are analysed and training is planned to injury prevention and the way clubs communicate with fans. The tools we have today provide insight into aspects of the game that were previously almost impossible to see, so football is relying less on the coach's "eye" alone and more on data. Clubs that manage to use such technologies wisely can gain a real competitive edge.

In the future, AI is expected to penetrate even more deeply into all parts of football – from tactical analysis to personalised content for fans. However, no matter how advanced technology becomes, it is important that football does not lose what makes it special: unpredictability, emotion and human creativity on the pitch.

THE ROLE OF AI IN STRATEGIC DECISION-MAKING IN MODERN FOOTBALL CLUBS

In the book *Strategy and Structure*, Alfred Chandler defines strategy as "the determination of the basic long-term goals of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals." In strategic management, the main focus is placed on the concept of "process" because it is a managerial activity that is continuous and constantly evolving. Such a process can be broken down into phases that are continually repeated within managerial activity. Accordingly, strategic management represents the process of defining long-term goals and determining the activities and resources required to achieve the desired future goals, as set by the top management of the organisation (Buble et al., 2005).

According to Buble et al. (2005), decision-making is a key managerial activity at all levels, but at the strategic level of the company, it occupies a central place in performing tasks and is present in all phases of strategic management. Since it is not possible to analyse all stages of decision-making simultaneously, the process of strategic decision-making in this context is equated with strategic choice, which includes three phases: generation, evaluation and final selection of options.

The use of business intelligence and artificial intelligence (AI) has become an indispensable tool in strategic decision-making within professional football clubs. From scouting and opponent analysis to financial management and risk assessment, modern clubs increasingly use data and algorithms to make informed decisions. Artificial intelligence in sport is not only a matter of technical support; it is becoming an integral part of strategic decision-making. The strategy for developing the sporting function of the club includes top-level recruitment of world-class players, scouting of talents and developing young players through the club's own academy, while at the same time using the concept of "non-match days" to generate additional revenue through stadium tours, non-sports events and hospitality services (Adcroft, 2015).

Application in scouting and player selection

Sports selection is the process of choosing talented individuals whose potential suggests that they will, in the future, be capable of handling a very demanding training process and are likely to achieve top competitive results (Milanović, 2010).

The analysis of sports activity provides valuable information that is crucial for programming learning and training processes, as well as for assessing the degree to which technical-tactical knowledge has been acquired. Such analysis helps define criteria for the successful execution of technical elements and tactical solutions within a given sport. This becomes the basis for shaping training content, load levels and types of work, all to improve performance and increase athletes' success in competition (Milanović, 2013).

"Since footballers constantly change their running speed during a match, it is necessary to break down the distance covered into specific categories according to running speed (intensity)" (Marković & Bradić, 2008).

Football is full of complex and unpredictable situations, which makes it impossible to absolutely predict the course and outcome of events on the pitch. During the game, two processes occur simultaneously: on the one hand, there is constructive cooperation among players in organising and executing attacks, while on the other hand, the opposing team seeks to disrupt these actions through defensive tasks and ball recovery, thus protecting its own goal from conceding (Barišić, 2007).

According to Jelaska (2011), there are two standard approaches to studying performance factors in sport. The first, structural approach, is based on determining a differentially weighted linear combination of factors that can describe the equation of success, depending on the theory of sports performance and the sports activity. The second, functional approach, presents performance factors in interaction, i.e. as a process in which performance factors mutually interact to determine an athlete's performance and sporting achievement, which generates a nonlinear relationship among the observed relevant factors. These two approaches are not necessarily mutually exclusive.

Jadczak, Grygorowicz, Wieczorek and Śliwowski (2019) investigated static and dynamic balance in 101 first-division Polish footballers, grouped by playing position. Testing included the dominant and nondominant leg, static balance (with eyes open and closed) and dynamic balance on a DPPS device. Central midfielders showed better balance than goalkeepers (static, eyes closed) and all other positions (dynamic). Asymmetry between the legs was observed, likely due to the functional role of the nondominant leg in the game.

Unlike some other team and individual sports, football does not require a highly specific body type. Both shorter and taller athletes can be successful, which is supported by the fact that the average height of professional footballers is 181 cm, while the average body mass is 75 kg. Goalkeepers and central defenders are usually somewhat taller than average. Body fat percentage in elite players ranges from 9 to 12% (Marković & Bradić, 2008).

Endurance, defined as the ability to resist fatigue and maintain a high intensity of activity over a longer period, is crucial for footballers because it allows them to display their full technical-tactical skills throughout 90 minutes. It is important that endurance is developed through tasks with the ball, which increases players' motivation (Schnabel, Harre & Borde, 1997).

Coordination is the ability to quickly perform complex motor tasks and to synchronise body movements with the ball, and its development is essential for effectively solving situational motor tasks during the game (Čolakhodžić, Rađo & Alić, 2016). Agility, or the ability to change direction quickly without losing balance and control, is extremely important because football requires numerous unpredictable and rapid changes of movement (Pearson, 2001). Although flexibility is not a key motor ability in football, it is a prerequisite for the quality execution of movements and optimal utilisation of other abilities such as explosive strength and agility. Optimal flexibility also reduces the risk of injury. Balance is important for controlling all types of kicks, dribbling and defensive tasks and plays a significant role in preventing foot and knee injuries (Marković & Bradić, 2008). Accuracy – expressed as the ability to pass and shoot precisely – develops through a combination of speed, coordination, strength and endurance, which is important in a dynamic and fast football environment (Čolakhodžić, Rađo & Alić, 2016).

Krespi, Sporiš and Mandić-Jelaska (2018) conducted a study on 158 Croatian footballers aged 17–18, comparing the effects of exponential and linear tapering protocols over eight weeks. Motor and functional abilities were measured. Forwards showed the greatest improvements in sprinting and agility, goalkeepers in jumping, and midfielders in repeated sprints. The exponential protocol produced slightly better results, especially in the 30-metre sprint.

According to Marković and Bradić (2008), during a football match, players perform a large number of different activities and movements, with and without the ball. High- and low-intensity intervals alternate unpredictably every 4 to 6 seconds, leading to an average of 1,200 to 1,400 activity changes per match. As many as 95% of these activities occur without direct contact with the ball. The same authors claim that elite players cover between 10 and 13 kilometres per match, while goalkeepers run about 4 kilometres. In younger age groups (U12–U20), these values are somewhat lower and range from 6.2 to 11.5 kilometres. On average, players perform

30–35 sprints, 15–20 duels, 10 jumps, 600–800 turns, 40 stops, 20 dribbles and around 30 passes per match.

Because of such demands, a high level of functional-motor abilities is required for players to maintain a high level of performance throughout the entire match. Physiological load – what happens inside the body during the game – is particularly important. One of the most commonly used indicators for assessing internal load is heart rate, expressed as a percentage relative to maximum heart rate. Furthermore, Marković and Bradić (2008) state that a footballer uses around 330 litres of oxygen and expends about 1,650 kilocalories during a match, which, in the context of physiological abilities, leads to the conclusion that aerobic endurance plays a key role. The authors therefore conclude that the aim of training is not to develop aerobic capacity to its absolute maximum, but to develop an acyclic form of aerobic endurance, since players move randomly and situationally across the pitch in line with their position and the flow of the game. An indicator of aerobic capacity is maximal oxygen uptake (VO_2max), whose values in footballers average between 60 and 65 ml/kg/min and are highly correlated with total distance covered during a match.

Since football belongs to the group of complex sports activities, an elite player is characterised by a high level of development in a large number of motor abilities. Strength in football manifests itself in various activities such as take-off in jumps, push-off in sprints, stopping and changing direction, as well as in duels and heading or kicking the ball. Increasing strength is important not only for performance, but also for reducing injury risk and speeding up recovery (Bangsbo, 1994). Speed in football is most often seen in sprinting, which includes the speed of individual movements and their frequency. Most authors agree that speed is largely genetically determined, even up to 95%, while training can influence it only to a limited extent (Marković & Bradić, 2008). Endurance, defined as the ability to resist fatigue and maintain high-intensity activity over time, is crucial for footballers because it allows them to demonstrate their technical-tactical knowledge over the full 90 minutes. It is important that endurance is developed through ball-based tasks, which increases athletes' motivation (Schnabel, Harre & Borde, 1997).

Coordination is the ability to quickly perform complex motor tasks and synchronise body movements with the ball, and its development is essential for effectively solving situational motor tasks during play (Čolakhodžić, Rađo & Alić, 2016). According to Pearson (2001), agility – the ability to change direction quickly without losing balance and control – is extremely important because football involves numerous unpredictable and rapid changes of movement. Although flexibility is not a key motor ability in football, it is a prerequisite for quality movement execution and optimal use of other abilities such as explosive strength and agility. Optimal flexibility also reduces the risk of injury. Balance is crucial for control of all types of shots, dribbling and defensive tasks, and plays an important role in preventing injuries to the feet and knees (Marković & Bradić, 2008), while Čolakhodžić, Rađo and Alić (2016) argue that accuracy – the ability to pass and shoot precisely –

develops through a combination of speed, coordination, strength and endurance, which is important in a dynamic and fast football environment.

Predictive analytics

Nyce (2007) defines predictive analytics as a broad term encompassing various statistical and analytical techniques used to develop models that aim to predict future events or behaviours, where the form of the model is adapted to the specific event or behaviour to be predicted; most of these models generate a criterion whereby a higher score indicates a greater likelihood of a given event or behaviour occurring.

Abbott (2014), on the other hand, views predictive analytics as the process of discovering interesting and significant patterns in data, relying on several interrelated disciplines that have been used for over a hundred years to identify such patterns, including pattern recognition, statistics, machine learning, artificial intelligence and data mining.

According to Bakhshi and Bates (2018, p. 2), predictive analytics is a technology that uses statistical methods and machine learning techniques to analyse data, uncover hidden patterns and predict future events, all to make better business decisions. In today's business environment, it has become indispensable because it enables organisations to improve efficiency, reduce risks and increase productivity, and its applications range from finance to healthcare.

Many studies offer different definitions of predictive analytics. Kelleher and D'Arcy (2015) argue that modern organisations collect large amounts of data, but in order for these data to be useful, they must be analysed and turned into insights that help in making better decisions. The same authors define predictive analytics as the art of using models that, based on patterns in historical data, can make predictions.

As Pavlović and Dejanović (2014, p. 761) note, predictive analytics is based on technologies such as machine learning, statistics and natural language processing, and is used to analyse data to predict future events. In a business context, it enables companies to predict market trends, consumer preferences and competitor behaviour, to optimise business processes, improve customer relationships, and identify and manage risks. However, the authors emphasise that predictive analytics should not be used merely for the sake of employing advanced technology; rather, its application should be carefully directed towards genuinely improving business decisions and outcomes.

Predictive analytics is described as the application of human skills, expertise and technologies such as machine learning to extract, analyse and transform data into clear forms used for planning and decision-making, whereby algorithms identify patterns in data and forecast future outcomes. From these definitions, it is clear that people, tools and algorithms are key to predictive analytics, which is future-oriented and based on generating data-driven forecasts (Ogunleye, 2014).

According to Kumar and Garg (2018), all predictive analytics models fall into two categories: classification models, which predict class membership, and regression models, which predict numerical values. Among the most commonly used techniques are decision trees, which visualise decisions and their consequences, and regression, which models the relationship between dependent and independent variables.

Artificial neural networks enable complex pattern modelling, while Bayesian statistics uses conditional probabilities for prediction. Ensemble learning combines multiple weaker models to achieve better accuracy, and support vector machines (SVM) classify data using an optimal hyperplane. Time-series analysis predicts future values based on historical data, while principal component analysis (PCA) reduces dimensionality while retaining key information (Kumar & Garg, 2018).

The process of model building is a combination of science and craft, guided by a simple routine procedure in which intuition and experience play an important role at every step. According to Wu and Coggeshall (2012), the basic steps include defining the goals and purpose of the model, collecting the available data and assessing their quality, choosing an appropriate model structure depending on the type of data and purpose, preparing the data through coding and normalisation, selecting and eliminating relevant variables, building and evaluating the model with particular attention to the implementation environment, and finally drawing conclusions, documenting, implementing and monitoring model performance during use.

In general, a model is defined as a representation of something, which can be static or dynamic. A static model, for instance, may be a woman walking a fashion runway in new designer clothes, showing how a person would look in those garments, while dynamic models involve sets of equations that describe processes such as fluid dynamics, traffic flows in cities or the oscillation of stock prices over time (Wu & Coggeshall, 2012).

RESULTS

Giovanni Branchini is an Italian football agent (Globe Soccer, 2025) with more than 20 years of experience representing some of the biggest names in world football. During his career, he has worked with legends such as Manuel Rui Costa, Hidetoshi Nakata, Romário, Ronaldo, Jean-Pierre Papin and many others. A special place is occupied by Clarence Seedorf, the only player to have won four UEFA Champions League titles with three different clubs – Ajax, Real Madrid and AC Milan. In 1986, together with Carlo Pallavicino, he founded the agency “Branchini Associati”, which has been involved in some of the most important transfers in modern football: from Cristiano Ronaldo’s move from Sporting to Manchester United to Luca Toni’s and José Sosa’s transfers to Bayern Munich. Today, Branchini also represents several Italian internationals, including Marchisio, Montolivo and Pepe. Among Croatian footballers (Buškulić, 2022), Branchini has represented Boban, Šuker, Mandžukić and Perišić, and together with one of the authors of this paper, who was also part of his international management team (author’s note: author Damir Mihanović), he represented Marcelo

Brozović and negotiated a record-breaking contract with Italian giants Inter Milan.

In the semi-structured interview with Mr Branchini, the development of global football brands, the role of artificial intelligence in modern transfers, and the historic transfer of Luka Modrić from Tottenham to Real Madrid are analysed. Although Real Madrid needs no special introduction, it is worth recalling that the club is a prime example of a global brand which, thanks to technology and artificial intelligence, generates high revenues. Comparing Modrić's 2012 transfer with contemporary decision-making approaches, Giovanni Branchini points out clear differences between the analysis systems then and now. The transfer at the time was largely based on the personal impressions of scouts and managers, perceptions of potential and the influence of the media. Branchini believes that such a transfer today would be significantly rationalised through the use of AI tools.

AI systems are also used in medical and conditioning areas – by tracking microtraumas, fatigue and biomechanical deviations. AI analyses data in real time and helps to optimise training and prevent injuries, which is extremely important for protecting investments in players. According to Branchini, Modrić's transfer from Tottenham to Real Madrid was a key moment in the development of the club as a global brand and sports organisation. Decision-making processes in modern football require integration of sports analytics, financial data and market trends. Although AI enables clubs to precisely assess player value and transfer strategies, Branchini believes that top-level football agents and managers who have an "instinct" for the player – who will fit into the team and contribute to club goals – will continue to play an important role in the future.

Branchini explains that in Modrić's case, although data on sporting performance, finances and the market were used at the time, the success of that transfer is measured not only through sporting results, but also through increased revenue, a stronger image and the global expansion of the Real Madrid brand. He particularly emphasises the importance of advanced metrics such as "expected passes under pressure", which quantify how successfully a player passes under opponent pressure, i.e. how effectively he distributes the ball in demanding situations. This metric, Branchini says, is particularly important for Modrić, who is known for his composure, intelligent decision-making and precise passing even when surrounded by opponents. A high value in this metric indicates technical superiority and coolness under pressure.

Part of the expert community had already recognised Modrić as a "silent engine" – a player who initiates attacks, accelerates play and controls the tempo. Branchini points out that through advanced metrics such as ball progression metrics, it would be clearly visible how successfully Modrić moves the ball forward (more than 10–15 metres), how often he plays the ball into the final third or the penalty area. Analysing his performances from 2008 to 2012 using modern tools like StatsBomb, Opta or Wyscout would likely reveal high numbers of progressive passes, consistent progressive distance, carrying the ball through central areas and a large number of passes into the attacking third.

In defensive actions, Branchini explains, a player is usually measured by the number of tackles, ball recoveries, interceptions, blocks, one-on-one duels and regaining possession. “Defensive actions per zone” measures how active a player is in different phases of defence. Modrić, according to Branchini, showed positional intelligence and activity in the middle third, with the highest number of defensive actions in central zones, a solid number of interceptions in transition areas, and fewer interventions in deep defence or high pressing.

Another important metric is Pass Value Added (PVA), which shows the player’s actual impact on the flow of the game. Although Modrić was not a prolific assist provider, his passes built attacks, broke defensive lines and created advantages, which would be clearly reflected in high PVA values at Tottenham. Branchini emphasises that Modrić may have been modest in terms of goals and assists, but he had an extraordinary sense for the timely pass, forward-moving balls and passes that “cut” through defensive lines. An analysis of PVA would show that he consistently added value to the game in the middle and final thirds.

If such a transfer were being carried out today, all these data would be compared with players of a similar profile in compatible playing systems to assess his fit with Real Madrid’s tactical requirements. AI models could simulate his performance in La Liga, including comparisons with Real’s existing midfielders. The model would take into account the tempo of play in the Premier League and La Liga, the expected number of chances created and other parameters. The model would, Branchini argues, likely predict a positive long-term value for Modrić despite modest physical attributes, based on his technical superiority, intelligence and tactical flexibility.

In addition, modern tools would analyse online sentiment – posts on social networks, media articles and public perception of the player. Such data would be useful for assessing reputational risk and planning PR campaigns after the transfer. In conclusion, Branchini notes that with today’s systems, Modrić’s transfer would not be met with such scepticism. Artificial intelligence and advanced analytics would support the decision with objective indicators, reduce the impact of subjective opinions and sensationalism, and more clearly demonstrate his true value.

The results of the study show a strong contrast between the subjective nature of transfer decisions in 2012 and the objectivised models used by clubs today. Advanced metrics such as expected passes under pressure, ball progression metrics and Pass Value Added would, in contemporary conditions, enable a more detailed evaluation of Modrić already during his early Premier League seasons. AI-driven simulations of the player’s integration into Real Madrid’s tactical system would also demonstrate predictive value that traditional scouting could not provide at the time.

These findings confirm the existing literature highlighting AI’s capacity to reduce decision-making risk (Davenport & Ronanki, 2018; Kumar & Garg, 2018). However, they also align with research emphasising that AI cannot fully replace human intuition and experience in sports management (Jordan, 2019).

CONCLUSION

Strategic decision-making in professional sport, especially football, is increasingly relying on artificial intelligence (AI) as an extremely useful tool for making informed and long-term sustainable decisions. By analysing the case of Luka Modrić's transfer from Tottenham to Real Madrid in 2012, and comparing it with today's approaches to managing sporting assets, it has been shown that the use of advanced analytical systems and AI tools could improve the process of player evaluation, quantify his potential value, reduce reputational risk and speed up decision-making.

The interview with leading sports agent Giovanni Branchini confirmed that sports organisations such as Real Madrid have for years been at the forefront of integrating sporting, financial and marketing strategies. Branchini points out that today's AI systems would easily recognise the value of a player like Modrić by analysing metrics such as expected passes under pressure, ball progression metrics and pass value added, and by simulating his integration into a specific playing system.

However, alongside the undeniable advantages of BI and AI systems, there is also room to reflect on the ethical dimensions of decision-making. Artificial intelligence, no matter how advanced, cannot replace the human capacity for moral reasoning, critical thinking and free will. As Brajnović warns, machines cannot possess awareness of good and evil, nor can they bear responsibility for the consequences of their "decisions". Therefore, the use of artificial intelligence in sports management – as in journalism and other professions – should always remain a tool in the service of humans, not a substitute for human judgment.

The limitations of this research include a small sample (one interview), retrospective analysis and the absence of quantitative AI models due to limited access to official databases. Future research should include a larger number of experts, comparative analyses of different transfer cases and the application of real AI models for simulating player value.

In conclusion, the results of this study show that business intelligence and artificial intelligence have significant transformative potential in the strategic management of sports organisations, especially in the areas of scouting, transfer policy, squad optimisation and performance monitoring. However, long-term success requires not only technical sophistication, but also ethically grounded, professional and responsible public decision-making.

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APPENDIX

Interview with Giovanni Branchini conducted on August 11, 2025.

Interview

Authors: Mr Branchini, you have been active in the highest levels of football management for decades. When you look back today at Luka Modrić's transfer from Tottenham to Real Madrid in 2012, how much has the decision-making process for such transfers changed?
Branchini: It has changed almost completely. Back then, decisions were based on experience, scouts' and managers' impressions, personal assessments, and perceptions of potential. Today, the process is far more sophisticated. Clubs use artificial intelligence (AI) tools and large databases to reduce risk and accurately assess player value. A transfer like Modrić's today would be much faster, safer, and based on objective indicators—precisely thanks to technology.

Authors: What exactly do you mean by "technology" in the context of scouting and transfer decisions?
Branchini: Today, a whole range of analytical systems is used. For example, advanced metrics such as *Expected Passes Under Pressure* measure how well a player can retain and distribute the ball while under pressure. Luka Modrić excels in precisely this. His ability to remain calm and deliver accurate passes even in the most dangerous areas of play makes him perfect for this kind of analysis. Today, we could easily quantify his impact on the flow of the game.

Authors: So, if such a transfer were happening today, the numbers would immediately "speak in his favour"?
Branchini: Absolutely. Modrić would shine in modern metrics such as *Ball Progression Metrics,* which measure how much a player advances the ball toward the opponent's goal. There's also *Pass Value Added (PVA),* which shows how much a pass increases the chances of scoring. Even though Luka was never a player with a high number of assists, his passes consistently "cut through" defensive lines and enabled attacking buildup. Today, his true value would be clearly reflected in the numbers.

Authors: To what extent did Real Madrid recognise the importance of linking the sporting and business segments?
Branchini: Real Madrid was already ahead of its time. Through Real Madrid Television, digital marketing, international brand expansion, and leveraging the image of their players, they managed to turn the club into a global brand. Luka Modrić's transfer was not only a sporting acquisition but also a business move. He became the face of campaigns, part of international marketing, and contributed to the club's revenue growth.
Authors: Can we say that Modrić's transfer was an example of an integrated approach?

Branchini: Exactly. At top clubs today, there is no longer a strict boundary between sport, finance, and marketing. All of these segments are connected through business intelligence and AI analytics. In Modrić's case, his sporting performance, market value, and ability to strengthen Real Madrid's brand were all considered. The result? One of the most successful transfers in modern history.

Authors: How important are defensive metrics today, such as "defensive actions per zone"?
Branchini: Extremely important. The *Defensive Actions per Zone* metric shows where a player is most active defensively. Modrić, for example, was not a classic ball-winner, but he was extremely active in the middle third, where he intercepted passes and regained possession. Such metrics help coaches and managers to precisely understand a player's role—and where on the pitch he brings the most value.

Authors: Has artificial intelligence also entered the field of fitness preparation and injury prevention?
Branchini: Absolutely. AI is now used in the medical segment too—it tracks microtraumas, fatigue, and biomechanical deviations. Real-time systems analyse data from players' sensors and help optimise training and prevent injuries, which is extremely important for protecting investments in players. That's another example of how much management has changed.

Authors: Do you think Modrić's transfer would be met with less scepticism today?
Branchini: Without a doubt. At the time, the media and some of the public doubted his physical readiness and suitability for La Liga. Today, AI models could simulate his performance in the league, compare him with other midfielders, and analyse his compatibility with the coach's tactics. Additionally, the systems would take into account the rhythm of play in the Premier League and La Liga, the expected number of chances created, and even online sentiment—social media posts, reputational risk, media image. Such an analysis would clearly show that he is a player of exceptional long-term value.

Authors: Finally, how do you see the future of football management?
Branchini: The future is already here. Football management today demands integration of data, technology, and human judgment. AI can suggest the ideal transfer, but you still need human instinct to recognise a player's character. The combination of those two factors creates success. And Modrić? He is an example of how—even before the data era—the right people could recognise a genius.

Authors: Thank you for the interview, Mr Branchini.
Branchini: Thank you. Football changes, but one thing remains the same—the value of true players is always recognised, regardless of technology.