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EDITORIAL

MEASURING DEVELOPMENTS

During 2022, The Technician had compelling reasons to focus on women's football. The pace of development had been illustrated by a season in which records had been pulverised. The EURO 2022 final between England and Germany had attracted a crowd of 87,192 to Wembley Stadium. The Women's Champions League semi-final between FC Barcelona and VfL Wolfsburg posted another record-breaking attendance of 91,648 at the Camp Nou in the Catalan capital. But the success story was not exclusively about the pulling power or entertainment value of women's football. The Technician highlighted momentum in terms of technical and tactical skills, along with advances in physical preparation, which allowed coaches and players to design and implement playing philosophies based on sustained intensity and, in many cases, high-energy strategies such as high collective pressing.

This was statistically backed up by research covering the quarter-century between the European Championship of 1997 – the first to feature a group phase – and the 16-team mega event in 2022, with revealing data about, for example, pass completion rates or the areas of the pitch where teams set out to regain possession. At the same time, the expanded format of the Women's Champions League was allowing a greater number of clubs and players to measure themselves against the continent's best and thereby maintain or increase rates of development.

Meanwhile, UEFA's commitment to encouraging more women to engage in coaching was boosted by the fact that both competitions were won by female coaches: Sarina Wiegman making history with successive wins at the helms of the Netherlands and England; and Sonia Bompastor becoming the first female champion in more than a decade by leading Olympique Lyonnais to victory in Europe's top women's club competition.

But The Technician also highlighted other significant developments in the game as a whole, among them the proliferation of coaches specialising in ever more specific areas of match play, such as set pieces or, in some cases, even finer details such as the throw-in. There was also an in-depth examination of the role of the technical director, who, in an era when the tenure of coaching positions has been progressively shortening, is often the main provider of continuity in longer-term projects within clubs or national teams.

All this adds up to some fascinating reading in this compendium of articles published in The Technician during a stimulating and thought-provoking year.

Frank K. Ludolph
Head of Technical Development

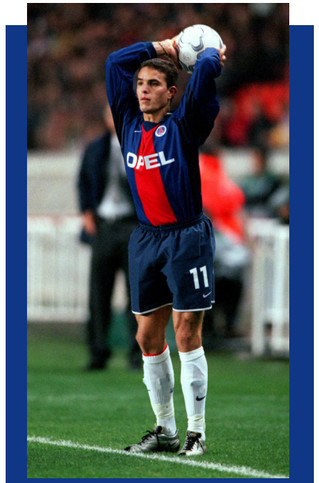
THE RISE OF THE SPECIALIST COACH

Roberto Mancini with his team of specialist coaches. Left to right: Alberico Evani, Gianluca Vialli, Gianni Vio, Claudio Donatelli, Andrea Scanavino and Valter Di Salvo.

For many years, the roles of those involved in the preparation of team performance have been firmly set. In most cases, a small team of staff, led by the head coach, have had responsibility for all aspects of the coaching process. However, the last decade has seen significant change to the design and delivery of elite training sessions.

There are now more eyes on player performance than ever before. At both club and national level, roles such as attacking coach, defensive coach, individual development coach and other titles are becoming more commonplace. Liverpool now employ a throw-in coach. Italy's men's and women's national teams have a specialist responsible for set plays. When England won the men's U-17 and U-20 World Cups in 2017, specific coaches focussed on in-possession and out-of-possession phases of the game. With the number of specialist positions in the game continuing to grow, it is fair to say the role of the specialist coach is on the rise. →

Thomas Gronnemark, here in a training session with Liverpool, is surprised that specialist throw-in coaches did not exist sooner.



Thomas Gronnemark: Liverpool's throw-in coach

Before entering the world of professional football, Thomas Gronnemark, Liverpool's specialist throw-in coach, was an athlete on the Danish national bobsleigh team.

"I don't see throw-in coaching as a separate path from 'normal' training. No, the throw-in work should be integrated. At Liverpool it's an integral part of the playing style and it's an integral part of the training."

Thomas Gronnemark
Liverpool's throw-in coach

It was here the 46-year-old learned to appreciate that taking care of detail leads to successful performance.

"One of the reasons I'm good at analysing the game of football is that we analysed our bobsleigh start over 7,000 times," says Gronnemark. "We looked at the position of the hips, hands, feet, as well as our rhythm and many other things. Then we looked at the sledge position in the different curves of the run."

Unlike athletics, Gronnemark felt that the 'sources of truth' in football were often reliant on 'tradition and story', rather than data. "When I came to football, it just felt so far behind," says the Dane, who began working as a throw-in coach in 2004. "When you watch a football match and possession is lost from a throw-in, the commentators are not saying anything. It's almost accepted that throw-ins are bad. A lot of teams still throw the ball down the line and hope to win the duel. But if you're just doing that, there's a bigger risk of losing the ball."

Gronnemark accepted an offer from Jürgen Klopp to join Liverpool in 2018/19. By the end of that season, he had helped the Anfield club move from eighteenth to first in the Premier League rankings for retaining possession under pressure from throw-ins. "At the start with Liverpool, I just helped them learn the basics," says Gronnemark. "I also started analysing all the throw-ins from all of their games and sending reports."

Changing how coaches and players thought about throw-ins was another key part of the work. "We normally have 40 to 60 throw-ins in a match," explains Gronnemark. "And the situation following the throw-in normally takes around 15 to 20 minutes of analysis. So, a throw-in is not only a small part of football, it's actually a gigantic part."

Gronnemark has implemented this process at a host of other clubs – he currently works with ten professional teams around the world. "I found clubs, coaches and players were lacking knowledge around how to keep possession and create chances from throw-ins. So, I felt it was so important to improve the throw-in."

Integrated, not isolated, coaching practices

A common misconception is that specialist coaches like Gronnemark work in isolation away from other elements of the coaching process. Although there may be some one-to-one and small group work, the key is effective integration. "I don't see throw-in coaching as a separate path from 'normal' training," he says. "No, the throw-in work should be integrated. At Liverpool it's an integral part of the playing style and it's an integral part of the training, and that's the way it should be."

Developing 'throw-in intelligence' is a core part of Gronnemark's approach and can only be achieved by creating game-realistic situations in training, says the Dane. "The relations between the players are so important. Not only in space creation but also things like eye contact, body signals and reading body language.

"In my philosophy, you don't know who should receive the ball because there are many different options. This links to eye contact and reading each other's body language. Of course, this is developed in the small basic exercises, but it's also developed in small-sided games or bigger match exercises that utilise different zones. And, of course, you can't expect to have perfect relations after a week or after one visit from me. It takes work."

Gronnemark lists basketball, American football, handball, ice hockey and athletics as influences on his way of working. There are also less conventional areas of interest. "I observe birds and animals," he explains. "I'm also getting inspiration from art, museums and different patterns that I see.

Gianni Vio with Roberto Mancini.

"I've also taken inspiration from the Roman army," he adds. "Two thousand years ago, they had archers who were stationed at the front of the army in battle. They had to shoot the arrows before going back through the rest of the army in a chaotic situation. The army had different systems where they could get those archers back through the ranks without anyone getting hurt or falling over each other. There is so much valuable inspiration and knowledge from different areas and people that you can pick up."

Gianni Vio: Italy's set-pieces coach

Another specialist coach with a unique background and methodology is former banker Gianni Vio. The UEFA Pro licence holder is the set-pieces coach for the Italian men's and women's national teams and explains that it is clear from the data why this area of specialism is so important. "30–35% of the goals come from dead balls," says Vio. "In today's game it is one of the aspects that can really make the difference.

"A three-year university study on the Premier League says that only 2.2% of corners lead to a goal," he adds. "It means we are not doing the job properly in more than 97% of cases. Working on this aspect can be a great advantage."

Vio believes that dedicating resource into improving set pieces could be as profitable as having an additional striker. "If we manage to improve even by just a few percentage points, it could mean scoring 15–20 more goals in the season," says Vio. "Which is like having an important striker. This is why I would like to be considered as an additional striker, not as a coach."

How Vio works collaboratively with the head coach is crucial to ensuring his set-piece work fits with the other aspects of the coaching process. "I think it's one of the great qualities that Roberto Mancini has," explains Vio. "He is not only coordinating but also understanding very easily what we are doing. He is also very good at involving us in every aspect. We really feel like we are his second team for sure." →

"If we manage to improve even by just a few percentage points, it could mean scoring 15–20 more goals in the season. Which is like having an important striker. This is why I would like to be considered as an additional striker, not as a coach."

Gianni Vio
Italy's set-pieces coach

> "Each aspect was integrated. On the grass, we would break off for position-specific warm-ups and those groups would work on key practices and themes linked to the session objective. Those groups would then come together again. They were always interacting and interchanging."
>
> **Matt Crocker**
> England head of development team coaching between 2013 and 2020

Matt Crocker: England's U-17 and U-20 World Cup success

In 2017, England celebrated unprecedent success at men's youth level, winning both the U-17 and U-20 World Cups. Silverware was reward for the integration of a number of specialist coaches into an overall 'coaching model' explains Matt Crocker, England head of development team coaching between 2013 and 2020.

"Our coaching model was based on a head coach, in-possession coach, out-of-possession coach and a goalkeeping coach responsible for set plays," explains Crocker. "But each aspect was integrated. On the grass, we would break off for position-specific warm-ups and those groups would work on key practices and themes linked to the session objective. Those groups would then come together again. They were always interacting and interchanging."

Research into other sports led Crocker and the England staff to implement the idea of 'pack' coaching – a method championed in a number of American sports. "'Pack' coaching is based on the idea that the game is ever-changing," explains Crocker. "The game is scruffy and untidy: there's attack, defence and always opposition working against you.

"A session might have had a specific focus on an in-possession theme, but the role of the out-of-possession coach was to make things even more difficult for the in-possession team. This was the opposite of what you would traditionally see. Normally, a co-coach would try to help make a practice work. We were more interested in how the coaches could make it more difficult for each other, because that's what the opposition are doing in an 11v11 game."

Integrating each element into a cohesive session plan was key to the process, explains Crocker. "The coaching team would continually refine session plans – sometimes getting up to version eight or nine – due to the extent of discussion and debate in order to make things difficult rather than to make things easy."

Changing coaching models: game coach and individual development coach

When Crocker joined Premier League side Southampton as director of football operations in 2020, the idea of integrated specialist coaching continued to evolve. "At Southampton, with the Under-18 and the B team, we implemented the idea of a game coach and an individual development coach," says Crocker. "The game coach is responsible for delivering the club philosophy – the 'playbook' – preparing players for games and making sure that the practice design is right. The individual development coach is responsible for the individual development plans of players."

Although the two roles overlap, there are clear focus areas and responsibilities for training and matchday, explains Crocker. "The individual development coach leads the process of looking at what each player needs to do to grab the shirt in front of them, which is obviously the first-team shirt," he says. "On gameday our individual development coach's role is to watch the game through a totally different pair of spectacles to the game coach. They are looking at key individuals. They might pick out two, three or four individuals that they can have a specific 'laser focus' on in the game and feed back to directly.

"Whereas the game coach is looking at the performance of the team and the style that we follow in the philosophy of the first team. If there are tactical tweaks that we need to make at half-time to refine and help us perform better, they will do that. But the two coaches have got to work really closely together."

With traditional coaching roles continuing to change, a wider variety of coaching skills and knowledge will be needed to be effective in the future, says Crocker. "I think the key skills for the specialist coach are being open-minded and inquisitive," he says. "The specialist coach has to be accepting they haven't got all the answers. They need to be humble and vulnerable enough to go and ask, research and learn – whether that be from players, other members of staff or from research. They have to be really open-minded and curiosity is key.

"Also there has to be a real passion for attention to detail. In terms of technical details, it is somebody who is prepared to look beyond traditional coaching methods at things like biomechanics, movement patterns and someone who values the input from sports science and other areas. It is somebody who is open-minded and understands that the solution to an issue might also be psychological."

Dutch goalkeepers Jasper Cillessen, Justin Bijlow and Mark Flekken with Frans Hoek.

Frans Hoek: From goalkeeper coach to 'goalplayer' coach

Goalkeepers have long benefited from specialist coaching. However, as the role of the goalkeeper continues to change, so too must the associated coaching methods, says Netherlands' goalkeeping coach, Frans Hoek. "The role of the goalkeeper coach has changed because the game is changing," explains Hoek, who has worked for Ajax, Barcelona, Bayern Munich, Manchester United, Galatasaray as well as the Polish and Saudi Arabian national teams in a distinguished coaching career spanning nearly 40 years. "The goalkeeper of today is, in my opinion, a 'goalplayer' and is doing everything that the outfield players are doing. The only difference is the goalkeeper is allowed by the rules to use their arms and hands within the box. If you take away the gloves, goalkeepers look the same as players, only with their own specific task."

Hoek points to Manchester City and the role of the goalkeeper in Pep Guardiola's team to emphasise the game understanding needed for a goalkeeper, or goalplayer, to be effective in the modern game. "You can see with Pep at Manchester City how important the goalplayer is to their whole way of playing in both attack and defence. It means there has been an enormous development to the role of the goalplayer to play this way."

To effectively support these changes, there is still much work to be done, says Hoek. "If you look at goalplayer coaching, in some cases, you don't see a very big development yet. What we often see happening is that the goalplayer and the goalplayer coach are more or less creating their own unit. But if you are working →

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>
> **Frans Hoek**
> Netherlands' goalkeeping coach

With skills worthy of an outfield player, Gianluigi Donnarumma and Manuel Neuer are a perfect illustration of the 'goalplayer' of today.

separately with the goalplayers, you have nothing to do with the team, you have no teammates to work together with and no opponents."

Integrating goalkeepers into outfield practices is not a new idea, but it is an approach that must stay up to date with the latest trends in the game in order to be effective, says Hoek. "The moment you put the goalplayer in the game situation, as a goalplayer coach you need the competencies of a regular coach as well as your specific knowledge on goalplaying. Which means you need to know how to attack, defend, transition, and how the goalplayer can help their team-mates. So, it's a much more complex situation with a different kind of specialisation."

How information from the goalplayer coach is communicated back to the head coach is another key part of the role, says Hoek. "I always try to place myself in the role of the head coach," says Hoek, who has worked alongside Johan Cruyff, Louis van Gaal and Leo Beenhakker during his career. "I want the head coach to see me as an objective advisor. I want them to see me as somebody that gives the best possible advice that is based on facts and not subjective feelings.

"When I first started, I worked more on emotion, feeling and intuition. Now the feeling and intuition are there, but I can describe it a lot better. My job is to provide all the options to the head coach and make it very objective advice. And I think it's so important that you don't only think about the goalplayer but you think wider and understand the overall picture of the team. Then the head coach looks at you as a full part of the staff."

Open-minded head coaches

How head coaches embrace the rise of specialist coaches will continue to provide both challenge and opportunity in the future. With greater numbers of specialist staff to manage and multiple information streams to understand and utilise, the skills required of the future head coach will continue to evolve.

"I think that the development in the area of specialist coaching is just starting," says Hoek. "If you remember the time when the head coach did everything, it was difficult for them to 'zoom in' on the detail. Now you have a coaching staff of six, seven or more people, so everybody can 'zoom in' on certain situations and take out everything. There should not be one detail that is missed."

With greater resource comes the need for greater clarity and communication from the head coach, says Hoek. "With more and more coaches, they all need to bring the same message," says Hoek."The more people that are involved, the more difficult it is because you have to communicate and discuss with each other. You have to speak the same football language. The big challenge for the head coach is to get every piece into the whole puzzle and not leave it as different pieces. Having a clear vision and knowing how all the bits and pieces fit together will be key."

Head coaches will also need to develop a greater range of 'softer' skills, says Crocker. "I think the days of the 'superhero' leader, the single person that leads from the front, is becoming less and less," he says. "With advancements in specialist coaches, data and sports science, the role of the head coach is changing and is evolving. Having outstanding communication skills is absolutely key, but that communication is not only one way. The head coach has to create a listening environment, because that's the hardest thing to do when you've got such a short amount of time and there's so much pressure.

"Head coaches have to really listen to their staff with regards to the information that's coming in and utilise the level of expertise they are surrounded by. They can't be great at all elements of the process, so filtering all that information is key. Similarly, head coaches have to know their 'blind spots', share those with staff and show a certain level of vulnerability. If the head coach can do that, I think they will get a lot more out of the team of staff around them." ⚽

Guillaume Gille, head coach of the French national handball team

'We're entering a new era'

Other team sports are also calling on the services of specialist coaches to help improve individual and team performance. Guillaume Gille, head coach of the French men's national handball team, the current Olympic champions, explains how coaches in his sport are becoming more and more specialised.

"The French national handball team has goalkeeper coaches, fitness coaches, video analysts, assistant coaches, and so on. It's very similar to football, but on a smaller scale, because we don't have the same financial resources.

"I expect a specialist coach to have particular expertise in a specific field, as well as the ability to work as part of a team. If one of my fitness coaches does whatever they like or decides to do things their own way rather than act in the best interests of the team, disaster is inevitable. Information must be shared effectively to enable all staff members to help the players perform to the best of their ability.

"We are all trying to analyse and understand the players' performances on the court, gathering as much information as possible so we can help them fulfil their potential. We're entering a new era. Data is already being used widely, but not in a joined-up way.

"When you use GPS trackers to measure distances covered or high-intensity runs, you're seeing things through a very small window. Thanks to video tracking, I think we will soon be able to access a player's complete data – physical, mental and technical – and therefore manage our team better. This will create the need for more specialists to collect the data, pick out the key information, pass it on and use it."

Guillaume Gille

Julian Schlosser

Julian Schlosser

MEASURING AGAINST THE BEST

UEFA Women's Champions League sets benchmarks in club football

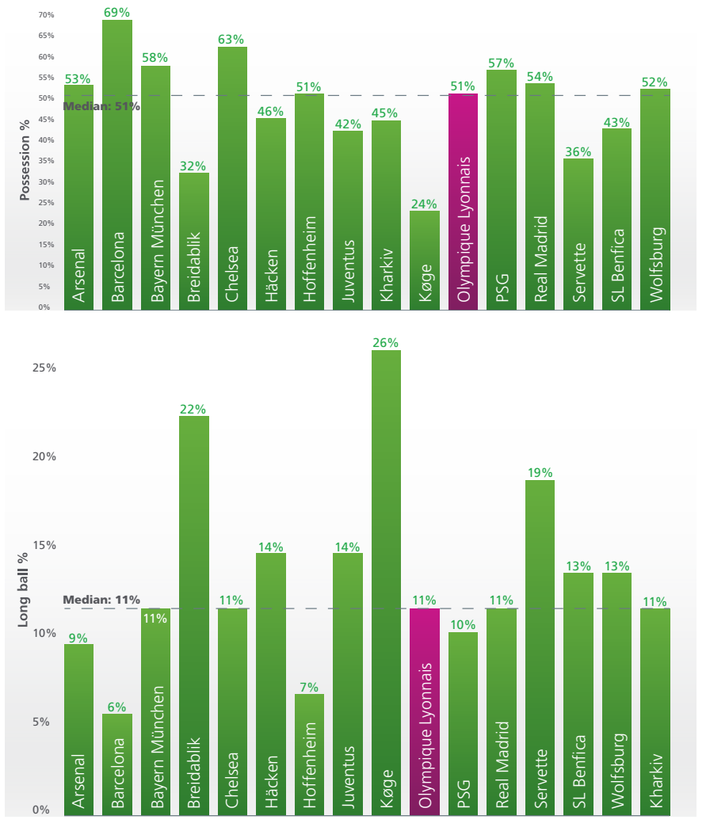
An eighth victory for Olympique Lyonnais in the last dozen UEFA Women's Champions League finals hints at a degree of familiarity. But the impression is at odds with the realities of an unfamiliar season. The new format, featuring a 16-team group stage, allowed more players and coaches to measure themselves against top-level opponents. Technicians gave an overwhelming welcome to a system that improved on the previous formula of knockout rounds involving 32 teams, which offered limited exposure to high-calibre opposition.

Among the coaching fraternity, a salient feature was a thought-provoking turnover rate. FC Bayern München's Jens Scheuer was alone among the top eight in having a tenure as head coach that pre-dated 2021. There were familiar faces from previous editions who resurfaced at different clubs – for example, Jonas Eidevall (FC Rosengård to Arsenal) and Joe Montemurro (Arsenal to Juventus), while Jonatan Giráldez could claim previous experience as assistant coach to Lluís Cortés when FC Barcelona lifted the trophy in 2021. Another unfamiliar feature in a season with a familiar outcome was that OL's Sonia Bompastor became the first female coach to win the UEFA Women's Champions League, ending a long wait since Monika Staab and Martina Voss-Tecklenburg won the first and last editions of the old UEFA Women's Cup in 2002 and 2009 respectively. The 2021/22 season demonstrated that the coaching landscape in top-level women's football is changing.

Even though the season enjoyed a return to quasi-normality, coaches were still required to deal with untimely absences caused by COVID protocols – even into the knockout rounds when, for the second leg of the quarter-final against Paris Saint-Germain, Jens Scheuer had only two outfielders on the FC Bayern bench and made only one change during a match that extended into extra time. →

Lyon's eighth Women's Champions League title makes Sonia Bompastor the first to win the competition as a player and as a coach.

Long balls and possession




Ada Hegerberg (Lyon) in action against Barcelona goalkeeper Sandra Paños.

Some teams were confronted by steep learning curves during a group stage where both teams scored in ten of the 48 fixtures. Ball-possession statistics help to gauge difficulties. Denmark's HB Køge, for example, averaged 24% in their group alongside Arsenal, Barcelona and Hoffenheim; Iceland's Breidablik 32% against Kharkiv, PSG and Real Madrid; Servette 36% in their tough group alongside Chelsea, Juventus and Wolfsburg.

Averages, however, can be precarious evidence. Arsenal's figure of 53% conceals shares of 80 and 76% against Køge, contrasting with 36 and 28% against Barcelona, whose share of the ball in their 11 matches never fell below 60%. As an indicator of contrasting styles, their opponents in the final were not overly concerned about dominating possession. Against FC Bayern in the group stage, Lyon had 49 and 44%; then 48 and 38% in the semi-final against PSG; and 39% in the final. Their use of the long pass stepped up in relation to previous seasons, reaching 20% during the away leg against PSG and the final in Turin.

Long passing fell into two categories: systematic and enforced. Køge (27%) and Breidablik (23%) fell into the former, with more than one third of the Danish team's passes against Barcelona covering distances in excess of 30 metres. Chelsea, on the other hand, were persuaded to stray from their habitual modus operandi when they travelled to Wolfsburg in the group stage. Whereas their percentage of long passing had fallen a few decimal points short of double figures in the other five group games, 21% of the 2020/21 silver medallists' passing was long during the critical game in Germany, the number of passes fell from well over 500 to 340, and the pass completion rate dropped to 62% overall and 56% in the Wolfsburg half. The 4-0 defeat spelt elimination. Tommy Stroot's side adopted a similar approach to the away leg of their semi-final against Barcelona, holding a high line, pressing the ball hard and marking individually. The home team, however, remained unfazed and maintained their season-long 5% quota of long passing.

Long passing fell into two categories: systematic and enforced

Leading from the front

The final showcased two species of central striker. Lyon's readiness to exercise the long-pass option was linked to the return to form of target striker Ada Hegerberg, while at the other end of the pitch, Jennifer Hermoso's game was focused on mobility aimed at drawing centre-backs out of position (as she had done in the home leg of the semi-final against Wolfsburg) and creating openings for the incisive runs from deeper positions by Alexia Putellas and Aitana Bonmatí.

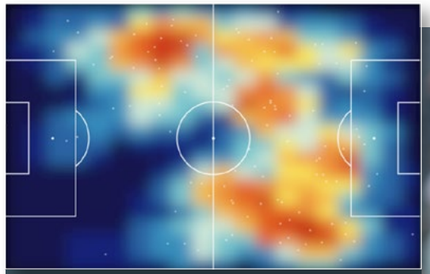
Lyon's readiness to exercise the long-pass option was linked to the return to form of target striker Ada Hegerberg

After the interval, Giráldez replaced her with Asisat Oshoala, a target striker similar in athletic attributes to PSG's Marie-Antoinette Katoto.

Arsenal's attacking format was adjusted after the signing of Stina Blackstenius, after she had played the group phase with BK Häcken. "Generally, Blackstenius would run the line in or beyond the channels," technical observer Hope Powell observed after watching the home game against Wolfsburg, "while Vivianne Miedema would come short between lines to receive." Real Madrid also exploited a target striker as a route out of Barcelona's high press. "The way out was always Esther González," commented technical observer Vera Pauw. "She was the target striker who rarely missed out on the early ball forward and played the space behind the defence. She was fast and direct and knew how to make herself free in front of goal or in the build-up. No run was too much for her and when necessary she dropped to help the midfielders defend. She gave the team structure when they were under pressure."

The higher the better?

Was it coincidence that the final was disputed by the two teams that recorded the highest number of regains in the attacking third? Was it coincidence that Olympique Lyonnais and FC Barcelona then converted ball recoveries in advanced areas into goal attempts? →



Barcelona's pressure in the semi-final v Wolfsburg (2nd leg)

Lyon's pressure in the semi-final v PSG (1st leg)

Apart from scoring a superb goal in the final, Amandine Henry pressed hard against Barcelona.

The table shows figures for the top teams with the R3 column denoting the average number per match of recoveries in the attacking third and R3+S the average number per game of recoveries that led to a shot on goal.

Team	R3	R3+S
FC Barcelona	12	6
Olympique Lyonnais	11	5
VfL Wolfsburg	8	4
Paris Saint-Germain	7	4
FC Bayern München	7	4

Lyon's expertise was illustrated by the crucial opening goal in the final, with Amandine Henry snapping into a tackle, coming away with the ball and, a few strides later, hitting an unstoppable shot from distance into the top corner. As Corinne Diacre noted during the semi-final against PSG: "After losses of possession, OL swarmed with density around the ball." Vera Pauw, observer at the return leg, commented: "After an attack broke down, OL made sure they pressed immediately to give players time to get behind the ball and then pressed as a unit from behind the ball in the opponents' half, leaving them no opportunity to play in behind their high defensive line."

"PSG also set out to disturb the OL build-up high up the pitch," she added, "but often on a more individual basis, with major gaps behind the first line of defence resulting in control for OL. By doing this aspect in a better way, OL were able to create more danger from their immediate transitions to attack."

"Wolfsburg set out to press Barcelona," Jorge Vilda remarked after watching the first leg in Spain, "with a very high back line but marking 1v1 on their opponents. As a result they risked being pulled out of shape – and they were 2-0 down within nine minutes." During the return match, Monika Staab commented: "Barcelona's defence stayed very high. The team was very compact and did well in duels, with the forwards pressing very high in Wolfsburg's third in order to get very quickly back in possession."

FC Bayern, as Corinne Diacre noted: "Sometimes looked for high regains, but often focused their ball winning on slightly deeper areas to give themselves room to counterattack."

"Real Madrid set up a deep defensive block," said Vera Pauw after watching their home game against Barcelona, "and, from this block, would press forward on the player in possession, focusing on a little mistake or inaccurate execution to attack the ball and win it back. This usually happened in midfield." After seeing Arsenal at home to Wolfsburg, Hope Powell reported: "They pressed high and aggressively in a 1-4-4-2 formation when they could, with Stina Blackstenius leading the press from the front. But when Wolfsburg had comfortable possession, they would focus on recovering shape and balance by retreating to the edge of the mid-third."

Juventus generally opted for deeper defending. After watching them in Lyon, Jarmo Matikainen commented: "They tried to press early and put pressure on the centre-backs when they wanted to play out. So the front four were important in the defensive structure as the first line of defence. They held a high line at first but were forced to drop deeper – mainly a compact block in midfield but frequently even deeper. And the wide players had the task of defending against Lyon's attacking full-backs and needed to cover a lot of ground. So they often had to look for the front four with a long pass." Still with Lyon, heat maps from the final demonstrate that the team's average positions on the pitch were higher when out of possession than when the champions had the ball.

Amid the diversity in terms of the how, when and where of pressing mechanisms, Chelsea, eliminated in the group stage, emerged as the team who, as the graphic illustrates, allowed opponents the lowest number of passes (Passes Per Defensive Action) before winning the ball back from them.

Team	PPDA
Chelsea	7.90
FC Barcelona	9.23
Olympique Lyonnais	9.48
FC Bayern München	9.53
Real Madrid	10.03

Physical performance

Athletic conditioning (and climate) evidently need to be factored into a team's readiness to exert sustained high pressing. And, once again, peak performances in the UEFA Women's Champions League set the benchmarks. UEFA recently published an analysis of the physical demands of match play among the top eight teams in the 2019/20 and 2020/21 seasons – which can now be updated with data from 2021/22. In terms of collective effort in distance covered, the curiosity is that the champions posted the lowest figure of the knockout rounds: 103.74km in their away match against Juventus compared with an overall average of just over 110km per game. The codicil is that OL also registered modest statistics in real playing time: 50–52 minutes in three of their four fixtures during the run into the final (the exception being 59'19 in the home leg against PSG). The ball was out of play for 45 of the 101 minutes played during the final, where FC Barcelona collectively ran 5km more than their opponents to post the second-highest total behind FC Bayern München's 117.58km in the home match against PSG.

In terms of collective effort in distance covered, the curiosity is that the champions posted the lowest figure of the knockout rounds

Centre-backs like Lyon's Kadeisha Buchanan produced high speeds, exceeding 30km/h.

With regard to individual parameters, previous studies of the FIFA Women's World Cups in 2015 and 2019 revealed that, from one final tournament to the other, the amount of high-intensity running increased by 15 and 29% respectively. In the UEFA Women's Champions League, the study revealed a similar upward trend with, for instance, a 10% rise in high-intensity running in a single season between 2020 and 2021 with sprinting at speeds over 23km/h while out of possession rose by a significant 30%.

The research indicated that, on average, wide players need to be ready to deliver 17 sprints at a mean speed of 28.4km/h. In the knockout rounds of the 2021/22 season, wide midfielders accounted for six of the dozen players who produced sprints in excess of 30km/h, alongside OL right-back Ellie Carpenter. Although her peak speed fell short of 30km/h (29.85km/h to be precise) Wolfsburg's Tabea Wassmuth delivered 3.16km at speeds between 15 and 30km/h during her team's home game against Arsenal.

The UEFA analysis also demonstrated that centre-backs are required to produce high speeds when the team is out of possession – with Arsenal's Leah Williamson and OL's Kadeisha Buchanan illustrating this by topping the 30km/h mark. Central midfielders, the data confirmed, generally cover a lot of ground (Barcelona's Aitana Bonmatí ran 12.1km during the final, for example) but rarely find enough space to work up maximum pace. A notable exceptional to this rule was provided by PSG's holding midfielder Laurina Fazer who, in the away leg of the semi-final against OL, recorded 32.34km/h – second only to Wolfsburg's wide midfielder Sveindis Jónsdóttir's run at 32.87km/h during the 5-1 defeat in Barcelona.

A full technical report on the 2021/22 UEFA Women's Champions League is shortly to be published, based on observations by a team of current or former national team coaches comprising Corinne Diacre (France), Jarmo Matikainen (Finland), Nils Nielsen (Denmark), Vera Pauw (Netherlands), Hope Powell (England), Anna Signeul (Sweden), Monika Staab (Germany) and Jorge Vilda (Spain).

WOMEN'S EURO EVOLUTION SIGNALS RISING STANDARDS

A study of past Women's EURO tournaments highlights improvements in passing, pressing and possession as better coaching and fitness help the elite women's game develop.

Quality, not quantity. This short slogan could feature in a broad summary of the key trends identified in a longitudinal study of the development of elite women's football across the last seven UEFA Women's EUROs.

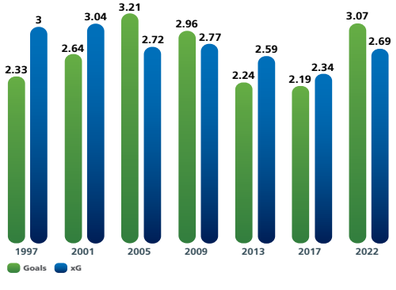
The study, commissioned by UEFA using data from StatsBomb, assesses every Women's EURO from 1997 up to and including this summer's final tournament in England and it has found several significant markers of improvement.

For a start, teams have become more selective in their shooting and pressing – shooting from better locations and pressing higher in the final third – both of which are signs of improved levels of organisation and fitness. When it comes to pressing, for instance, the average number of pressures has risen to 152 per game – compared with 112 in the first Women's EURO of this century in 2001.

The impact of better coaching is evident too in the reduced number of turnovers of possession, which means that when teams get the ball, they are passing it better and making more profitable use of their spells of possession.

UEFA hopes that by identifying the important trends in the women's international game, it can help the coaching community to build on the success of the 2022 finals. Here we reflect on the principal talking points raised by the study.

SHOOTING – Goals rise as shots fall



Goals v expected goals (xG)

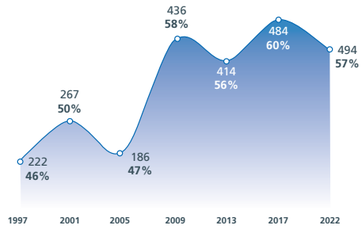
The 2022 tournament averaged 3.07 goals per game, which aligns with the wider trend for higher-scoring matches seen across football generally. The expected goals (xG) per game, meanwhile, has decreased since 1997. As the bar chart shows, for the 1997 finals, the xG was 3 and the goals total was 2.33. Indeed, the xG figure was greater than the goals total in four of the six previous tournaments in the study, whereas in 2022 we saw the opposite, with an xG of 2.69, which suggests an improvement in finishing technique. Shooting was one of the chief areas of focus of the study and the evidence points to players having become more selective when it comes to taking shots – a product of better approach play and also better defending.

	Shots per game	Shot conversion rate	% on target	% blocked	% wayward	% off target
1997	32.2	6.4%	32.1%	20.5%	7.6%	47.7%
2001	32.1	7.8%	33.3%	21.1%	6.2%	45.5%
2005	28.5	10.5%	34.3%	17.3%	8.3%	48.3%
2009	29.3	9.0%	35.1%	22.3%	7.9%	42.6%
2013	28.7	7.0%	29.7%	23.7%	8.9%	46.6%
2017	25.4	7.5%	31.3%	24.7%	9.0%	44.1%
2022	27.9	10.9%	33.3%	25.7%	6.8%	42.1%

Shot distance

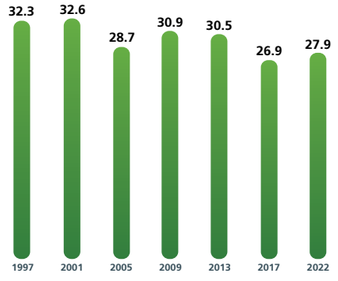
The average shot distance has fallen with every Women's EURO since 2005 – at an average rate of 0.6m per tournament. In 2022, the average distance was 16.5 metres and this is likely to be a consequence of teams seeking to create higher-quality goalscoring opportunities, which itself is a consequence, we can reasonably speculate, of better coaching.

Shots under pressure



Over 55% of shots are now taken under pressure – a slight dip from the 60% high recorded in 2017 but still a notable rise from the figure of just over 45% registered in 1997. Defensive organisation has improved over time, as already stated, and defenders are more aware of the need to disturb the player on the ball.

Shots attempted per match



This wish to create scoring opportunities of a better standard has led, over the 25 years, to a drop in the number of shots attempted. From a high of 32.3 in 1997, the number has fallen steadily, with the lowest average figures having been recorded in the past two EUROs: 26.9 in 2017 and 27.9 this year. It is a downward trajectory that is expected to continue.

At the same time, the shot conversion rate – which was 7.5% in the Netherlands in 2017 – has increased to a high of 10.9%. One reason for the increase could be an amelioration of players' technique; another could be players making better decisions as to when to shoot. Both would be likely factors also for the reduced portion of shots that were off target – down to an all-time low of 42.1% this summer.

It is worth considering too the percentage of blocked shots in this chart. This has slowly risen since 2005, with 25.7% the figure recorded at this year's tournament. This supports the view that defensive organisation is improving over time, and the same can be said of the overall trend for more shots being taken under pressure. →

Goalkeepers' save percentage

Interestingly, while defences are now better organised, the save percentage of the goalkeepers at Women's EUROs has fallen, from a high of 80% in 1997 to a low of 65% in 2022. Again this seems a likely product of the fact players are shooting from better positions.

AVERAGE NUMBER OF DEFENDERS WITHIN CONE

To expand this area of the analysis further, we should look at another measure of improved defensive positioning – the closer attention now given to players who are shooting at goal. In its study, StatsBomb used freeze frames on each shot to identify how many defenders are in place to potentially obstruct the shot each time. The resulting 'defenders in cone' metric involves the defensive players within view of the player shooting and the width of the goal. The more players there are between the shooter and the goal, the less space there is to place the shot.

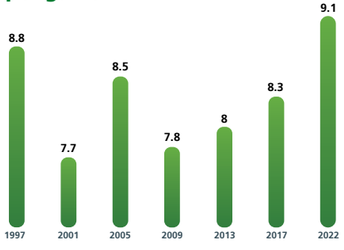
For the 2022 finals, the average number of defenders was 1.17 – the highest yet. For each of the first three tournaments in this analysis, the average was less than one defender, with 0.93 recorded in 2005; since 2009 it has been one or more, rising to this year's figure.

SET PLAYS

The study considered set pieces also and found that the balance between goals from open play (around 65%) and from set plays has been largely stable since the 2005 tournament in England.

	Combined set-piece shots per game	% from open play	% from corner	% from indirect free-kick	% from direct free-kick	% from penalty	% from throw-ins
1997	8.8	72.4%	12.8%	8.5%	4.1%	0.4%	1.9%
2001	7.71	75.5%	11.3	6.2%	4.6%	0.7%	1.8%
2005	8.43	69.9%	34.3%	10%	5%	0.7%	2.2%
2009	7.84	72.5%	35.1%	4.3%	3.8%	0.9%	0.7%
2013	7.96	71.6%	29.7%	6.2%	2.4%	0.8%	1.1%
2017	8.29	66.5%	31.3%	8.2%	4.9%	1.3%	1.9%
2022	9.1	72.5%	33.3%	4.8%	1.1%	1.1%	0.8%

Combined set-piece shots per game



The average combined number of shots per game from set pieces at this Women's EURO was 9.1 – the highest yet. The fact that set pieces were more productive would indicate that teams have been focusing more on the detail and organisation of dead-ball situations, finding value in set plays as per the trend in the game generally.

One additional point regarding set plays is that it would seem this extra attention to detail is focused on corner kicks. To refer to the chart below, at this year's tournament, 20.6% of shots came from corners – the second-biggest source outside of open play (72.5%).

There was a notable decrease in the percentage of goals from direct free-kicks – a drop of 3% since 2017 – but a 2% increase for indirect free-kicks.

PRESSING – With purpose

Pressure volume per team, per match

	Pressures
1997	134
2001	112
2005	154
2009	137
2013	117
2017	148
2022	152

Another area where the study offers food for thought is pressing. The average number of pressures per team per match in this year's tournament was 152. Only in 2005 has a higher average been recorded (154) and, once more, it is fair to infer that rising fitness levels and improved coaching are both relevant causes.

Average duration of pressure events (seconds)

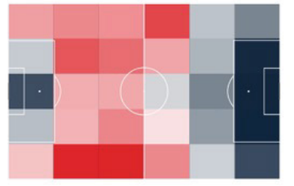
The duration of pressures is also noteworthy. This was above one second for the second tournament running – 1.03 compared with 1.05 in 2017 – and it supports the perception that teams are now better organised when it comes to pressing, with a specific plan for when to press and how long for.

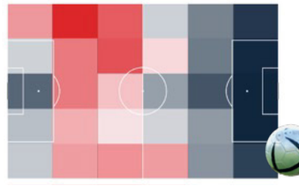
Pressure by pitch area

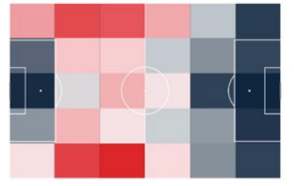
As for the areas where teams press, the most pressing still occurs in their own half. However, there is an upward trend for pressing in the opposition half and middle third, and a downward trend for teams pressing in their own defensive third. In other words, as teams are looking to press higher, so they are winning the ball higher and therefore spending less time in low blocks.

Change in possession by zone

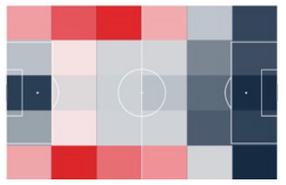
The graphic underlines this tendency by displaying, tournament by tournament, the zones of the pitch where the most turnovers, or changes in possession, took place. Red signifies a high number of turnovers (completed tackles, interceptions and changes in possession forced by pressure events), while dark blue means few. While there was a steady increase in turnovers higher up the pitch prior to this year, the 2022 Women's EURO witnessed a big change from previous tournaments, with a number of teams setting out in a high block – hence, for the first time, a prevalence of reds and pinks in the attacking third. →

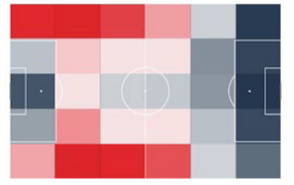

1997

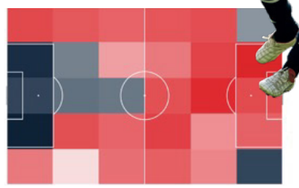

2001


2005


2009

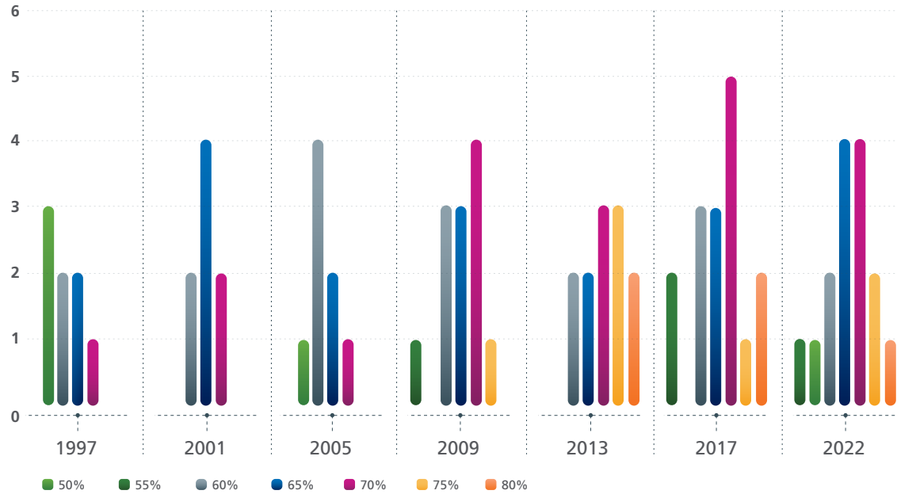

2013


2017


2022

PASSING – Numbers up

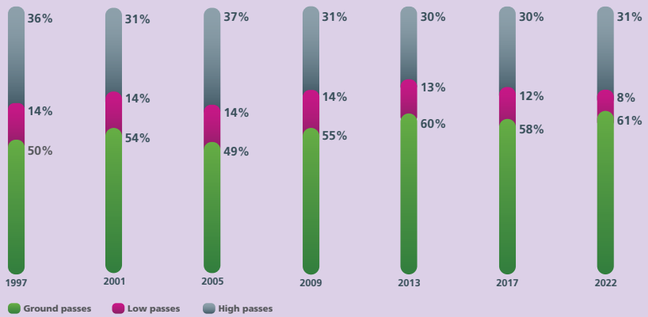
Number of teams by pass completion rate



For another gauge of rising standards in the elite women's game, the study provided an analysis of teams' passing.

The first point to make is that the pass completion percentages offer encouragement as, for the third tournament in a row, teams recorded percentages above 80%, with Spain leading the way. More and more teams are achieving a pass completion rate of 75%, which is regarded as the standard for those sides advancing to the knockout rounds. And evidence of greater consistency can also be found in the fact the two best-represented categories in 2022 were 65% and 70%. In the 1997 tournament, the most popular category was 55% yet, by contrast, only once in the past four tournament has a side recorded a passing completion percentage below 60%.

Combined passes per game, by height

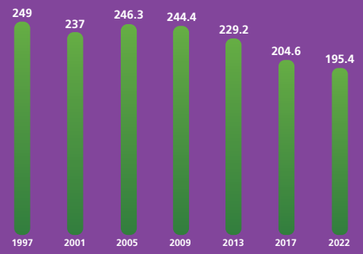


The number of passes per game, meanwhile, has witnessed a steady climb. The 2022 tournament saw the highest average yet, with 942 per game and Spain leading the way with 619.2 passes per game.

Regarding the table above, it should also be mentioned that the type of pass is evolving: in 1997 only 50% of passes were played on the ground and 14% were 'low' passes. By this year, 61% of passes were on the ground and just 8% were low.

POSSESSION – A case of quality not quantity

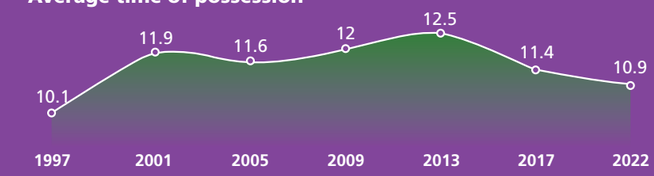
Average number of possessions per match



For the first time, at this Women's EURO the average number of possessions per match fell below 200. This marked the continuation of a trend across the last five tournaments – a trend which has accelerated recently. From an average of 229.2 in 2013, there was a drop to 204.6 in 2017 and now to 195.4.

This can be seen as another sign of the rise in the quality of general play. After all, fewer changes of possession would imply an improvement in the ability of teams to keep hold of the ball which, once again, corresponds with the notion that coaching levels have improved – along with individual skill – over the 25-year period in question. To remain on the subject of ball retention, the number of crosses per game has decreased across the last two tournaments, from a high of 24 in 2013 to 18 in 2022 (a 25% decrease in total). Although crossing remains the biggest source of goals, this is another sign of sides wanting to hold on to the ball in the final third and seek out the right pass or shooting chance, rather than rushing to put over a cross at the earliest opportunity.

Average time of possession



Finally, for the analysts working on this report, there was some surprise in the fact that the average time of possessions had fallen since 2013. To highlight this point, the average of 11 seconds this year was the lowest since 1997. To understand why, there is the suggestion that teams are slightly more direct in their attacking. Given the increase in technical ability, they can and do progress up the pitch more quickly – and with more passes – with the idea of creating as much disruption to the opposition as possible.

BALL IN PLAY – Time falls

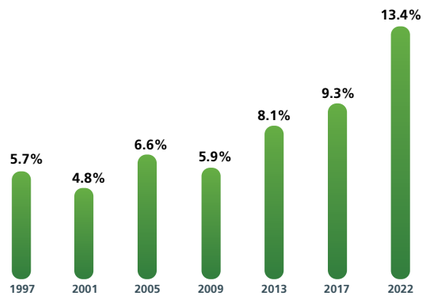
Average combined ball in play time

One final part of the study to reflect on concerns the amount of time the ball is in play. The bar chart shows a continuing slide in the average combined ball in play time, with Women's EURO 2022 registering the lowest average since the study began – just 53.9 minutes.

This can be interpreted as a result of more competitive matches, featuring more contested play. Ball out of play time means stoppages for free-kicks, goal-kicks, throw-ins and substitutions, and it could be argued that, owing to the greater competitive edge, teams are 'managing' the game in a more calculating way.

DISCIPLINE

Percentage of fouls given red or yellow card



This year's tournament witnessed a 44% increase in the number of fouls for which players received a booking. One interpretation is that the speed of the elite women's game has increased, which leads in turns to more fouls. Another is that improved technology has given referees more confidence to manage the game and make objective decisions.

COACHING COMMUNITY REVIEWS WOMEN'S EURO

National women's team coaches, technical directors and women's football officials from UEFA's 55 member associations came to England's national football centre at St George's Park on 31 October to undertake a far-reaching review of UEFA Women's EURO 2022 from a technical and coaching point of view.

The UEFA Women's National Team Coaches' Conference analysed July's three-week tournament and drew a wealth of conclusions from an event that not only broke overall records across the board, but also took elite women's football to an exciting new level – setting fresh benchmarks for the future in terms of technical skills, tactical intelligence, fitness and coaching acumen.

The conference, run by UEFA's technical department, was considered as an important post-Women's EURO milestone because it brought together key technicians in the women's game for sessions of discussion, feedback and dialogue.

Technical report tells the story

A focal point of the event in the English Midlands was the unveiling of UEFA's technical report on the tournament, compiled by the technical observer team comprising current or former women's national team or club coaches Gemma Grainger, Margret Kratz, Jayne Ludlow, Jarmo Matikainen, Joe Montemurro, Anne Noë, Vera Pauw, Hope Powell and former England goalkeeper David James, with additional input from fitness expert Stacey Emmonds.

The report – welcomed for its quality and breadth of detail – highlights in facts, figures, statistics and images the key tactical and technical developments observed at the tournament.

Members of the technical team gave specific presentations at the conference on major items contained in the report – focusing on specific findings that had emerged from the 31 matches in England. The aim of the technical team's work is not only to provide expert analysis for keen observers of the women's game, but also to give invaluable insights to coaches and coach educators engaged in women's football.

Coaches' views take centre stage

Highlights of the conference included a presentation by England's title-winning coach, Sarina Wiegman, who explained how she had joined forces with her staff and the team to create the environment and mindset that brought England their first major national team title in 56 years, and Wiegman her second successive Women's EURO crown after her triumph with the Netherlands in 2017 (see page 22 for a detailed account).

An on-stage forum featured three successful coaches at the tournament: Martina Voss-Tecklenburg, who guided Germany to the runners-up spot, and quarter-finalists Irene Fuhrmann (Austria) and Ives Serneels (Belgium).

Examining various technical and general aspects of the EURO, the three coaches agreed that teams had been much better prepared for opposing teams and players than ever before. "These days, you have such good analysis tools that we actually know everything about the players," Voss-Tecklenburg reflected. "If we take the way we prepared in 2017 and compare it with the way we do it now," Serneels added. "I think that's an evolution that you see in all the teams."

The forum participants expressed the view that it is important for countries across Europe and elsewhere to get players into the top women's leagues to become more acquainted with the increasing intensity of the women's game.

"It's absolutely a success factor for us," Fuhrmann explained, "because they aren't just pushed in competitions, but also during the training week they are challenged against other good players in their teams."

'A month to remember'

The conference also provided an opportunity to review the overall success of the tournament. The chair of the English Football Association's women's football board, Sue Hough, described EURO Women's 2022 as "a month to remember".

"[It] provided a different culture and a genuine family atmosphere," she said. "The product of football was the same, but it was a different experience – one that we all need to build upon."

Looking at the event from UEFA's point of view, UEFA's managing director of women's football, Nadine Kessler, said that standards had been increased in all areas, and that the tournament structure had taken a step forward from previous editions. "It was the best Women's EURO ever," she said. "A EURO that will be remembered for many things. Especially because we set new records one after the other."

Right to left: Belgium coach Ives Serneels, Germany coach Martina Voss-Tecklenburg and Austria coach Irene Fuhrmann being interviewed on stage by Graham Turner during the Women's National Team Coaches' Conference at St George's Park on 31 October.

Key findings in the Women's EURO technical report

EYE FOR GOAL With **95** goals scored in **31** matches, Women's EURO 2022 averaged **3.07** goals per game – the highest since the 2005 tournament.

SET-PLAY SUCCESS Dead-ball situations accounted for **36%** of the goals scored in England – a percentage considerably higher than the **27%** at the 2019 FIFA Women's World Cup or the **26%** during the 2021/22 UEFA Women's Champions League.

SHARPSHOOTERS Shots per game were up to **27.9** – an increase of **2.5** from 2017.

CLOSER TO THE GOAL The average shot distance was the lowest on record **(15.6m)** as teams looked to work the ball into better positions before shooting.

SHORT GOAL-KICKS IN VOGUE Goal kicks emerged among the tournament's talking points, with the rule permitting outfield players of the team in possession in the penalty area making a significant impact on build-up strategies. Many teams exploited the rule with the aim of controlling build-up play – but outcomes were not always positive, which underlined the relevance of risk-management awareness and fast decision-making.

SUBSTITUTION IMPACT Teams continued to make the most of the new five-substitute rule with each team averaging **3.41** substitutions per game. The final balance reveals that 17 goals were scored by substitutes – seven of them by players who emerged from the England bench, including the two that earned victory in the final, and four by Alessia Russo to push a substitute, unusually, into third place in the tournament's scoring chart.

KEEPERS STEP UP UEFA experts noted an improvement in goalkeeping when compared with 2017 with well-developed, agile athletes covering more space, being better positioned, proactive in their actions and more engaged in the game, even when the ball was further away.

WOMEN'S EURO CHAMPION COACH WIEGMAN

INSPIRING A TEAM... AND A NATION

Everything that **Sarina Wiegman** touched at the last two UEFA Women's EUROs turned to gold. The Dutch coach found the winning formula at both tournaments, leading the Netherlands and then England to the premier title in European women's national team football.

The bond that united England's team at the Women's EURO shines brightly as coach Sarina Wiegman (left) and player Alex Greenwood celebrate a victory on the way to the title.

In 2017, Sarina Wiegman basked in a sea of orange as the Netherlands captured the EURO crown on home soil. Accepting a new challenge to bring long-awaited success to England's national women's team in 2021, Wiegman savoured glory again in July, guiding the hosts – the Lionesses – to their first-ever Women's EURO triumph and England's first major international trophy, men's or women's, in 56 years.

The recent UEFA Women's National Team Coaches' Conference at England's St George's Park national football centre reviewed this summer's Women's EURO from a technical and tactical viewpoint and gave the European coaching community the opportunity to pay tribute to Wiegman for her magnificent achievement.

Wiegman responded by giving a fascinating presentation to close the conference, explaining how she created the environment with staff and the playing squad to bring England's EURO dreams to fruition.

> "In April, we started to talk about winning behaviour, so we asked the players: What do we need to win? Who do we want to be? Why are we here? And how can we win? That's what we were working on all the time."
>
> **Sarina Wiegman**

'Two of the best moments of my life'

She began by telling the audience how much she is enjoying this moment of professional and personal satisfaction. "It's incredible what happened," Wiegman reflected. "I've had two of the best moments of my life in sport, and they were winning the EURO with the Netherlands and winning the EURO here with England."

Wiegman explained her targets when she started her work as England coach in September 2021. "It was a short time until the EURO. Working in the Netherlands, everything was very familiar, I lived through the whole football journey in the Netherlands – except for one year in the USA, and then I came back – everything was very organic. My challenge [in England] was to bring people together, to create an environment with the staff, and to see if I could create a team of players that could perform at the highest level as well.

"The story behind football is team development – how you create the team, how you work together. I think when the communication is good, on and off the pitch, then you get a better collaboration, and I think you get better results.

"We asked [initial] questions – what brought us this far? And what do we need to get better? What made England so good that the team made three semi-finals in a row in final tournaments, and what prevented the team from going to the next stage? How can we take the next step to bring our game to the next level?"

Common commitment

Wiegman stressed the importance of the playing squad and staff working as one committed entity with a common goal. "We needed a structure," she said. "What we did, as a staff, was to create lots of clarity about how we wanted to work off the pitch and on it.

"When you go into a tournament, your collaboration is really intense," Wiegman continued. "We wanted everyone to be committed and attached to what we were doing. We wanted to use all the qualities of the players, as well as all the expertise of the staff."

Honesty and transparency were crucial in the overall approach. "When you talk to each other, you get understanding and acceptance. We wanted a high-demanding environment, then you need constructive feedback, and you have to be honest. I wanted the highest-level people around me, and people that think critically and give me feedback."

Building a winning belief

Wiegman and her staff worked hard to instil a winning belief in the team in the run-up to the EURO. "We desperately wanted to win a tournament," she said, "but I also felt a little bit like 'do we really believe it?' We saw it in some players, but we also had some players who were actually a little afraid of making mistakes.

"In April, we started to talk about winning behaviour, so we asked the players: What do we need to win? Who do we want to be? Why are we here? And how can we win? That's what we were working on all the time."

Eventually, all of these various elements gelled together as England grew and flourished into a unit that prospered and eventually emerged triumphant. "[There are] lots of leaders in this team," said Wiegman. "I had to get to know the different [personalities]. We had leaders that were visible, but we also had a lot of leaders that weren't visible but had a major role in the team. So [we ended up having] a very mature group of players really desperately wanting to win."

Changing and adapting

How has Wiegman changed as a coach over the years? "When I became a coach, you had to do everything by yourself because there was nothing else. And I was a perfectionist at that time – I really wanted to do well. I think I actually wanted to change the world.

"Then as the development of the game goes [on], you have to adapt to new situations. I did a lot myself and I was still growing too, and I didn't give away as many responsibilities as I do now. I knew that I had to change and adapt a little bit.

"I think I'm so much more of a manager now than just a coach. I'm responsible for the whole picture, but I give lots of responsibilities away. I can observe so much better, which actually gives me more rest. So, when I'm calm and I can really observe, I see so much more. I'm actually involved in everything, but I don't have to execute everything all the time, and we have such incredible experts in our [England] staff team."

Looking back at this summer's successful experience, how does Sarina Wiegman feel when she thinks of her team's remarkable achievement – on and off the field? "I'm really, really proud of them, and proud of the staff too," she reflected.

"Our dream was winning the EURO, our goal was to perform at the highest level, under the highest pressure. And we wanted to inspire the nation… I think we did."

TECHNICAL DIRECTORS FOCUS ON THE LONG TERM

Technical directors of national associations can play a key role in preparing the future of football if they are afforded the time and support to implement their vision, says former Austria and Israel technical director Willi Ruttensteiner.

"The technical director is responsible for the development of football in their country," explains Ruttensteiner, who has over 20 years' experience as a technical director in national associations. "Their role is to prepare the future of football; therefore, they are a key person in terms of the creation and implementation of long-term projects such as the national football philosophy."

Before long-term plans are developed or implemented, the technical director must take time to analyse and understand the culture and complexity of the country in which they are working, says Ruttensteiner. "When a technical director starts in a country, the first challenge is to analyse the situation and understand 'where they are' as a country," he says. "If that is done well, it's a really good base to move to the second step, which is designing your programme and the national football philosophy.

"As part of this process, technical directors – along with key internal and external stakeholders – must answer: Where do we want to be in five, seven and ten years?"

The role and influence of the technical director is critical not only in the national environment but also for the future of European football. The technical director is responsible for creating concepts and structures. Whereas the head coach wants to win the next game, the technical director wants to win the next decade. This focus on the long term has an impact on European football as a whole and, therefore, calls for highly competent technical directors.

Long-term support for a long-term project

Once a plan is created, national associations must give technical directors time and support in order for the plan to become a success. "I believe it should be a minimum to give the technical director a long-term contract because it's a long-term project," says Ruttensteiner. "In only a few years, you cannot see new national team players develop. If you start a talent development programme with children aged 12, they will only be near the national team when they are 18, 19 or 20 years old. So, it's almost eight to ten years as a project. I think one of the biggest problems is that associations quite often change and go away from their strategy, so the success cannot come."

Ruttensteiner's own role with the Austrian Football Association added up to almost 18 years: first as sports coordinator and Under-21 national team coach, then national coach and, finally, as technical director from 2006 to 2018. "I was very lucky, I had the possibility of almost 18 years in Austria," he says. "During that period, we developed the association from around 100th in the world rankings to 10th in 2016. Since then, Austria has always stayed around the first 30 in the world. For a small country, it's an amazing achievement."

Austria's belief in a long-term plan proves that success can be achieved if there is patience and support, says Ruttensteiner. "In all countries where a technical director is supported and assisted in the long term and the national football philosophy is accepted by the board, success comes. Of all the countries that I've studied, success came if they worked in this way. But often this does not happen and so the association does not see the rewards." →

Willi Ruttensteiner has over 20 years' experience as a technical director in national associations.

The varied roles and responsibilities of the technical director

The role of the technical director often looks different from one national association to the next. Responsibilities may include national teams, women's football, grassroots, coach education, talent identification, talent development and facilities. "Clarifying what is, and what isn't, part of the role, is key to making it a success," says Ruttensteiner.

"It's very important that the technical director clarifies the vision and goals of the technical department. Also, it is crucial that the technical director clarifies what their own role entails, as well as their main tasks and responsibilities.

"For example, is the technical director responsible for finances? What are the expectations of them as an individual? What does the association want from the technical director in the short, medium and long term? If they don't have this whole picture in their mind, supported by a very good monitoring process to track their work, it is quite easy to fail.

"To be effective across such a broad range of responsibilities, a varied skill set, much wider than football knowledge, is needed," says Ruttensteiner. "As well as leading the football vision, the technical director also needs to be a sports manager," he says. "Sports management education is crucial because the role involves working with lots of stakeholders, both inside and outside the organisation.

"It means being an effective leader. If you are a leader, you must know yourself and you must also know how to become better. The leader needs to take responsibility, make decisions, introduce structures, give orders and control and evaluate processes. They must also have the capacity to translate the national football philosophy – the vision, the goals – into reality."

Ruttensteiner also points to social competence and the ability to form and nurture effective professional relationships as key to success in the role. "In addition to football competence and holding the UEFA Pro licence, I think the competencies a technical director must include personality and social competence," he says. "They must have an ability to inspire, motivate, engage and also to help people realise their own potential for becoming better.

Scotland's Andy Gould (top), Finland's Hannu Tihinen (middle) and Israel's Jelle Goes (bottom) are technical leaders tasked with developing football in their respective national associations.

"It means they have to have good relationships with colleagues because they can't do everything alone. They need to create a positive working atmosphere in the technical department."

Developing an effective relationship with the national coach

One of the key internal relationships for all technical directors to establish is with the head coaches of the senior national teams (men's and women's), noting that not every technical director is responsible for the national teams owing to different association structures.

"Where a technical director is responsible for the national teams, one of the most important tasks is to support the head coaches," explains Ruttensteiner. "The technical director must create a high-performance environment where the national team head coach, along with their players and staff, can do their job to the highest level. This is the process of organisation, logistics, travel and many other areas.

"The second part involves the technical director closely analysing the work of the national team coach and giving really fundamental and open feedback about games, training and the environment around the national team."

In both Austria and Israel, Ruttensteiner's role as technical director involved working closely with the head coach of the men's national team. Developing trust and respect by 'adding benefit' was key to developing this relationship, he says.

"While I was with Austria, I worked with the Swiss coach Marcel Koller, who coached Austria for six years and was very successful qualifying for the European Championship for the first time.

"After the games, we went to a hotel or to a seminar room and we analysed the games and the performance. We did this from both the perspective of the head coach and the perspective of the technical director. If, as the technical director, you can bring benefit to the coach, they really appreciate it.

"It was so important to review the game with these 'four eyes'. If you have the experience and respect, the quality to communicate and you bring a benefit, the head coach will recognise the importance of input from the technical director.

"To summarise, the role of the technical director with the national coach is to give them a high-performance environment and, on the other side, to assist, support and give football feedback at the highest level."

Understanding country, culture and context

"Each national association has its own unique context and culture, meaning there can be no one single blueprint for the role of the technical director," says Ruttensteiner, who had to adapt to his new surroundings in Israel while he was technical director there from 2018 to 2020.

"I'm Austrian, so if you are coming to the Austrian Football Association as the technical director, you know a lot of people and you have a better understanding of the situation and the environment," he explains. "You can go forward quicker because you have observed what you need to be doing. But, when I moved to Israel, it took me around half a year to present the 'Israeli way' to the board, because I wanted to understand the association and I wanted to analyse the situation perfectly."

Understanding the key cultural differences between countries is crucial to implementing successful programmes and building effective relationships, stresses Ruttensteiner. "There are a lot of situations that arise from culture," he says. "In the Israeli national team we had both Jewish and Arabic players. How the technical director handles this is very important: how they train, how they eat, how you prepare the whole high-performance environment around the culture. So, we set standards to improve. If you can communicate effectively, you can also make positive changes to that culture."

Respecting the religious calendar when scheduling training and travel is one area technical directors should consider, he explains. "The most important religious day in Israel is Yom Kippur. When I worked in Israel, Yom Kippur was the day before a game. So, you cannot say we have training at 10am or 4pm. You have to accept it.

"I was also in the synagogue because I wanted to see and understand more about the players. I think we did the best out of this situation. I think when you live in a country, you understand more and more."

UEFA support for technical directors

UEFA has a long history of supporting technical directors working in European associations through its different technical development programmes, such as UEFA Share, and also in connection with other events and seminars (for example, UEFA Pro licence student exchanges and national team coaches conferences). The UEFA Share programme (previously the UEFA Study Group Scheme) is now in its 14th season and has always offered technical directors the opportunity to develop and extend their knowledge and experience. Among other technical topics on the menu, the Share programme is specifically targeting technical directors as part of the current two-year cycle (2022–24). Peer-to-peer discussions and cooperation are essential for the expansion and further development of technical functions and, in addition to facilitating these two aspects, UEFA Share seminars for European technical directors will address topics of common interest such as the technical director's role in different European environments, technical department structures and stakeholder relationships, as well as self-evaluation processes and competition matters.

"Sports management education is crucial because the role involves working with lots of stakeholders, both inside and outside the organisation. It means being an effective leader. If you are a leader, you must know yourself and you must also know how to become better. The leader needs to take responsibility, make decisions, introduce structures, give orders and control and evaluate processes. They must also have the capacity to translate the national football philosophy – the vision, the goals – into reality."

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