



Who should make Gareth Southgate's 26-man Euro 2020 England squad, based on quantitative analysis? City AM

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"I never pick on reputation - form has to come into it".

- Gareth Southgate 2017

1. Abstract

This research paper utilises purely objective, quantitative player performance analysis to determine who Gareth Southgate should select for his Euro 2020 England squad. **Jesse Lingard**, who is currently playing for West Ham United, on loan from Manchester United (**Carteret Rating* 302.2**), has been identified as the most in-form midfielder. The quantitative analysis suggests that it is Manchester United's **Dean Henderson** who deserves the number one jersey in the England squad, with a **Carteret Rating** of **184.5**. Tottenham Hotspur's **Harry Kane** is the most in-form English centre forward and has received little competition for his place in the squad. **Kane's Carteret Rating** of **283.7** is **29.4%** higher than second best centre-forward, Everton's **Dominic Calvert-Lewin** who has a **Carteret Rating** of **219.3**.

2. Headlines

- Manchester United midfielder **Jesse Lingard** (currently on loan at West Ham United) is the most in-form English player, with the highest **Carteret Rating** of **302.2**.
- **Harry Kane** is the most in-form English centre forward - scoring 22 goals for Tottenham Hotspur so far in the EPL (season 2020/21). The quantitative, player performance analysis suggests that **Kane** has received little competition, with a significant **Carteret Rating** delta of **29.4%** between him and his closest competitor, Everton's **Dominic Calvert-Lewin** (**Carteret Rating 219.3**).
- **Dean Henderson** for the number one jersey! Manchester United's **Henderson** (**Carteret Rating 184.5**) should objectively be selected for Southgate's starting XI, rather than Everton's **Jordan Pickford** (**Carteret Rating 168.5**).
- From Liverpool reserve to England centre-back! The quantitative player performance analysis has objectively determined that **Nathaniel Phillips** deserves a place in the Euro 2020 England squad - completing 125 key passes this season in the EPL and beaten only by Manchester United's **Harry Maguire** (179) and Everton's **Michael Keane** (147).

**Carteret Rating*: this is a proprietary method of determining how good a player really is. It is a significant and leading-edge algorithm. We assess a player by identifying every match in which he has been involved (for which we have data) and identifying the key events in each and every one of those matches. These Key Match Events ("KMEs") are events that led to a goal being scored; could have led to a goal being scored; led to a goal being conceded; or could have led to a goal being conceded. Then, for each and every KME, in each and every single match, we analyse that player's contribution to each of those KMEs. This is a substantial piece of analysis, and one which produces a unique *Carteret Rating* for the player. It is a dynamic rating, and it changes with each additional match played.

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- Manchester United's **Aaron Wan-Bissaka** is the leading English right-back, with a **Carteret Rating** of **211.6**. **Wan-Bissaka** has performed 88 successful tackles in the EPL this season, more than any other defender in the league.
- Arsenal midfielder **Emile Smith Rowe** (**Carteret Rating 205.5**) should travel to the Euros ahead of Borussia Dortmund's **Jude Bellingham** (**Carteret Rating 125.1**) according to objective data analysis.

3. Who should be included in the 26-man England squad for Euro 2020?

Exhibit 1 lists the 26 most in-form players this season (2020/21), based on purely objective, quantitative player performance analysis.

Exhibit 1: A table outlining the 26 most in-form English players this season (2020/21), based on their objective performance levels

Euro 2020 - England Squad Selection		
Player	Club	Carteret Rating
Goalkeepers		
Dean Henderson	Manchester United	184.5
Jordan Pickford	Everton	168.5
Alex McCarthy	Southampton	168.2
Left-backs		
Luke Shaw	Manchester United	207.2
Ben Chilwell	Chelsea	193.4
Right-backs		
Aaron Wan-Bissaka	Manchester United	211.6
Kyle Walker	Manchester City	202.2
Centre-backs		
John Stones	Manchester City	265.2
Michael Keane	Everton	231.3
Harry Maguire	Manchester United	226.0
Nathaniel Phillips	Liverpool	209.4
Midfielders		
Jesse Lingard	Manchester United	302.2
Jack Grealish	Aston Villa	280.4
James Ward-Prowse	Southampton	252.4
Mason Mount	Chelsea	235.2
Raheem Sterling	Manchester City	227.9
James Maddison	Leicester City	223.0
Jadon Sancho	Borussia Dortmund	221.5
Marcus Rashford	Manchester United	220.7
Phil Foden	Manchester City	212.4
Declan Rice	West Ham United	208.4
Emile Smith Rowe	Arsenal	205.5
Centre-forwards		
Harry Kane	Tottenham Hotspur	283.7
Dominic Calvert-Lewin	Everton	219.3
Ollie Watkins	Aston Villa	215.3
Patrick Bamford	Leeds	214.5

4. A little bit of science...

At Carteret Analytics we have developed the quantitative analysis utilised to good effect in investment banking for trading strategy, portfolio optimisation, derivatives pricing and hedging, and risk management by our sister corporate finance firm, Carteret Partners - and applied it to football. **In particular, our work provides an objective measure of how good a football player really is - removing all the subjective noise and opinions.**

An integral part of the analysis is to calculate a **Carteret Rating** for every football player, which rates and values a player's contribution to his team winning football matches. It is incredibly accurate at predicting a player's capabilities. Indeed, we always start with the premise that a professional football club's primary objective is to win matches - and therefore the more a player contributes to his team winning matches, the better the player.

5. About Carteret Analytics

Carteret Analytics is part of the Carteret Group of companies, based in the City of London, New York and Geneva. It provides leading-edge quantitative analysis and commercial analytics to clients worldwide, with particular expertise in the sports sector. In football our work includes player rating and valuation, head coach assessment, team performance analysis, and applying proprietary analytics to transform commercial revenues.

Further information and contact details

If you have any questions, or would like to enquire about further services provided by the Carteret Group, then please feel free to contact one of the team members listed below.

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Appendix

Euro 2020 England Squad Selection

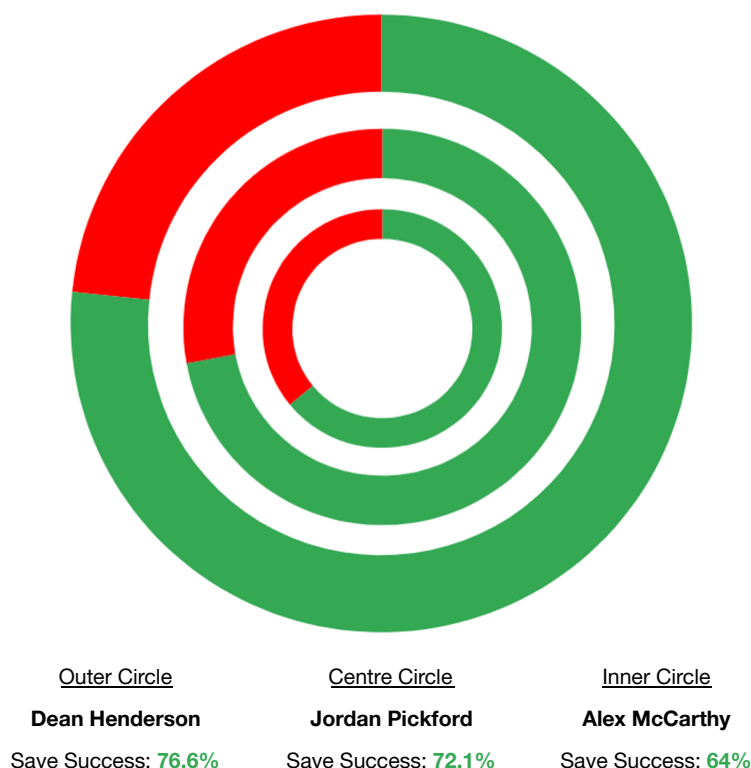
Detailed quantitative analysis by position

Goalkeepers

The quantitative player performance analysis has determined that Manchester United's **Dean Henderson**, Everton's **Jordan Pickford** and Southampton's **Alex McCarthy** are the top three performing English goalkeepers, and should objectively be selected for Southgate's Euro 2020 squad.

- **Dean Henderson** has been identified as the most in-form English goalkeeper, with the highest **Carteret Rating** of **184.5**. **Henderson** has the greatest save percentage of **76.6%**, compared to both **Pickford** (**72.1%**) and **McCarthy** (**64%**). This suggests that **Henderson** is the most effective goalkeeper when he is required to make a save.
- Southgate's preferred goalkeeper, **Jordan Pickford**, came in **9.5%** lower than **Henderson**, with a **Carteret Rating** of **168.5**.
- **Alex McCarthy** has a **Carteret Rating** of **168.2** - **9.7%** lower than top performing goalkeeper **Henderson**. He should objectively be Southgate's third choice goalkeeper.

Exhibit 2: The save success percentage in the EPL for each objectively selected goalkeeper for the England Euro 2020 selection.

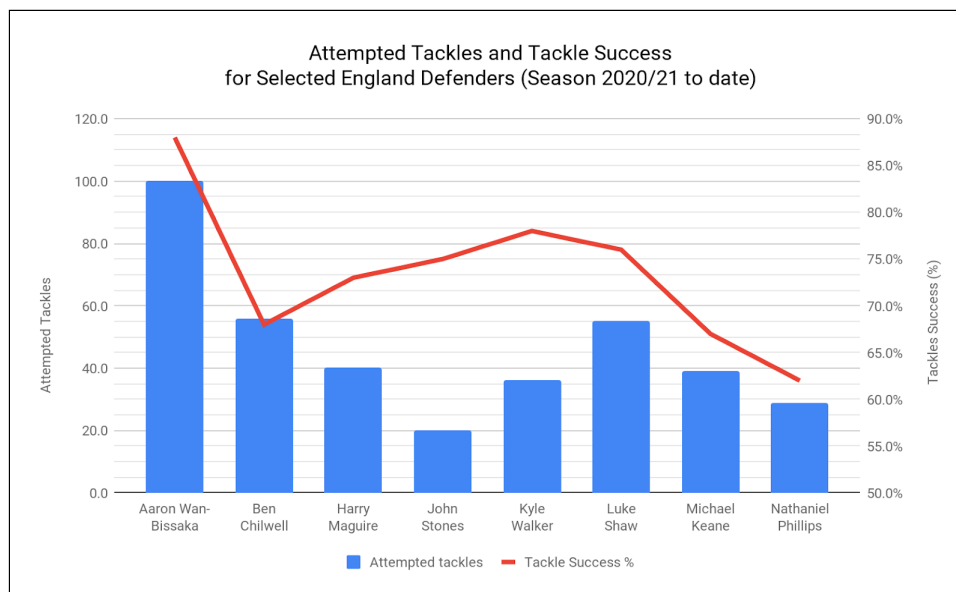


Who missed out?

- The data analysis has determined that Burnley's **Pope** is the fourth best English goalkeeper (**Carteret Rating** **147.2**), and should not make the 26-man Euro 2020 England squad. However, there is still a high chance that **Pope** will make the England squad, based on Southgate's recent squad selections.

Defenders

Exhibit 3: A chart to show the number of tackles made and tackle success for selected England Defenders (Season 2020/21 to date)



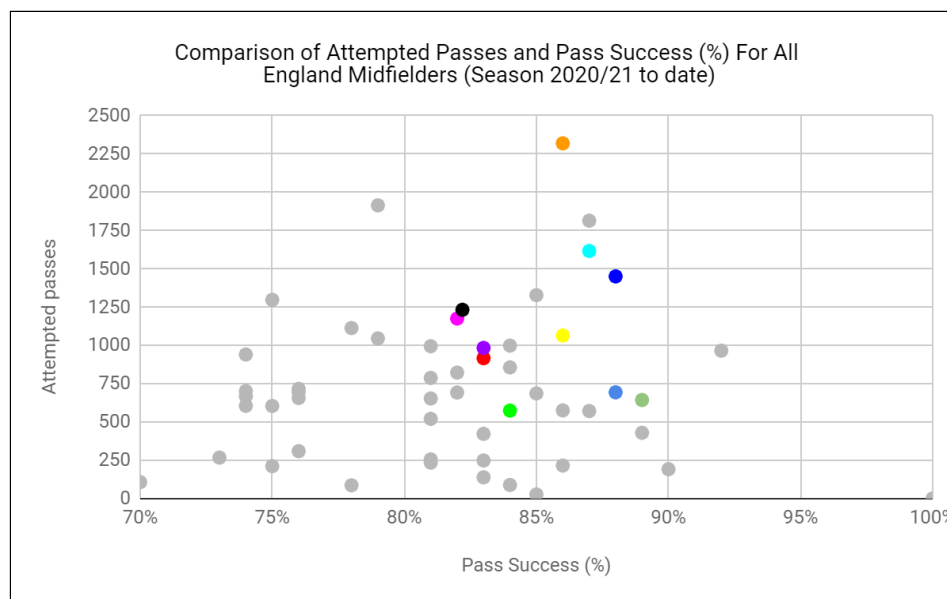
- Manchester City's **John Stones** is the standout English defender according to objective data analysis. **Stones' Carteret Rating** of **265.0** is a significant **17.3%** higher than the second best performing English Defender, Manchester United's **Harry Maguire** (**Carteret Rating** **226.0**).
- Prior to **Maguire's** ankle injury earlier this month, he had not missed a game for Manchester United in the EPL this season (2020/21). Interestingly, Manchester United have lost both of their games since **Maguire's** absence.
- As a contingency starter for Liverpool, it may be surprising that the data analysis objectively determined that **Nathaniel Phillips** (**Carteret Rating** **209.4**) should receive a place in the Euro 2020 England squad. **Phillips** has completed 125 key passes in the EPL this season, beaten only by **Maguire** (179) and Everton's **Michael Keane** (147).
- Manchester United's **Aaron Wan-Bissaka** is the leading English right-back, with a **Carteret Rating** of **211.6**. As seen in Exhibit 3, **Wan-Bissaka** has performed 88 successful tackles in the EPL this season, more than any other defender in the league - this is **110%** more than Manchester United's **Luke Shaw** performed, with the second highest total of 42 tackles.

Who missed out?

- The objective data analysis suggests that Tottenham Hotspur's **Eric Dier** should miss out on a place in the Euro 2020 England squad. But it is close! **Dier's Carteret Rating** (**209.3**) is lower than **Phillips** by just 0.1. Whilst **Phillips** is objectively the better player at present, it is likely that **Dier** will still make Southgate's squad, due to his previous experience playing at international level.
- The data analysis indicates that Chelsea's **Reece James** and Atlético Madrid's **Kieran Trippier's** performance levels are not currently high enough to justify Southgate selecting them for his Euro 2020 England squad.

Midfielders

Exhibit 4: A scatter graph to show the number of attempted passes and pass success (%) for all England midfielders (Season 2020/21 to date)



- Manchester United's **Jesse Lingard** is not only the highest rated English midfielder, but also the most in-form English player at present, with a **Carteret Rating** of **302.2**. **Lingard** has scored an impressive 9 goals in the EPL this season, and provided 3 assists in his 14 appearances since signing on loan for West Ham United in January 2021.
- The objective data analysis suggests that Southampton's **James Ward-Prowse** is a set-piece specialist - with all 7 of his assists in the EPL season (2020/21) coming from free kicks or corners.
- **Marcus Rashford** has scored 11 EPL goals for Manchester United this season, which is more goals than any other attacking midfielder in the league. **Rashford** has also provided 9 assists this season, beaten only by **Grealish** who has provided 10.
- As seen in Exhibit 4, all 11 of the English midfielders have a passing accuracy of over **80%** in the EPL and Bundesliga this season - compared to the EPL league average of **52%** for midfielders.
- West Ham United's **Declan Rice** (**Carteret Rating** **208.4**) has made 59 interceptions so far this season, compared to **James Ward-Prowse** who has made 40 - this highlights **Rice's** valuable defensive qualities.
- Borussia Dortmund's **Jadon Sancho** has a **Carteret Rating** of **221.5**, and has played 50 key short passes, second only to **Grealish** (72 key short passes), highlighting the level of creativity that **Sancho** brings to a team.

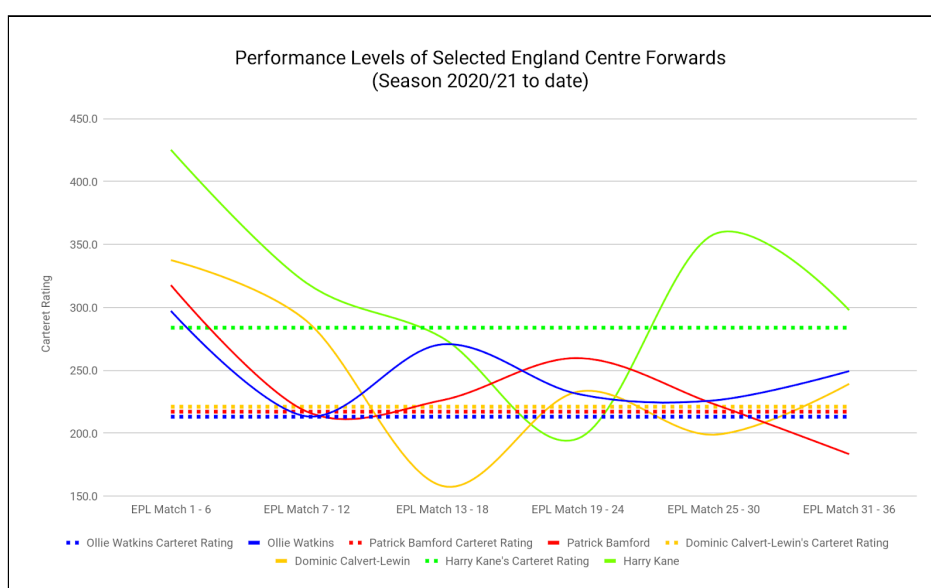
- Uncapped Arsenal midfielder **Emile Smith Rowe** (**Carteret Rating 205.5**) has a passing accuracy of **89%**. This is the highest of any of the selected midfielders. A call up for **Smith Rowe** may come as a surprise to many. Although the data suggests that **Smith Rowe** deserves to be picked for the Euro 2020 England squad, his lack of international match experience may limit his chance of selection.

Who missed out?

- With a **Carteret Rating** of **238.8**, the quantitative analysis suggests that Liverpool's **Jordan Henderson** should be considered by Southgate, if it were not for his lack of game time since his injury in February 2021. This presents a high risk decision - Will **Henderson** be able to return to his previous performance levels in time for the Euros?
- According to the data analysis, Borussia Dortmund's **Jude Bellingham** and Arsenal's **Bukayo Saka** are not performing to the level as the 11 highest rated midfielders, and objectively, should not secure a place in the Euro 2020 England squad.
- **Saka**, however, has demonstrated a significant improvement during the EPL this season, with his **Carteret Rating** improving by **41.7%**, from **134.8** in 2019/20 to **191.1** for this season. This suggests that if **Saka's** performance continues on a positive trajectory, then he will definitely be deserving of a place in future England squads.

Centre Forwards

Exhibit 5: A line graph to show the performance levels of selected England centre forwards (Season 2020/21 to date)



- England captain **Harry Kane** is the most in-form English centre forward, with an impressive **Carteret Rating** of **283.7** - a significant **29.4%** higher than his closest competitor **Dominic Calvert-Lewin** (**Carteret Rating 219.3**).
- Tottenham Hotspur's **Kane** has scored 22 goals so far in the EPL (season 2020/21), making him the joint top goal scorer. **Kane** has provided 13 assists so far this season, almost double that of Leeds United's **Patrick Bamford** who has provided 7 - this proves that **Kane** is not only a goal scorer but also a goal provider.

- The quantitative analysis suggests that Everton's **Dominic Calvert-Lewin** has the best aerial ability, winning **52.6%** of his aerial challenges - compared to **Ollie Watkins** who has won **46.6%** and **Harry Kane** who has won **40.4%**. However, **Calvert-Lewin** is yet to provide an assist in the EPL this season (2020/21).

Who missed out?

- Southampton's **Danny Ings** is not currently playing at the same level as the top four centre forwards, with a **Carteret Rating** of **207.1**. **Ings** has scored just 12 goals in the EPL this season, compared to the 22 goals that he scored in the previous season 2019/20. However, **Ings** has a shot to goal conversion ratio of 4.4 shots for every goal scored, which is more than any of the 26 top performing English players.