



Data-Driven Recruitment and Squad Construction Analysis for Liverpool Football Club 2025

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Executive summary

Liverpool Football Club is going to arrive at a crossroad at the end of the season. Three star players are out of contracts, some key players have only one or two years left on their deals, others are past their peaks physiologically and need replacing.

In this Final Master's Project, I attempt to find suitable targets for the club at specific positions that need strengthening for reasons that I mention and analyse.

Using similarity algorithms in R helped me execute this task.

I have taken into account many things that the club in the past have also taken into, which hopefully, made my findings more accurate, professional and realistic.

Executive summary

Key decision makers in this process at Liverpool FC:

- Fenway Sports Group (John W. Henry, Tom Werner)
- CEO of Football for Fenway Sports Group (Michael Edwards)
- Sporting Director of Liverpool Football Club (Richard Hughes)
- Head Coach (Arne Slot)

Introduction

The relevance of team building can not be understated. At any team sport, team building is a huge driving factor in the success of the team. Therefore, in football, recruitment is the biggest driver of success. Getting value for the money the club spends on its players is the predictor of future success. Liverpool is one of the most successful and popular football clubs in the world, it is prevalent for the club to achieve success on the pitch.



Project Objective

- Looking for transfer targets using Euclidean distance for similarity algorithm
- Based on financial statements and estimates from experts, the budget is being set
- Analysing the current squad and highlight issues (age curve, length of contract, playing time, quality)

Sources used

- The data sources was xfb Analytics, Cube
- Also Transfermarkt for injury history and contract length
- Fbref for historical and other statistics



Data processing

- The data originated from xfb Analytics
- Every player from the top 5 leagues, Eredivisie, Primeira Liga this season and some other players from certain season on a case-by-case basis
- Data cleaning: Only outfield players below 27 years of age with 50% playing time were considered (filtering)
- Adjusting for league quality based on a github file („Predicting the Success of a Transfer”), so players can be compared in a more sensible manner

Model suggested VAEP per minute conversion factor

From league	Sweden Allsvenskan	Scotland Premiership	Belgium Jupiler League	Norway Eliteserien	Netherlands Eredivisie	Germany 1. Bundesliga	England League 1	England League 2	USA Major League Soccer	Argentina Superliga	Russia Premier League	Portugal Primeira Liga	Turkey Super Lig	England Championship	France Ligue 1	Brazil Serie A	Italy Serie A	Germany 1. Bundesliga	Spain LaLiga	England Premier League
To league	Sweden Allsvenskan	Scotland Premiership	Belgium Jupiler League	Norway Eliteserien	Netherlands Eredivisie	Germany 1. Bundesliga	England League 1	England League 2	USA Major League Soccer	Argentina Superliga	Russia Premier League	Portugal Primeira Liga	Turkey Super Lig	England Championship	France Ligue 1	Brazil Serie A	Italy Serie A	Germany 1. Bundesliga	Spain LaLiga	England Premier League
England Premier League	1.56	1.13	1.5	1.39	1.48	1.35	1.31	1.5	1.33	1.18	1.13	1.08	1.2	1.07	1.03	1.11	1.09	1.1	1	0.91
Spain LaLiga	1.48	1.07	1.43	1.32	1.4	1.29	1.25	1.42	1.27	1.12	1.07	1.03	1.14	1.02	0.98	1.06	1.04	1.05	0.95	0.87
Germany 1. Bundesliga	1.43	1.03	1.38	1.27	1.36	1.24	1.21	1.37	1.22	1.08	1.04	1	1.1	0.99	0.95	1.02	1	1.01	0.92	0.84
Italy Serie A	1.42	1.02	1.37	1.26	1.35	1.23	1.2	1.36	1.21	1.07	1.03	0.99	1.09	0.98	0.94	1.01	1	1	0.91	0.83
Brazil Serie A	1.39	1	1.34	1.23	1.32	1.21	1.17	1.33	1.19	1.05	1.01	0.97	1.07	0.96	0.92	0.99	0.97	0.98	0.89	0.81
France Ligue 1	1.33	0.96	1.28	1.18	1.26	1.16	1.12	1.28	1.14	1.01	0.96	0.93	1.02	0.92	0.88	0.95	0.93	0.94	0.86	0.78
England Championship	1.31	0.95	1.26	1.17	1.24	1.14	1.11	1.26	1.12	0.99	0.95	0.91	1.01	0.9	0.87	0.93	0.92	0.93	0.84	0.77
Turkey Super Lig	1.31	0.95	1.27	1.17	1.25	1.14	1.11	1.26	1.13	0.99	0.95	0.92	1.01	0.91	0.87	0.94	0.92	0.93	0.85	0.77
Portugal Primeira Liga	1.26	0.91	1.21	1.12	1.19	1.09	1.06	1.21	1.08	0.95	0.91	0.88	0.97	0.87	0.83	0.9	0.88	0.89	0.81	0.74
Russia Premier League	1.24	0.9	1.2	1.11	1.18	1.08	1.05	1.19	1.07	0.94	0.9	0.87	0.96	0.86	0.82	0.89	0.87	0.88	0.8	0.73
Argentina Superliga	1.27	0.92	1.23	1.13	1.21	1.11	1.08	1.22	1.09	0.96	0.92	0.89	0.98	0.88	0.85	0.91	0.89	0.9	0.82	0.75
USA Major League Soccer	1.29	0.93	1.25	1.15	1.23	1.12	1.09	1.24	1.11	0.98	0.94	0.9	1	0.89	0.86	0.92	0.91	0.92	0.83	0.76
England League 2	1.26	0.91	1.21	1.12	1.2	1.09	1.06	1.21	1.08	0.95	0.91	0.88	0.97	0.87	0.83	0.9	0.88	0.89	0.81	0.74
England League 1	1.21	0.88	1.17	1.08	1.15	1.05	1.02	1.17	1.04	0.92	0.88	0.84	0.93	0.84	0.8	0.87	0.85	0.86	0.78	0.71
Germany 2. Bundesliga	1.17	0.85	1.13	1.04	1.11	1.02	0.99	1.13	1	0.89	0.85	0.82	0.9	0.81	0.78	0.84	0.82	0.83	0.76	0.69
Netherlands Eredivisie	1.13	0.81	1.09	1	1.07	0.98	0.95	1.08	0.97	0.85	0.82	0.78	0.87	0.78	0.75	0.8	0.79	0.8	0.73	0.66
Norway Eliteserien	1.11	0.8	1.07	0.99	1.05	0.96	0.94	1.07	0.95	0.84	0.8	0.77	0.85	0.76	0.74	0.79	0.78	0.79	0.71	0.65
Belgium Jupiler League	1.09	0.79	1.05	0.97	1.04	0.95	0.92	1.05	0.94	0.83	0.79	0.76	0.84	0.75	0.73	0.78	0.77	0.77	0.7	0.64
Scotland Premiership	1.02	0.74	0.98	0.91	0.97	0.88	0.86	0.98	0.87	0.77	0.74	0.71	0.78	0.7	0.68	0.73	0.71	0.72	0.66	0.6
Sweden Allsvenskan	1	0.72	0.97	0.89	0.95	0.87	0.84	0.96	0.86	0.76	0.73	0.7	0.77	0.69	0.66	0.71	0.7	0.71	0.64	0.59

Algorithm

- Similarity algorithm by Euclidean distance in R
- Certain players were used as benchmarks as the basis of the similarity
- Those players would've been suitable for Liverpool from 2025/2026 season
- Then, I created lists comprised of 10-15 of the most similar ones to those players
- I narrowed down those lists to 2 or 3 players, evaluating them statistically
- Finally, I created my final list at each position I looked at

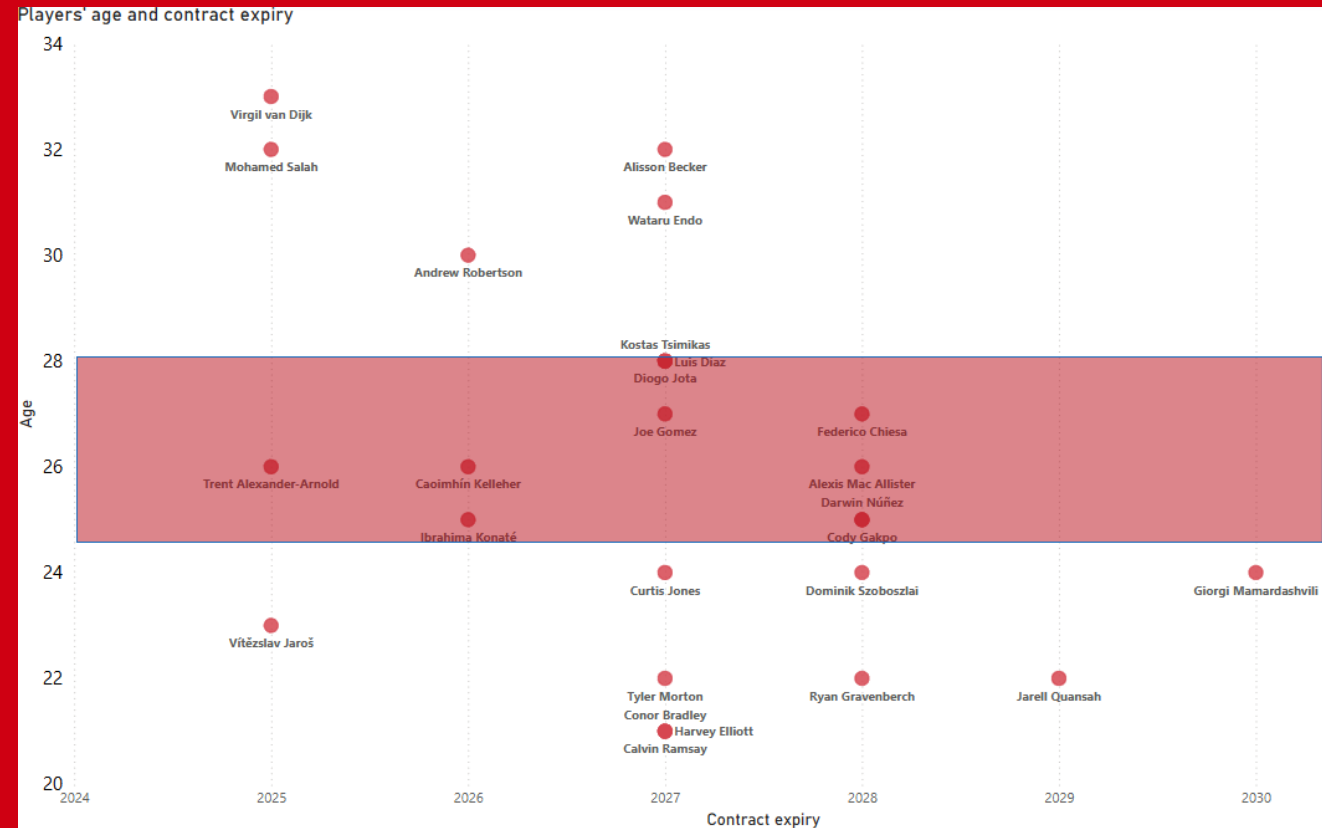


Visualisation

- Microsoft Power BI was used for radar visualisations and for a scatterplot (data, like percentile metrics are from Cube, xfb Analytics)
- The radar visualisation is the most popular one in the industry, that and the ability to compare players in one radar are the reason of its use
- Other visualisations were from Cube (xfb Analytics)

Squad analysis

- The squad composition based on contract length and age
- Urgent need to find a resolution for Alexander-Arnold's, Van Dijk's and Salah's future
- Extend or sell Ibrahima Konaté (preferably extend) and Andrew Robertson this summer
- Field offers for post-peak and fringe players



Transfer budget

- Liverpool FC are financially healthy
- £150 million transfer pot without selling players
- £75 million for signing-on fees for Alexander-Arnold, Van Dijk and Salah (if any of them leave, that amount boosts the amount above)
- 50% of the potential revenue from sales
- Potential total budget: £365 million

Liverpool FC - Profit & Loss Statement and Fixed Asset Investment (in £m)								
Period End: 31 May	18/19	19/20	20/21	21/22	22/23	23/24 Est	Change	% Chang
Broadcasting	260.8	201.6	266.1	260.8	241.6	197.1	(44.4)	(18.4%)
Commercial	188.0	217.4	217.6	246.7	272.5	295.5	23.0	8.4%
Matchday	84.2	70.9	3.6	86.8	79.8	93.3	13.5	17.0%
Total Revenue	533.0	489.9	487.4	594.3	593.8	585.9	(7.9)	(1.3%)
Wages & Salaries	(309.9)	(325.6)	(314.4)	(366.1)	(372.9)	(344.7)	28.2	(7.6%)
Other Operating Expenses	(99.7)	(122.7)	(95.8)	(131.8)	(137.2)	(142.7)	(5.5)	4.0%
Adjusted EBITDA	123.4	41.6	77.2	96.4	83.7	98.5	14.8	17.7%
Player Amortization	(111.8)	(106.0)	(107.8)	(102.7)	(107.5)	(121.1)	(13.6)	12.6%
Player Impairment	(0.5)	-	(0.5)	(0.2)	(2.1)	-	2.1	(100.0%)
Depreciation & Impairment	(9.4)	(8.7)	(8.9)	(11.4)	(12.1)	(12.6)	(0.5)	4.1%
Goodwill Amortization & Other	(1.2)	(1.2)	(0.2)	-	-	-	-	
Adjusted EBIT	0.6	(74.3)	(40.2)	(17.9)	(38.1)	(35.3)	2.8	(7.4%)
Exceptional Items	-	-	-	-	-	(10.0)	(10.0)	
Player Sale Profit	45.2	26.9	39.3	28.1	33.8	20.3	(13.5)	(39.9%)
Property Sale Profit	(0.0)	4.0	(0.2)	(0.2)	(0.1)	-	0.1	(100.0%)
Operating Profit/(Loss)	45.8	(43.3)	(1.0)	10.0	(4.5)	(25.0)	(20.5)	459.9%
Finance Income	1.1	0.7	0.5	0.9	1.6	1.9	0.3	19.9%
Finance Expenses	(5.0)	(3.7)	(4.3)	(3.5)	(6.2)	(8.7)	(2.6)	41.4%
Profit/(Loss) before Tax	41.9	(46.3)	(4.8)	7.5	(9.0)	(31.7)	(22.7)	252.4%
Tax Income/(Expense)	(8.5)	6.9	(4.8)	(5.0)	2.1	7.9	5.9	282.3%
Profit/(Loss) for Period	33.4	(39.5)	(9.5)	2.4	(6.9)	(23.8)	(16.9)	243.4%
	18/19	19/20	20/21	21/22	22/23	23/24 Est	Change	% Chang
Net Spend - Player	163.2	(0.1)	93.2	36.1	89.4	162.6	73.2	81.9%
Net Spend - Infrastructure	25.3	29.1	10.7	26.3	53.6	48.0	(5.6)	(10.4%)
Net Fixed Asset Investment	188.5	29.1	104.0	62.4	143.0	210.6	67.6	47.3%
Fixed Asset Investment / Revenue	35.4%	5.9%	21.3%	10.5%	24.1%	35.9%		
Fixed Asset Investment / Adjusted EBITDA	152.7%	69.9%	134.7%	64.8%	170.8%	213.7%		
Fixed Asset Investment / Unadjusted EBITDA	152.7%	69.9%	134.7%	64.8%	170.8%	237.9%		

Source for 2018-2023: Club Accounts for The Liverpool Football Club and Athletic Grounds Limited

Potential departures

- Taking into consideration playing time, age, production and resale value, I find players who can generate funds for transfers
- Players: Caoimhin Kelleher, Joe Gomez, Kostas Tsimikas, Ben Doak, Darwin Núñez, Luis Díaz, Harvey Elliott, Tyler Morton, Stefan Bajčetić, Federico Chiesa
- Potential revenue from sales: £280 million



Potential incomings

Positions that I have looked at when it comes to potential incomings:

- Right-back
- Left-back
- Centre-back
- Defensive midfielder
- Right-winger
- Left-winger
- Centre-forward



Database of players

- Every player from the Premier League, La Liga, Serie A, Bundesliga, Ligue 1, Primeira Liga and Eredivisie and one player from the Fútbol Liga de Profesional and the Süper Lig was considered
- Only players under the age of 27 and having at least 50% of the minutes played were considered



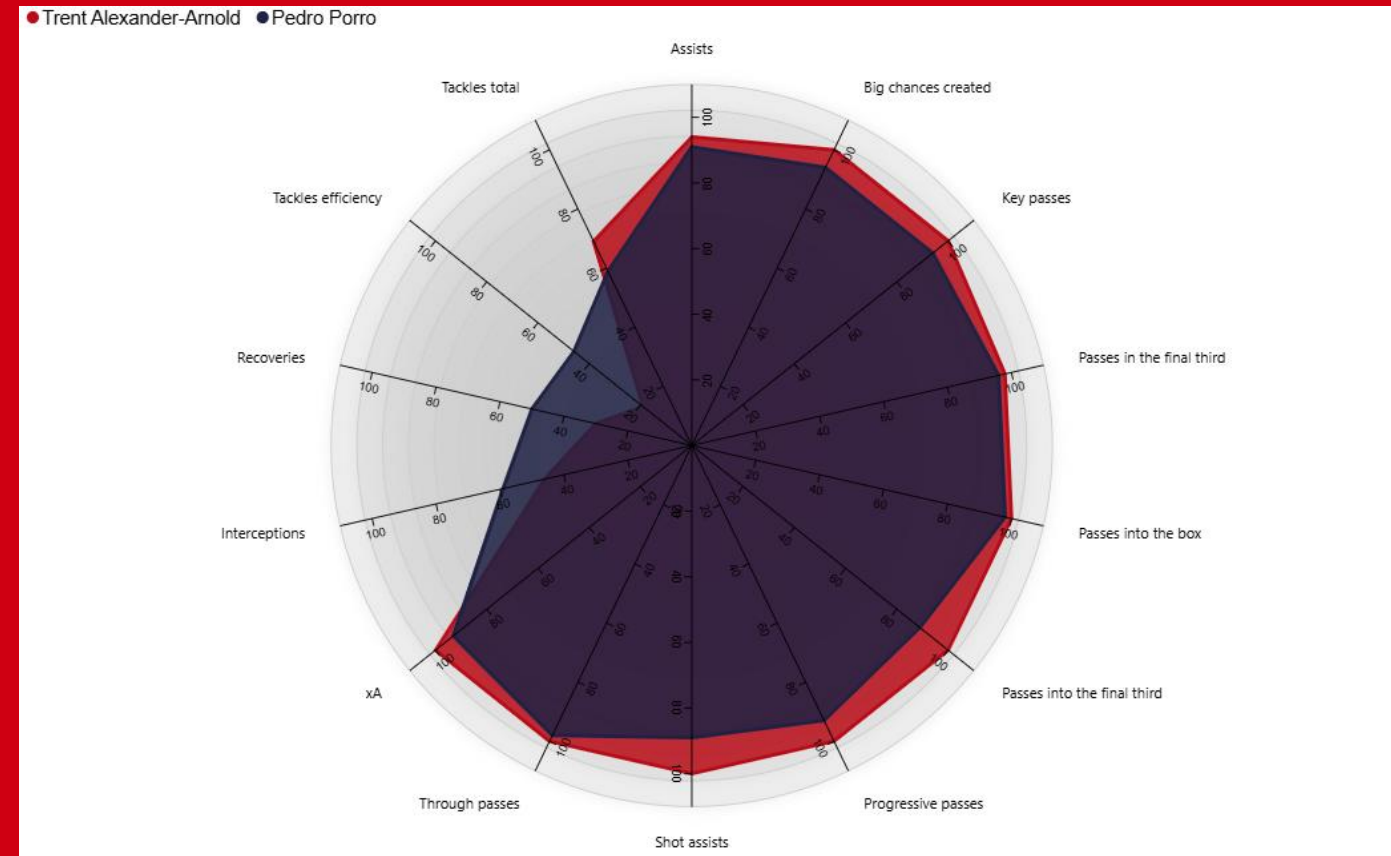
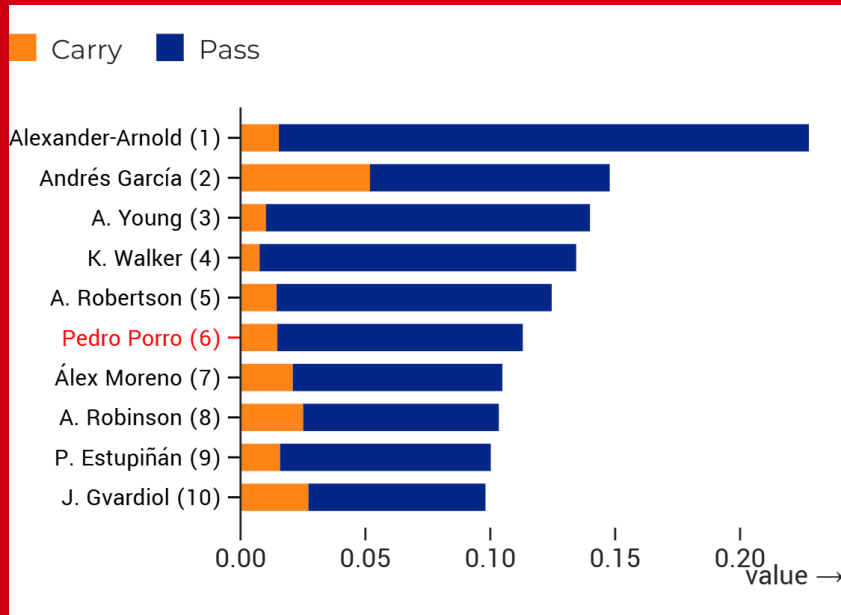
Right-back

- Pedro Porro
- Martim Fernandes
- Óscar Mingueza



Pedro Porro

- Although not as great as Alexander-Arnold is, good, progressive passer, ball carrier, creates high quality chances and is better defensively
- Would be very expensive, protracted negotiations with Daniel Levy



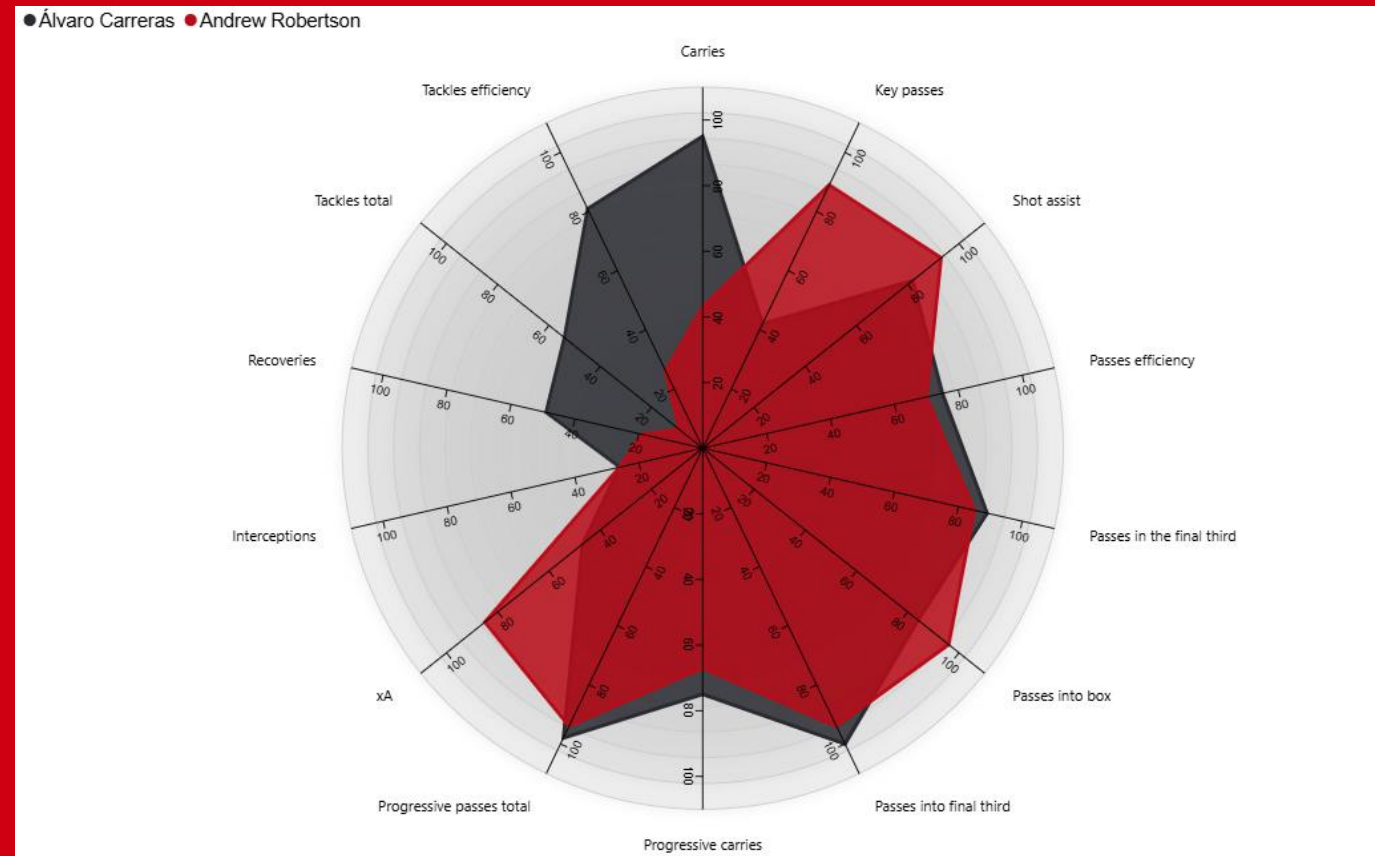
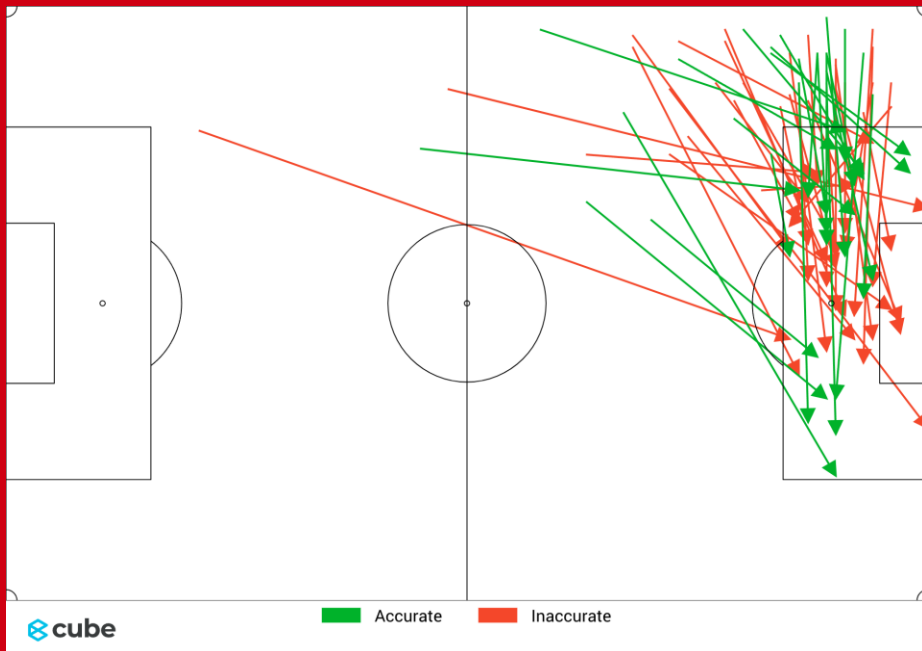
Left-back

- Álvaro Carreras
- Andrea Cambiaso
- Rayan Aït-Nouri



Álvaro Carreras

- Carreras is a really good ball progressor, crosser and carrier. His passing can help the build-up, moreover he is very adept at creating chances in the final third
- Would be cheaper than Cambiaso or Aït-Nouri, which would save some money for other positions



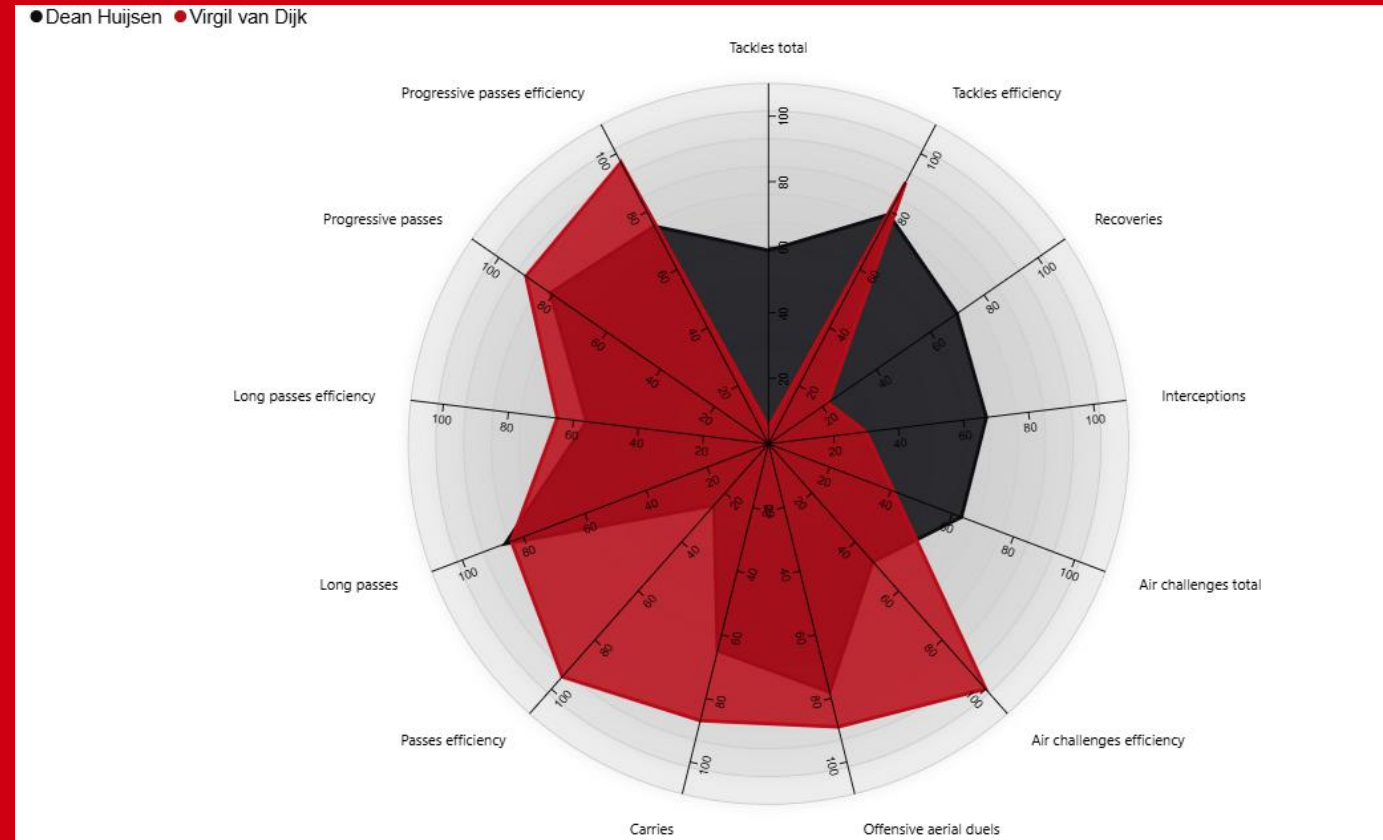
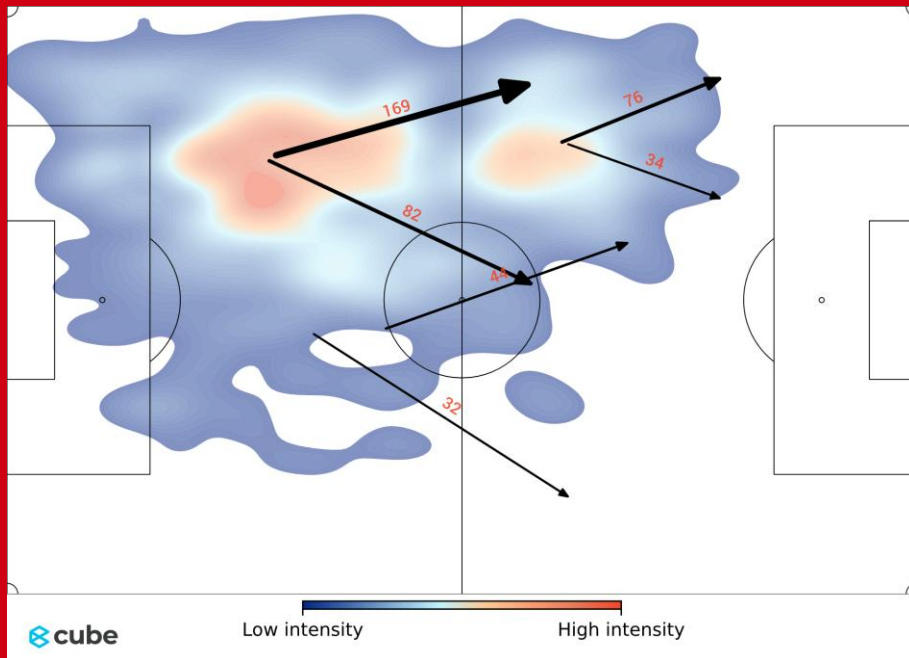
Centre-back

- Dean Huijsen
- Jan Paul van Hecke
- Anthony Rouault



Dean Huijsen

- Huijsen has been a highly touted player since his Juventus days
- Very good progressive passer considering his age, his long passing can be a staple of any team's attacking plan
- Tall, mobile, recovers and intercepts the ball a lot, good in the air



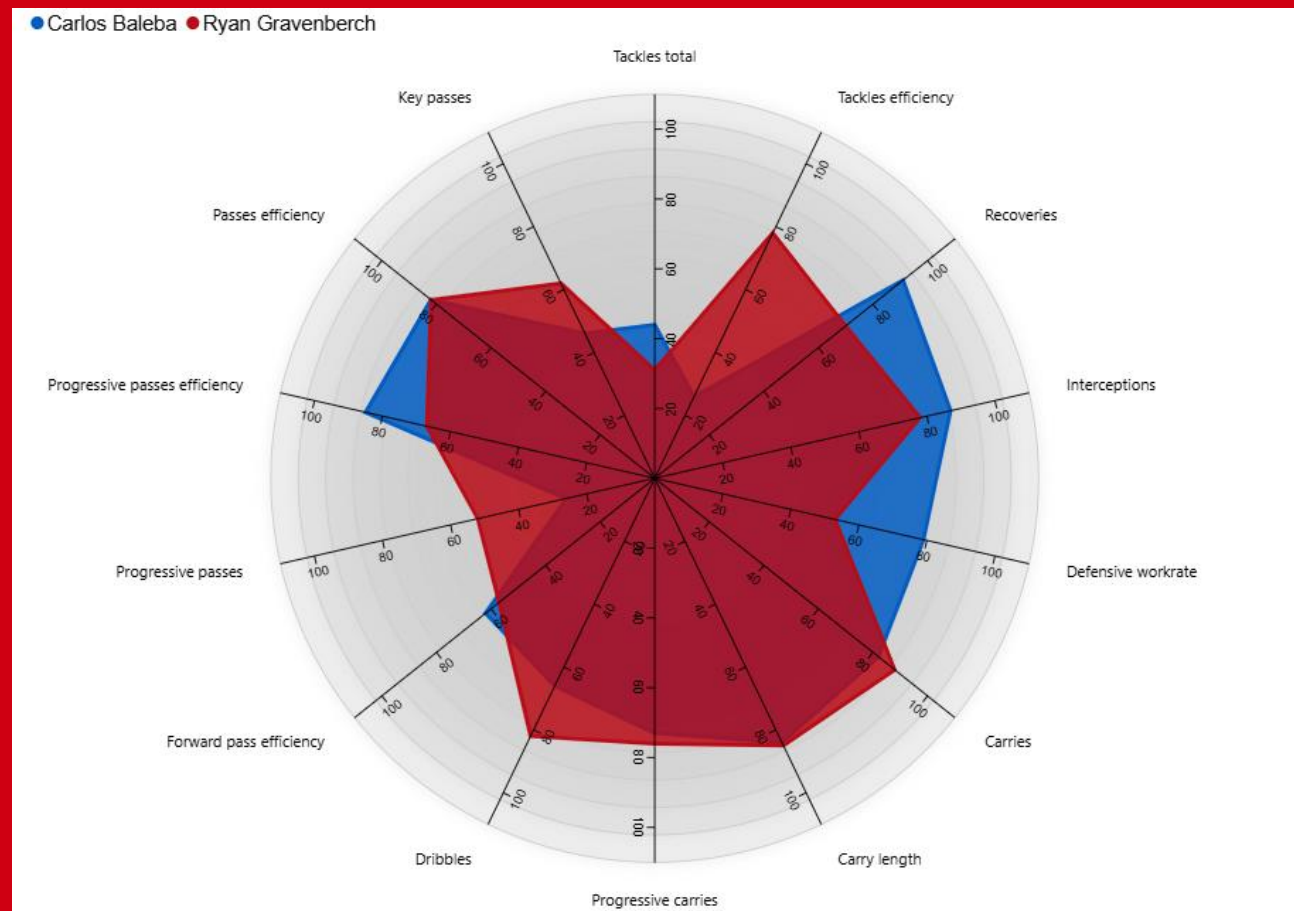
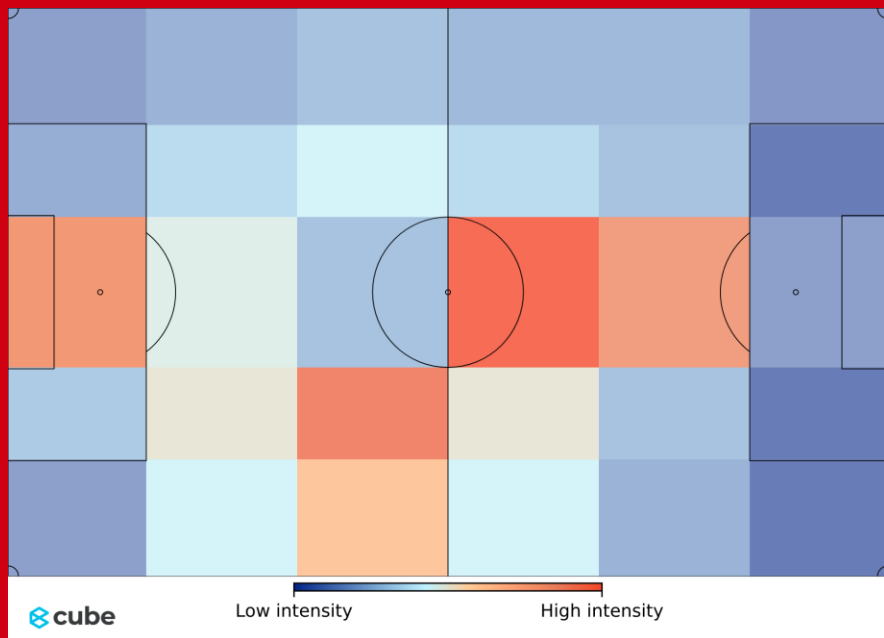
Defensive midfielder

- Carlos Baleba
- Youssouf Fofana



Carlos Baleba

- Huge ceiling as a defensive midfielder in the Premier League
- Very good defensively, good passer, great at duels and can carry the ball upfield
- Very expensive, Tony Bloom is a tough negotiator, potential bidding war



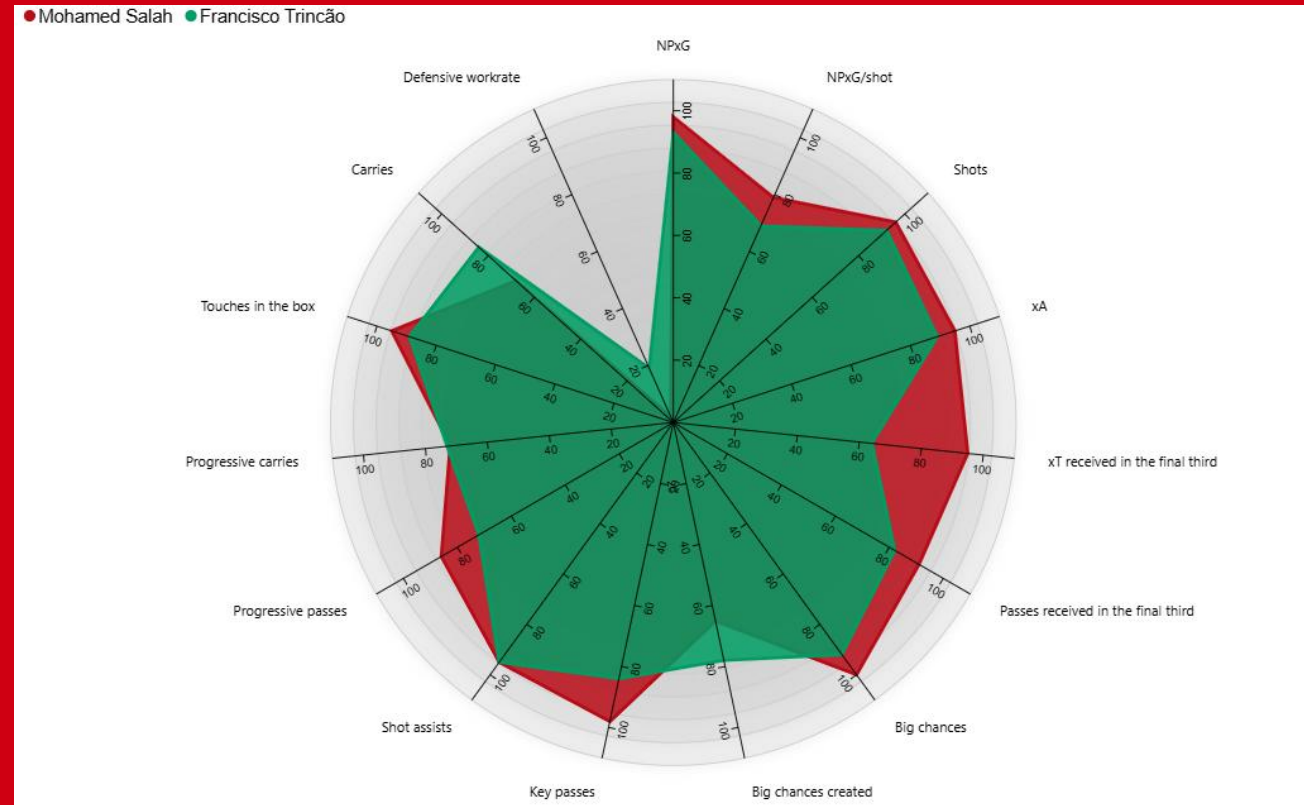
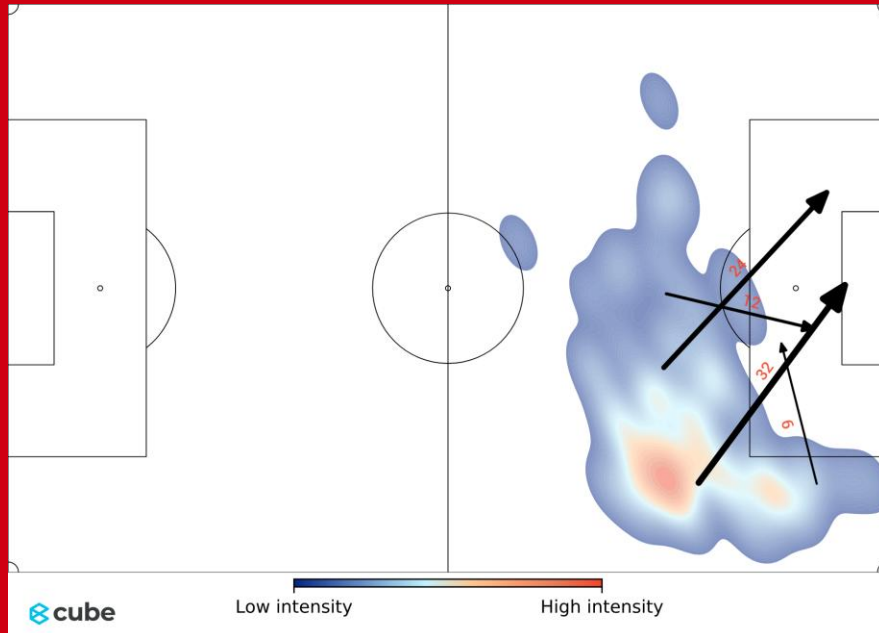
Right-winger

- Francisco Trincão
- Rodrygo
- Takefusa Kubo



Francisco Trincão

- Technical player, who creates for his teammates, but also takes shots
- His good dribbling aids his playmaking ability
- Below average finishing is an issue
- Rodrygo might not be for sale



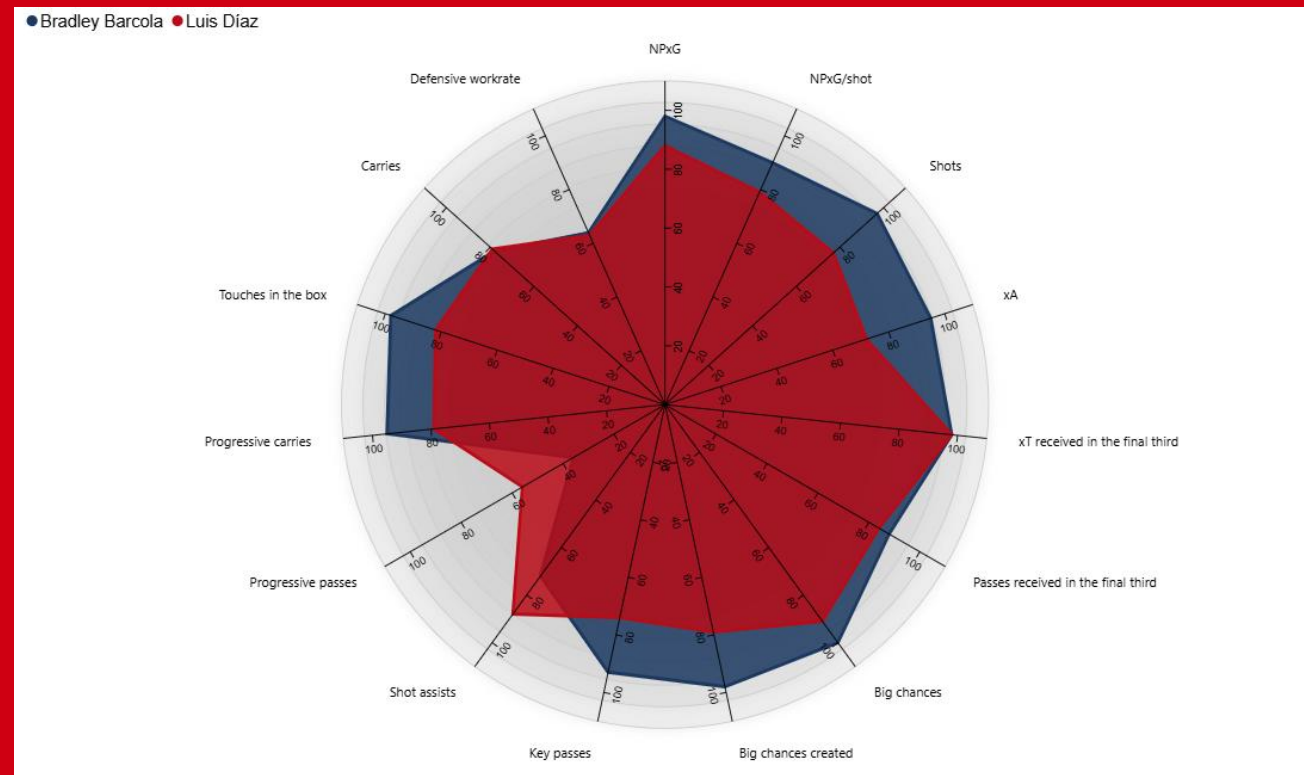
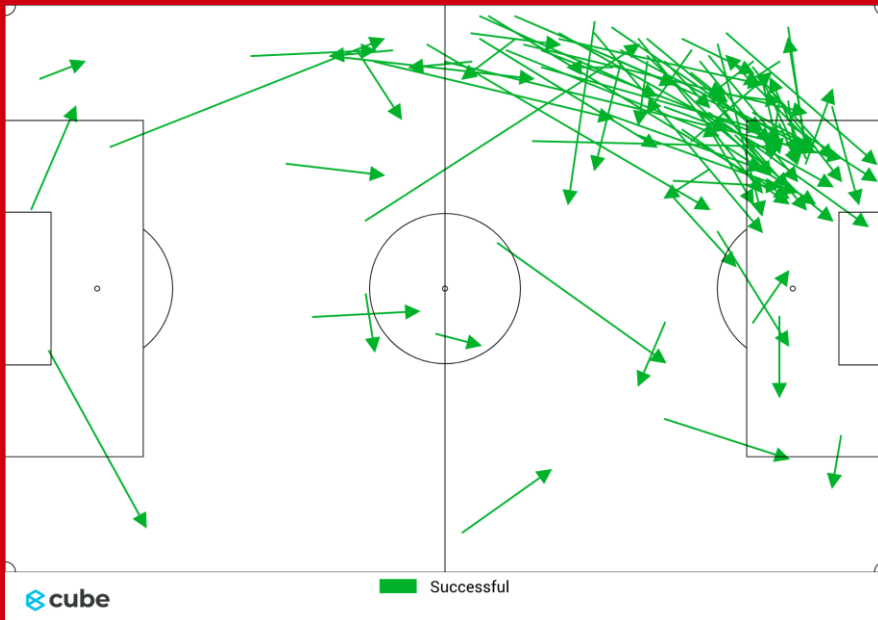
Left-winger

- Bradley Barcola
- Igor Paixão



Bradley Barcola

- Elite dribbler and direct ball carrier
- Gets big chances and creates big chances for others
- Below average finishing is an issue, PSG's status make this tough to pull off



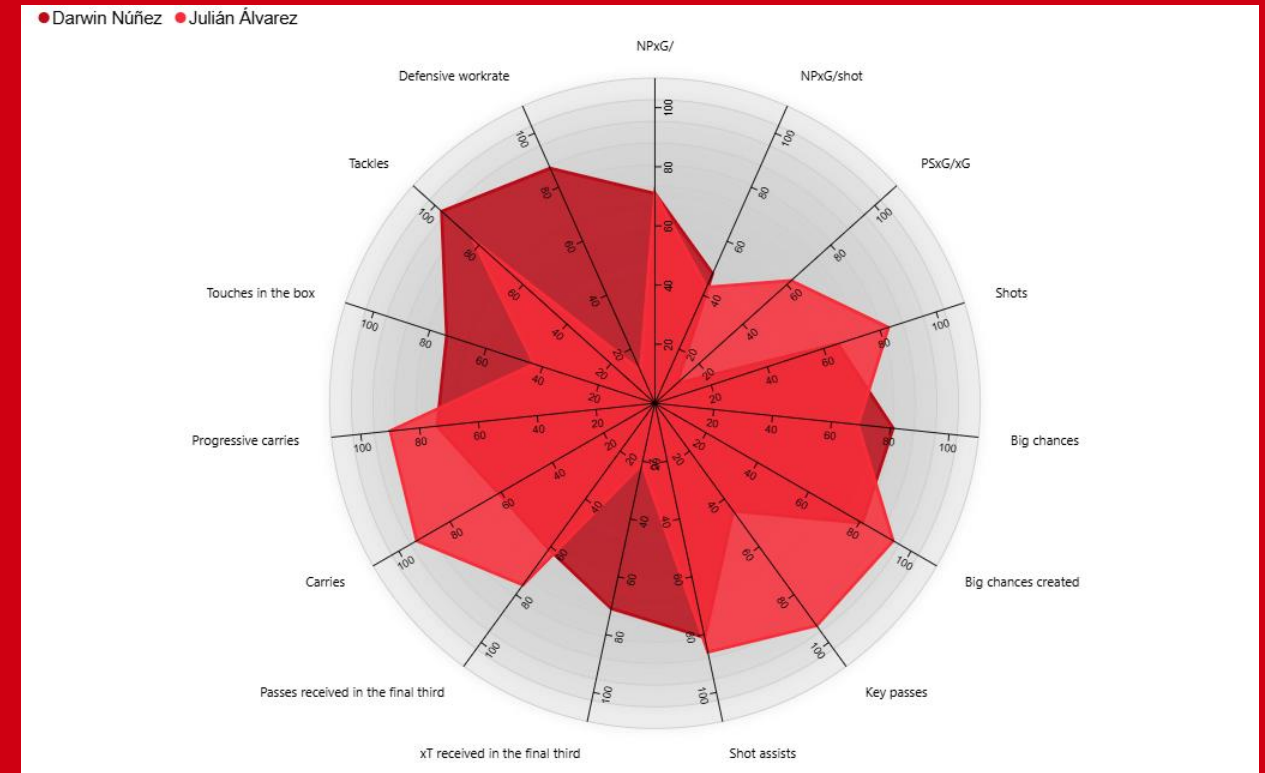
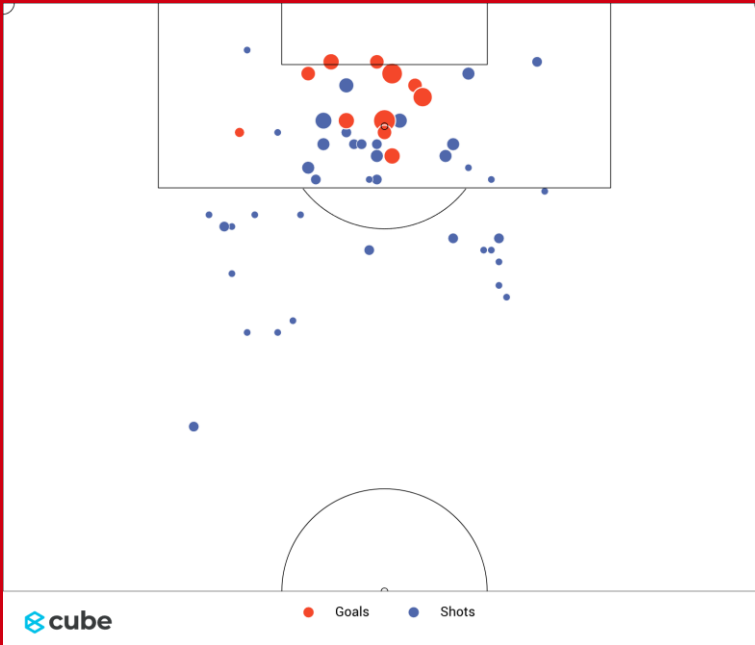
Centre-forward

- Julián Álvarez
- João Pedro
- Hugo Ekitiké
- Alexander Isak
- Charles De Ketelaere



Julián Álvarez

- All-round forward, can play with different profiles (Messi, Haaland)
- Elite finisher throughout his career
- Good shot locations, sets up his teammates well, creating big chances for them
- No „red flags”, worth the big outlay



Conclusions

- I believe I've found players, at each position I looked at, that can help the team replace current players to not have a huge fall-off in those areas (especially right-back, right-winger, centre-back), and others who can improve the team in some other position (left-back, defensive midfielder, left-winger, centre-forward,)
- With the adjustments made to every metric, it is a more thorough evaluation of players across several leagues

Thank you for your attention!

