

Assignment 2 - Evaluating Players

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1 Introduction

Summer 2018. #MeToo was exploiting, Harry and Meghan had just been married and Arsenal had just finished 6th in the Premier League, losing out on top 4 for the second year running after the last occurrence in the 1995/96 season. Furthermore had Arsene Wenger, their manager for the last 22 years, announced his retirement in April. This leaves Arsenal with a very important transfer window leading into the 2018/19 season.

2 Assessing Arsenal's current defence

The first area to improve is the defence. Arsenal had conceded 51 goals, the most since 1983/84, no central defender in Arsenal made it past 25 starts in the Premier League, and Per Mertesacker and Laurent Koscielny were both past 30.

To access the current defence we have implemented 6 defensive metrics. All metrics are calculated per 90 minute and the radars shows a comparison of all defenders in the top 5 European leagues (England, Germany, Italy, Spain and France) with more than 400 minutes played in total. The size of bar in the radars indicates the percentile ranking in the specific metric and the number is the

- **Interceptions**

When a player actively intercepts the ball when an opponent passes, shots or crosses

- **Air Duels Won**

An aerial duel in own defensive third where own team wins the ball

- **Progressive Passes**

A pass that moves the ball 25% closer to goal

- **Passes from Def- to Mid Third**

A pass from the defensive third (0-35m.) to the middle third (35-70m.)

- **True Tackles**

The sum of tackles, fouls from tackles and ground duels lost

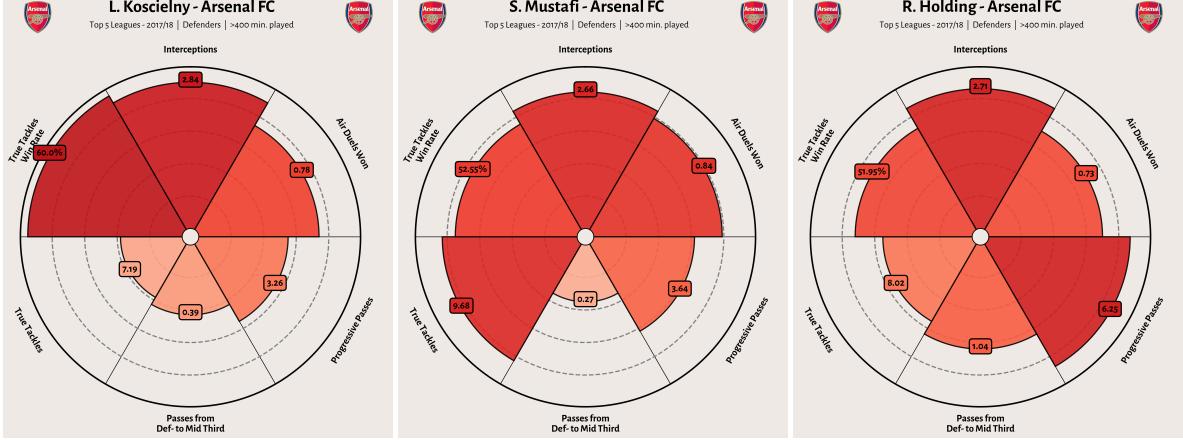
- **True Tackles Win Rate**

The amount of tackles won out of all true tackles

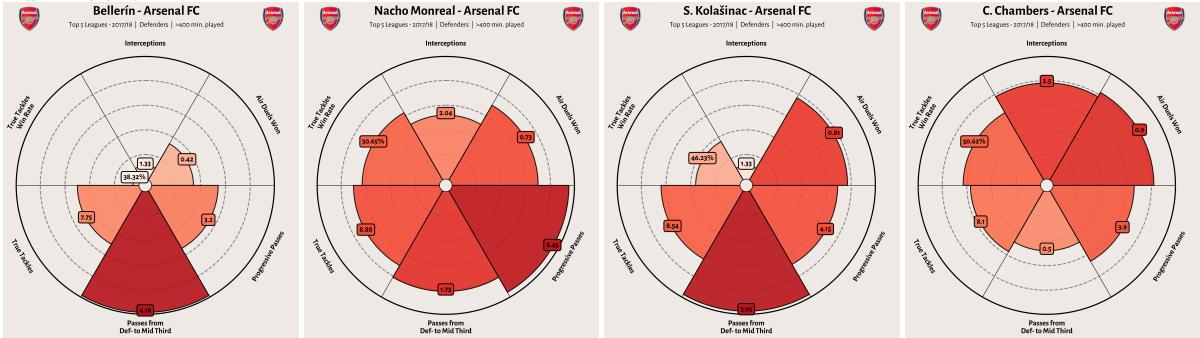
From the percentiles it can be seen that Arsenal's central defenders rank high in true tackles and true tackle win rate. The full backs do not perform well in this metric, but they are good on the ball having high ranks in progressive passes and passes from def- to mid third.

In finding a replacement for Mertesacker and an improvement/back-up for Koscielny, we should look at a defender who ranks high in true tackles and like to get a foot stuck in. Both the metrics are inspired by The Athletic and the [work of Tom Worville and Mark Carey](#).

Central Defenders



Full Backs

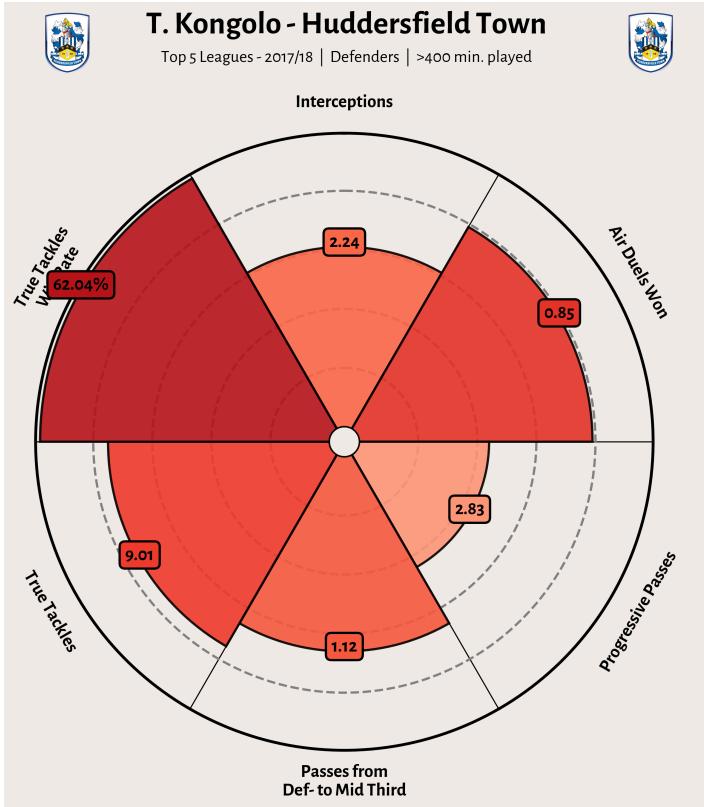


3 Finding a new defender

When looking over the top 5 European leagues for defenders with a high number of true tackles and true tackle win rate we can boil it down to a list of 10 player.

Name	Team	Position	Market Value	Age	True Tackles	True Tackle Win Rate
V. Jovanovic	SD Eibar	CB	€3.00m.	22	5.7	67.0%
D. Maroh	1. FC Köln	CB	€1.00m	31	7.28	65.8%
J. Vertonghen	Tottenham	CB	€31.00m	31	6.2	64.7%
A. Izzo	Genoa CFC	CB	€8.50m.	26	9.5	64.0%
Vitor Hugo	AFC Fiorentina	CB	€7.50m.	27	9.4	63.7%
M. De Sciglio	Juventus	RB	€14.0m.	25	6.8	62.7%
N. Süle	Bayern München	CB	€45.0m.	22	7.2	62.3%
T. Kongolo	Huddersfield	CB	€10.0m.	24	9.0	62.0%
F. Roncaglia	Celta de Vigo	CB	€3.00m.	31	8.3	61.5%
Filipe Luis	Atlético de Madrid	LB	€8.00m.	32	8.9	60.9%

From the list we can easily exclude players above 30 as we would like a player for the future. Additionally, we want a centre back which excludes De Sciglio. Niklas Süle recently moved to Bayern and his price excludes him as an option. This leaves us with Jovanovic, Izzo, Vitor Hugo and Kongolo. Jovanovic ranks low in true tackles compared to the others, and given that Kongolo is 3-4 years younger than the others puts him first. Kongolo had recently been a part of keeping Huddersfield in the Premier League and has proven that he is capable of adapting to the league, so even though he is a part of the Premier League he had only in the league for a half year. Terence Kongolo is therefore the recommendation from me and his radar can be seen below.



4 Group discussion and conclusion

The group presentations showed a wide variety of players, both full backs and centre backs, and from all top 5 leagues. This led to a great discussion of who Arsenal should sign.

We quickly assessed that Arsenal would need to sign a centre back. This was based on that our metrics mainly focused on defending, where centre backs were better shown in the data. Furthermore, would a replacement for Mertesacker and Koscielny be appropriate as the centre backs rotated a lot as mentioned earlier.

Dinindu and Will have implemented some really great and detailed metrics. Especially, Dinindu's xT conceded broken down into individual actions such as interceptions is interesting. His recommendation was although a full back.

A few members of our group were assessing the defenders on dangerous ball lost as they had observed the current Arsenal defenders had lost a lot of dangerous balls. It is worth nothing that this metric does not occur often, several players has 0 ball lost, and it is therefore a vulnerable metric to scout on. They recommended Sokratis, Skrinar and Mario Gaspar. Of these player do Milan Skrinar stand out. Gaspar and Sokratis are both nearing 30 and, as we want a future replacement, Skrinar's age of 22 and relatively low market value are appealing and would be the recommendation I got from the group discussion.

The code for the assignment can be found on my [Github profile](#) or in the attached Python file