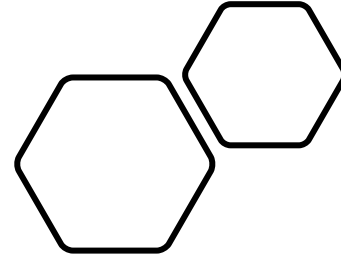


Identifying Top Ball- playing Center Backs from Statsbomb 2018 World Cup Data

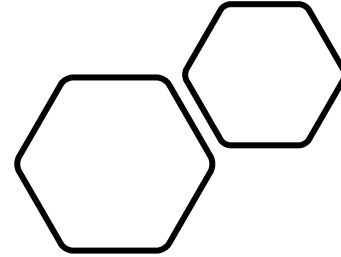


For : Norwich City Football
Club

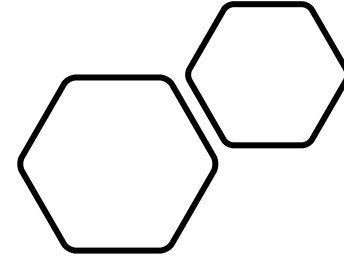
Created by : Soumyajit Bose

Table of Contents :

- Player Selection
- Metrics chosen
- Brief Overview of Methodology
- Exploration of Possession-based metrics
 - Common Standout Names
- Exploration of defensive metrics
 - Common Standout Names
- Top 3 Choice of Players
 - Player Percentile Bar Charts
 - Pick top 3 names
 - Some more details for the three players
 - Progressive Passes and Carries
- Conclusion



Player Selection

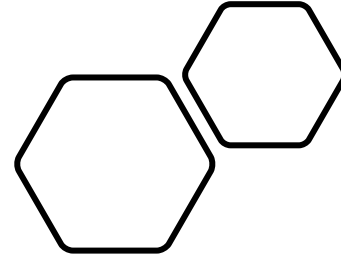


- 102 center backs in the dataset
- Minimum minutes - 180
- Minimum open play passes - 100
- Number of center backs reduced to - 51

Metrics Chosen

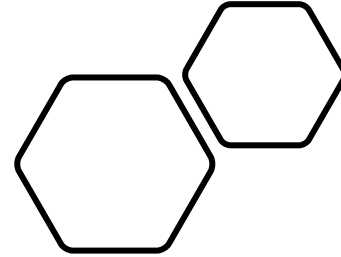
- In-possession :
 - Expected Threat Created
 - Expected Threat Facilitated
 - Pass Completion above Expectation
 - Final Third Passes and Carries
 - Progressive Passes and Carries
 - Successful Passes and Carries
 - Turnovers
 - xG Buildup
 - Pass Success % overall and under pressure
- Out-of-possession :
 - Possession-adjusted Defensive Actions
 - Possession-adjusted Pressures
 - Aerial Challenges Win %
 - True Tackle Win %

(Details of these metrics will be described in subsequent slides)



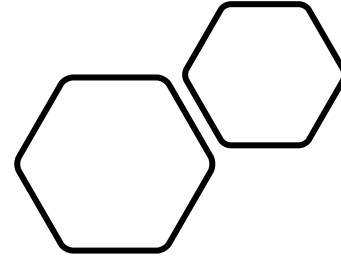
Methodology

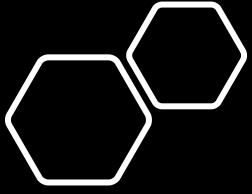
- Normal metrics like Passes, Carries, Final Third Entries - events counted directly from dataset.
- Pass Completion above Expectation - an Expected Pass Completion model was built using the dataset and machine-learning classification algorithm (Random Forest and XGBOOST) and compared to actual Pass completion.
- Expected Threat - Karun Singh's xT model has been used to quantify threat values of successful passes and carries.
- xG Buildup - Made use of Statsbomb's Possession Sequences to identify players who contribute to buildup to open play shots and reward them with xG value of those open play shots.
- Defensive metrics are possession-adjusted.



Exploration of In-Possession Metrics

- In the next set of slides, several in-possession metrics will be presented to gauge ball-playing abilities of the chosen set of center-backs.
- For each case, the “standout” names – players who perform better than the median will be listed out separately.



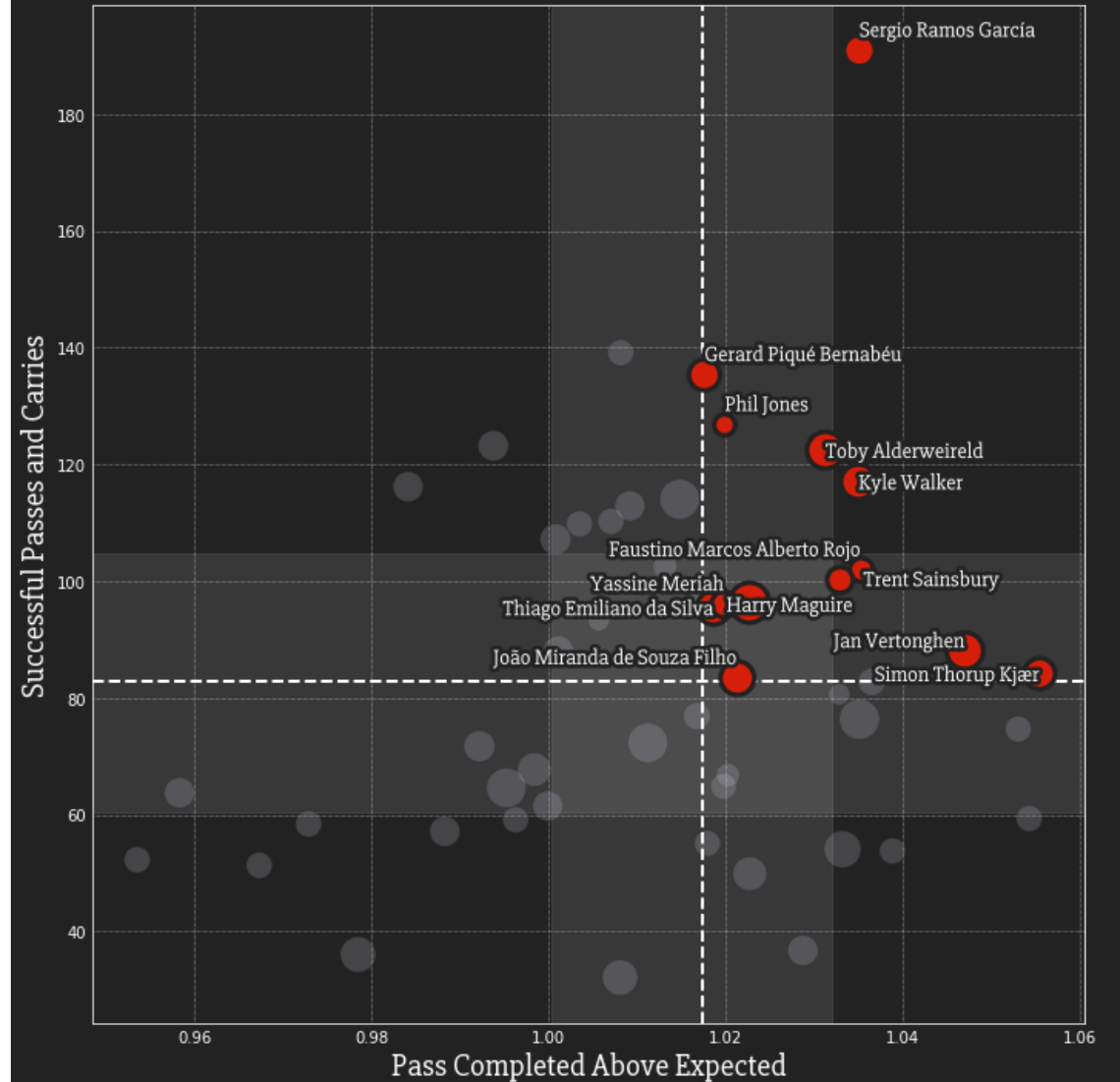


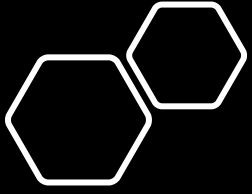
Possession Volume and Expected Pass Completion

- Pass Completed Above Expected – greater than implies pass completion rate is better than what's expected from an average player.
- Standout names – Ramos, Pique, Alderweireld, Walker, Rojo, Jones, Sainsbury, Maguire, Vertonghen, Kjaer, Thiago Silva, Miranda

Evaluating Center-Backs from WC2018 Possession Volume and Security

Dot size proportional to minutes played
Minimum minutes played : 180



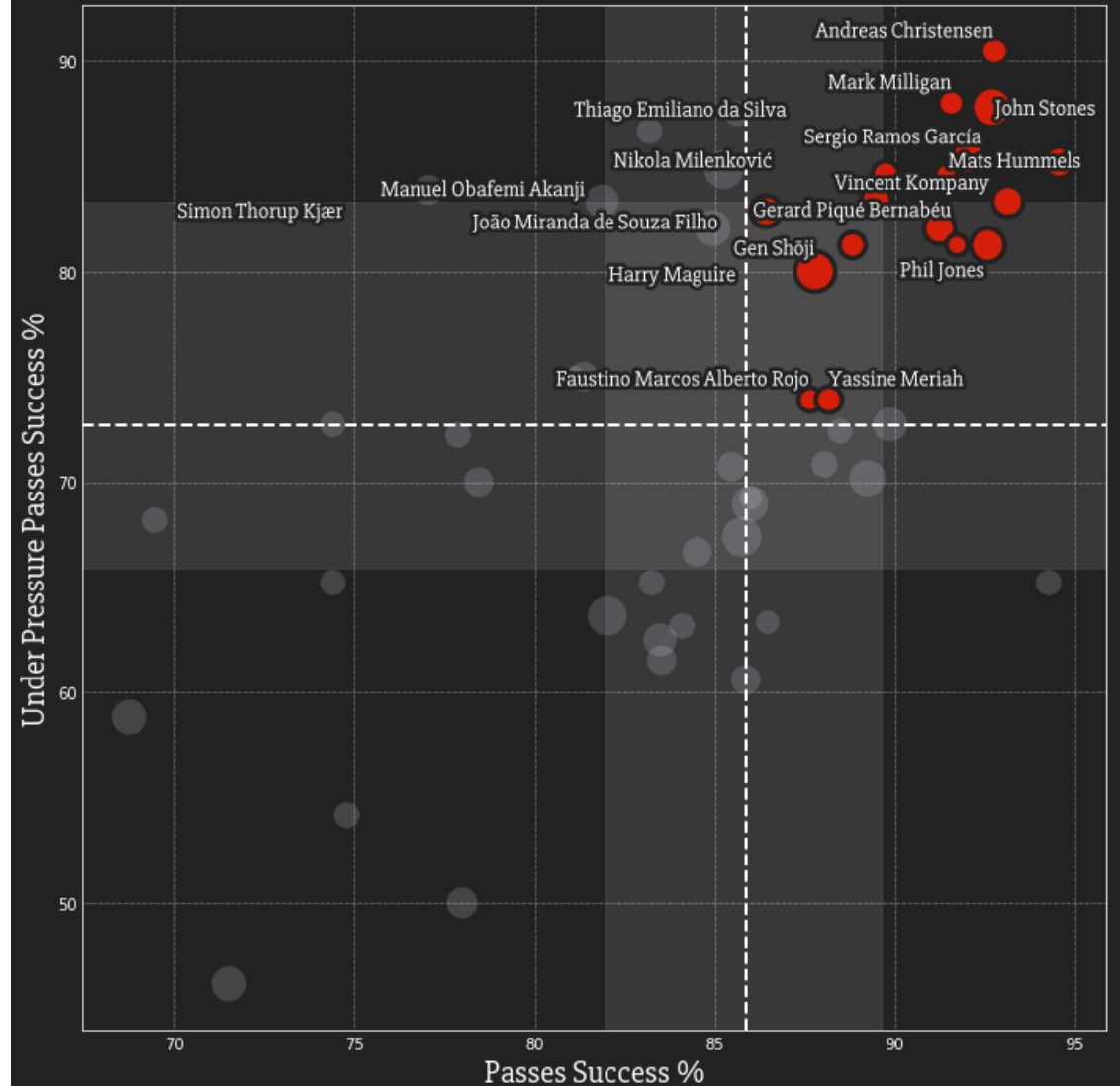


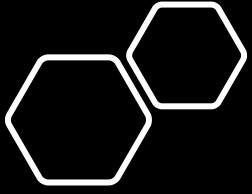
Pass Success % and Effect of Pressure

- Standout names – Christensen, Milligan, Stones, Ramos, Hummels, Kompany, Thiago Silva, Pique, Jones, Shoji, Milenkovic, Akanji, Miranda, Kjaer, Maguire, Rojo, Meriah

Evaluating Center-Backs from WC2018 Effect of Pressure on Pass Success

Dot size proportional to minutes played
Minimum minutes played : 180



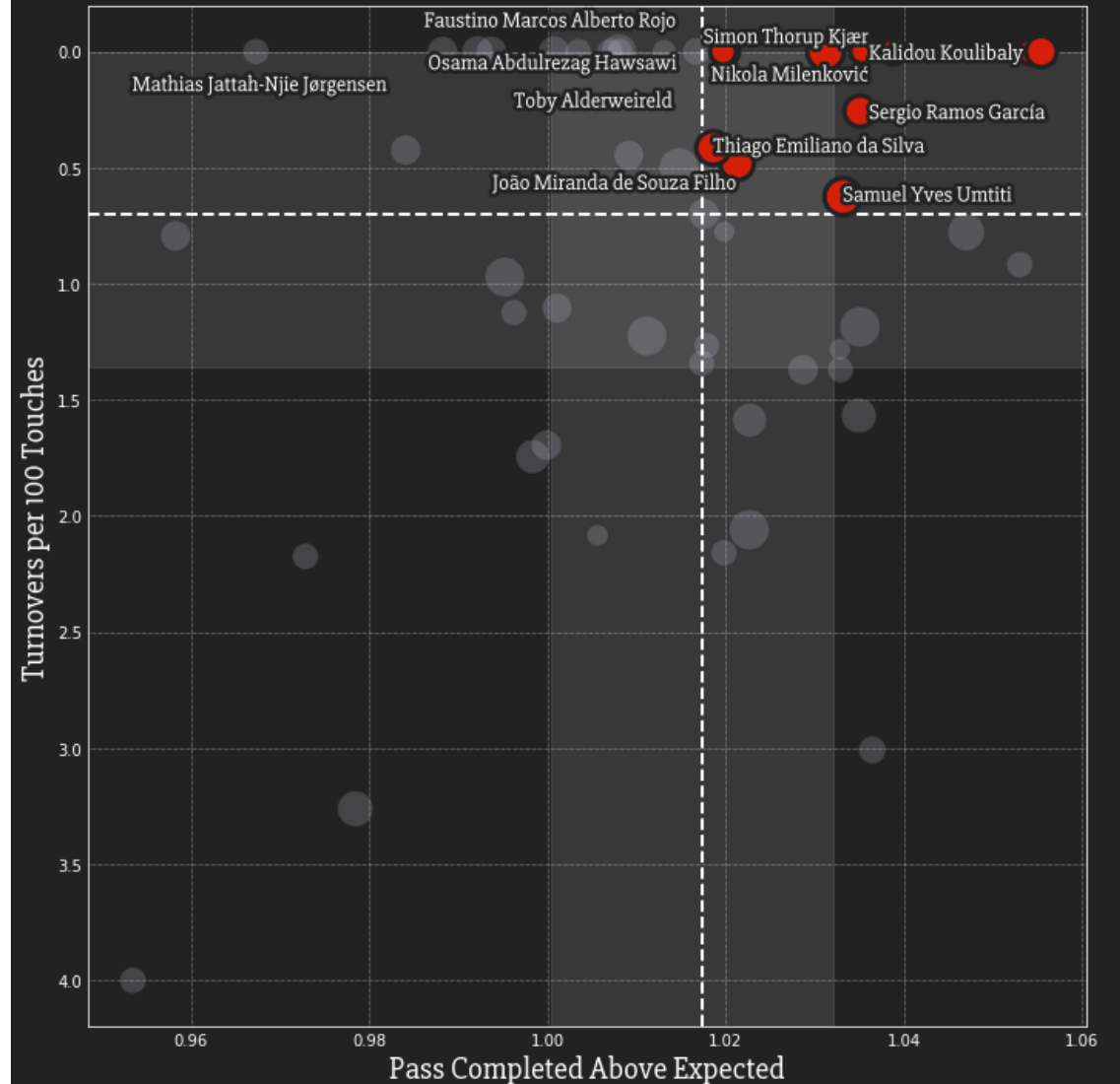


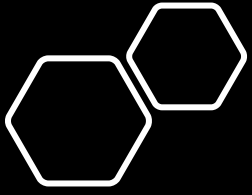
Turnovers and Expected Pass Completion

- Turnovers per 100 Touches -> Turnovers divided by number of carries and attempted dribbles
- The y-axis has been inverted so that the best players appear at the top right corner.
- Standout names – Koulibaly, Kjaer, Milenkovic, Rojo, Ramos, Thiago Silva, Umtiti, Miranda, Alderweireld, Hawsawi, Jorgensen

Evaluating Center-Backs from WC2018 Security in Possession

Dot size proportional to minutes played
Minimum minutes played : 180



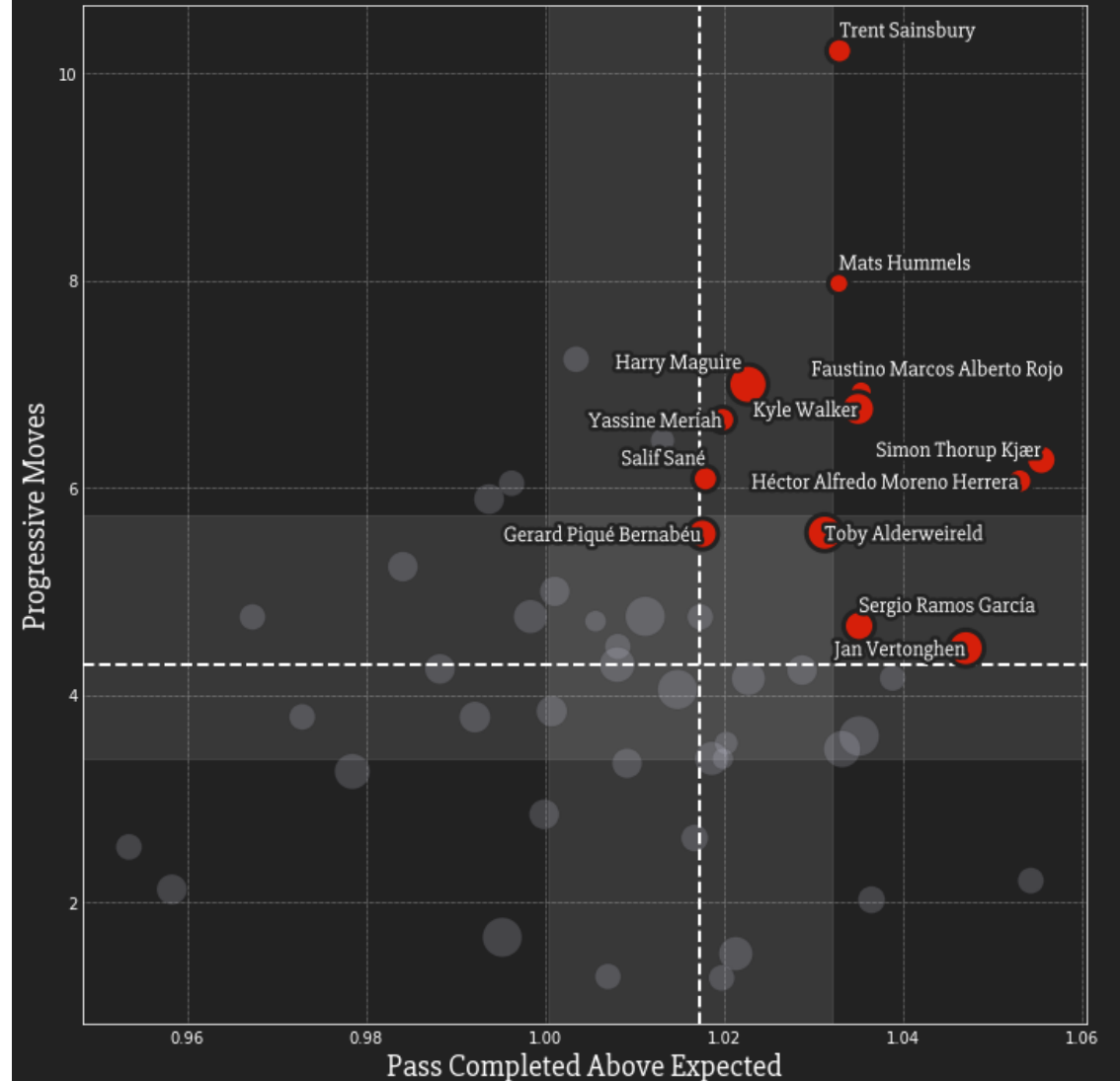


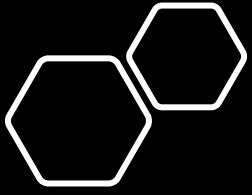
Ball Progression and Expected Pass Completion

- Progressive moves -> Progressive passes + carries.
- Definition of “progressive” -> Any pass or carry that moves the ball closer to the opposition goal by 25 %, or moves the ball into the opposition box from outside.
- Standout names – Sainsbury, Hummels, Rojo, Maguire, Walker, Kjaer, Herrera, Meriah, Sane, Alderweireld, Pique, Ramos, Vertonghen.

Evaluating Center-Backs from WC2018 Progression and Security

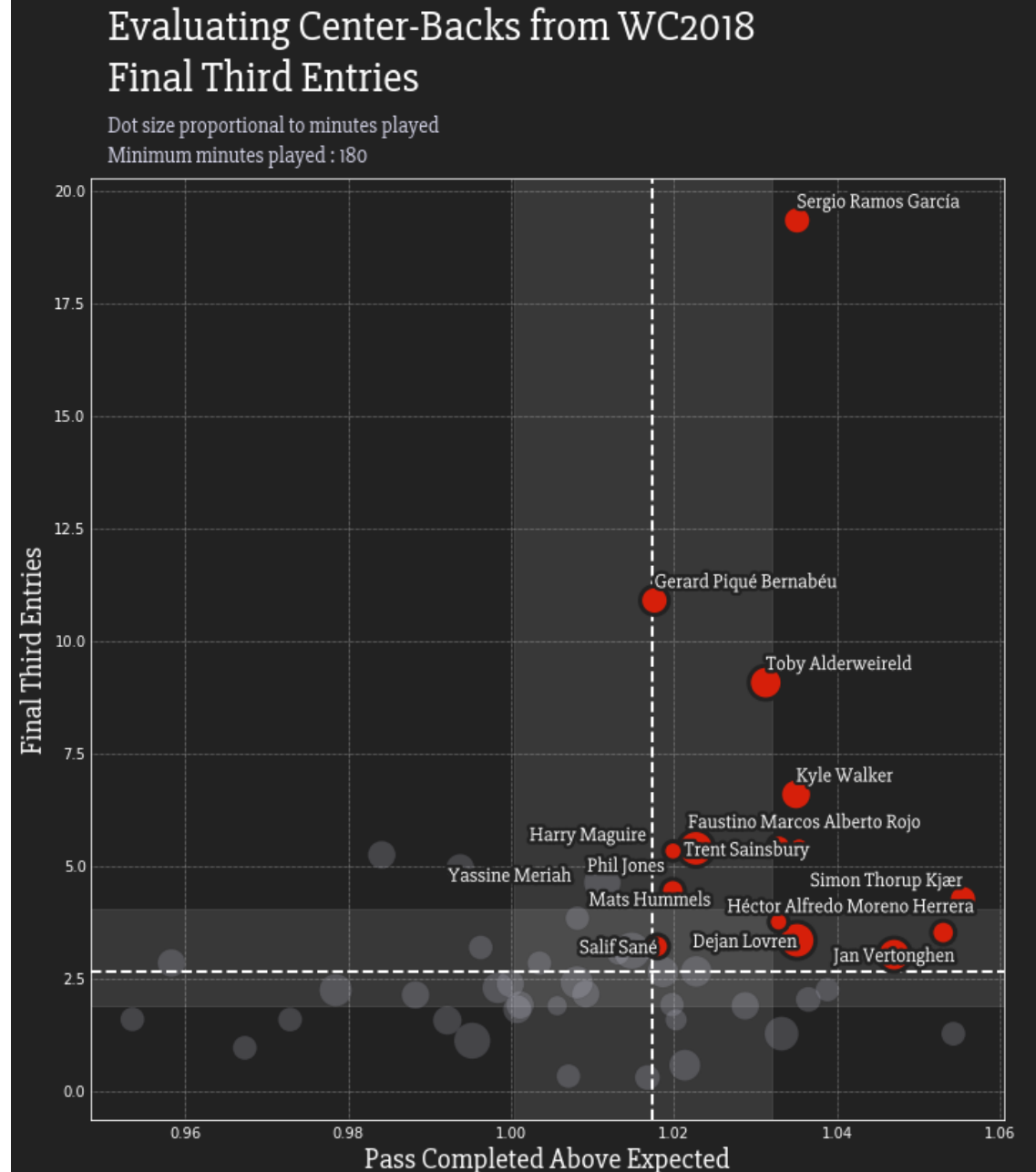
Dot size proportional to minutes played
Minimum minutes played : 180

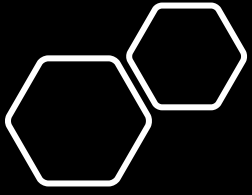




Final Third Entries and Expected Pass Completion

- Final Third Entries -> Successful Passes and Carries into the final third
- Standout names - Ramos, Pique, Alderweireld, Walker, Rojo, Sainsbury, Maguire, Kjaer, Herrera, Vertonghen, Lovren, Hummels, Jones, Meriah, Sane



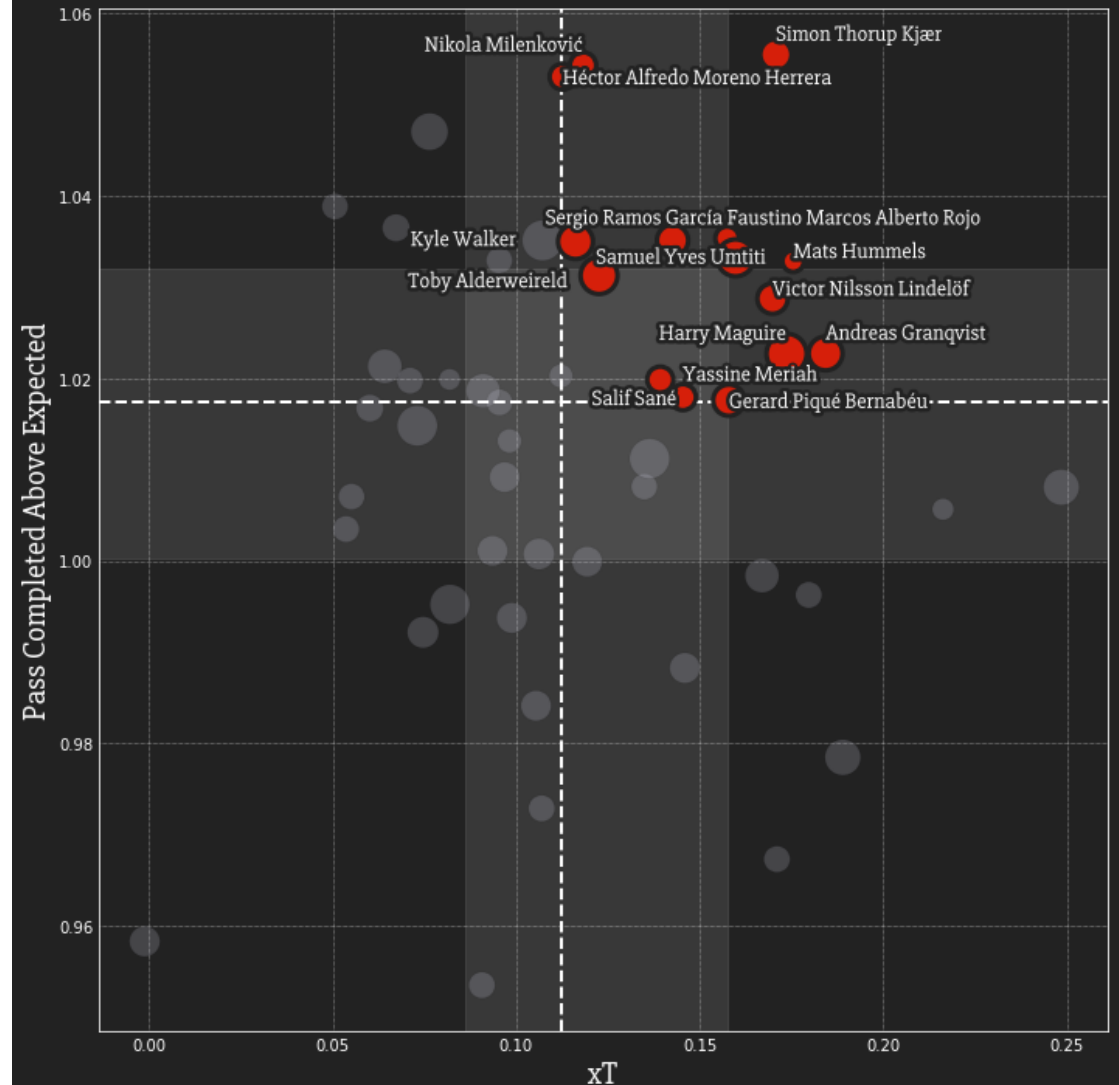


Threat Creation and Expected Pass Completion

- xT -> calculated per 100 successful passes and carries.
- Standout names - Kjaer, Herrera, Milenkovic, Ramos, Rojo, Hummels, Umtiti, Lindelof, Granqvist, Walker, Alderweireld, Maguire, Meriah, Sane, Pique

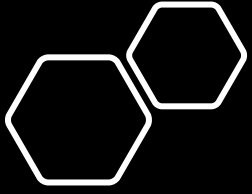
Evaluating Center-Backs from WC2018 Creation and Security

Dot size proportional to minutes played
Minimum minutes played : 180



Presented to you by : Soumyajit Bose (@Soumyajit5209314)

STATSBOMB



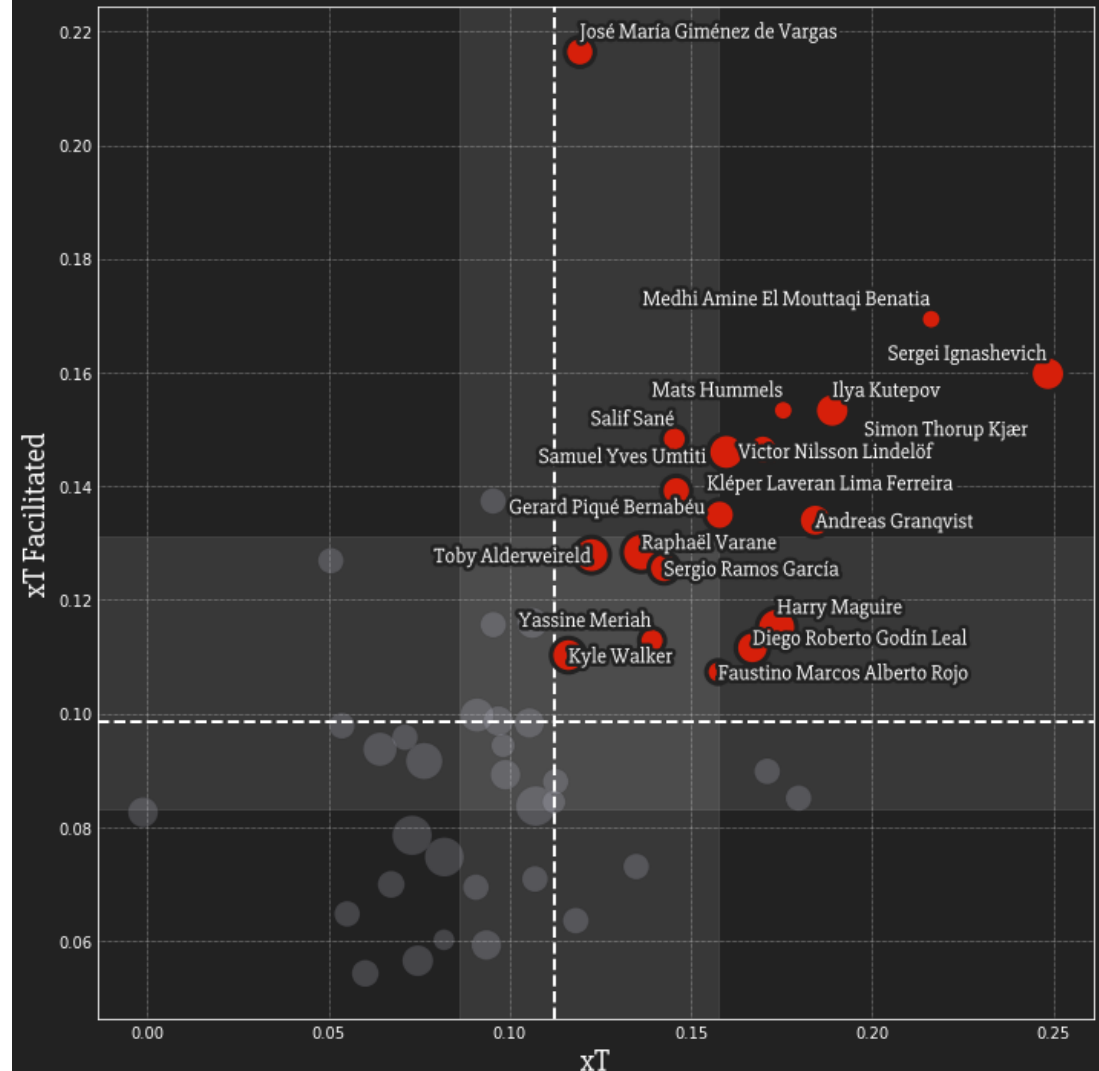
Threat Creation and Facilitation

- xT Facilitated -> the xT of the next player's moves. This captures the fact that sometimes players will invite pressure and suck the opposition in, before releasing a team-mate and allow them to create danger.
- Standout names - Gimenez, Benatia, Ignashevich, Kutevov, Kjaer, Hummels, Lindelof, Sane, Umtiti, Pepe (Klepnar), Granqvist, Pique, Varane, Ramos, Alderweireld, Maguire, Godin, Meriah, Walker, Rojo

Evaluating Center-Backs from WC2018

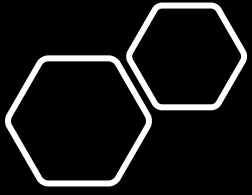
Create and Allow to Create

Dot size proportional to minutes played
Minimum minutes played : 180



Presented to you by : Soumyajit Bose (@Soumyajit5209314)

STATSBOMB

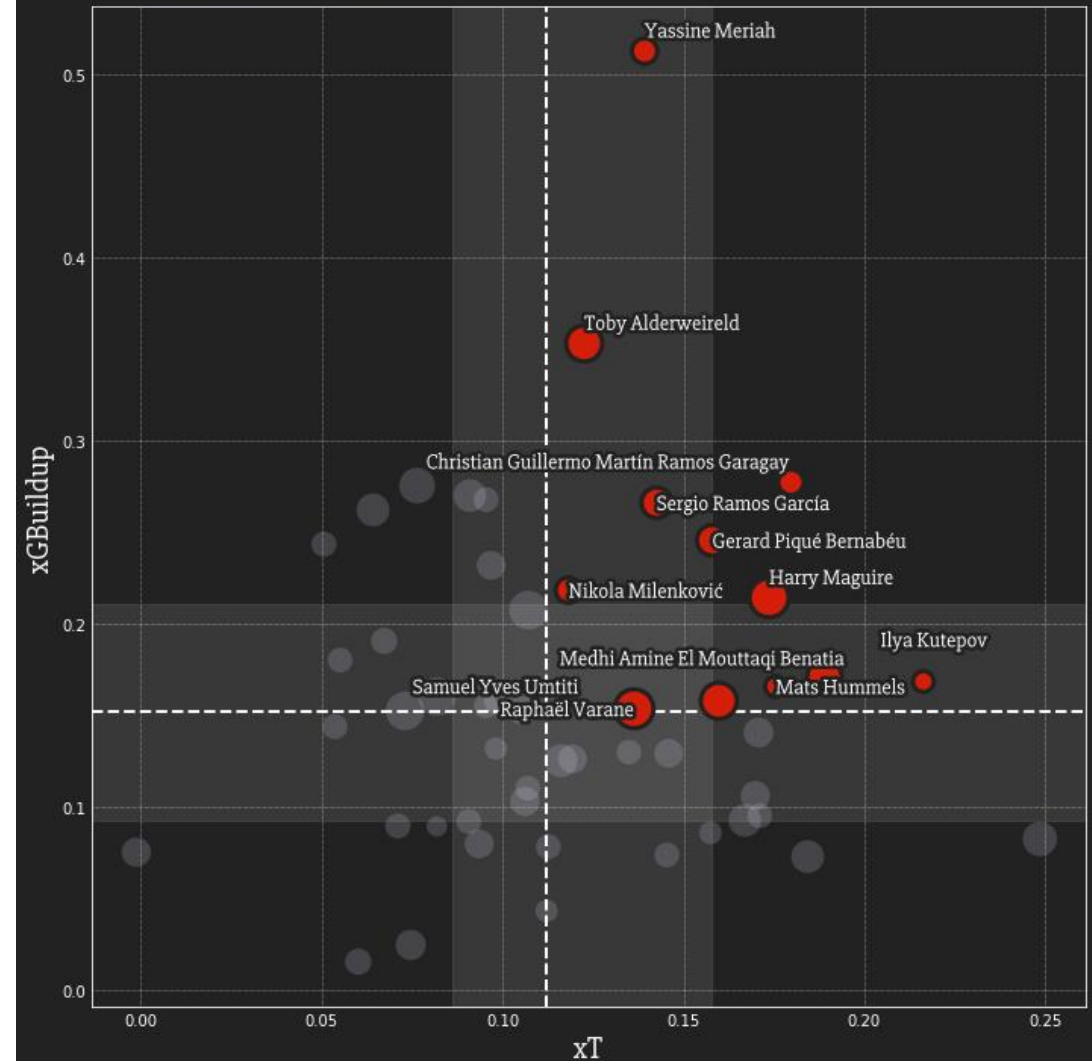


Threat Creation and Buildup Participation

- xGBuildup -> calculated per 10 open play shots by the team.
- Standout names - Meriah, Alderweireld, Garagay, Ramos, Pique, Maguire, Milenkovic, Benatia, Kutepov, Hummels, Umtiti, Varane.

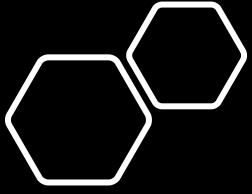
Evaluating Center-Backs from WC2018 Creation and Buildup contribution

Dot size proportional to minutes played
Minimum minutes played : 180



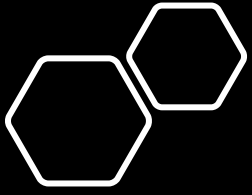
Presented to you by : Soumyajit Bose (@SoumyajitS209314)

STATSBOMB



Brief Note :

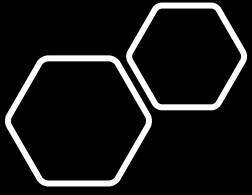
- Why have xT/xT Faciliated and xG Buildup been adjusted ?
- To accommodate for the difference in number of passes+carries for the players, and of open play shots for the teams.



Names that have stood out repeatedly

Absolute standouts - Ramos, Pique, Alderweireld, Walker, Rojo, Maguire, Kjaer, Hummels, Milenkovic, Meriah, Umtiti, Sane.

Honorable mentions – Jones, Thiago Silva, Miranda, Herrera, Sainsbury.

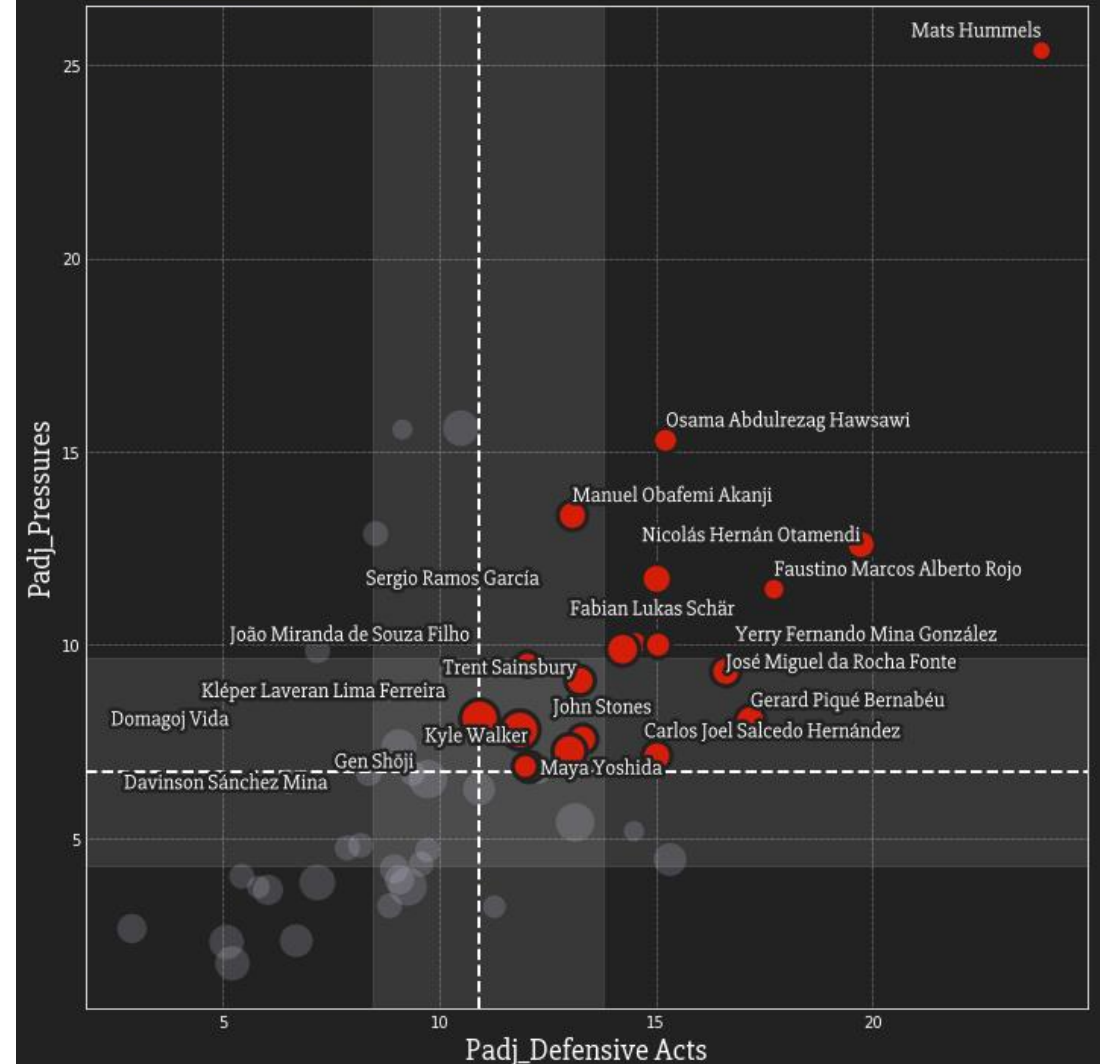


Possession-adjusted defensive activities and Pressure

- Defensive acts -> Tackles+Interceptions+Blocks+Ball Recoveries.
- Possession-adjusted to mitigate the effect of possession-heavy team styles.
- Standout names - Hummels, Hawsawi, Akanji, Otamendi, Rojo, Schar, Mina, Fonte, Ramos, Pique, Miranda, Sainsbury, Stones, Hernandez, Pepe, Vida, Davinson, Walker, Shoji, Yoshida

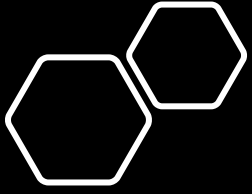
Evaluating Center-Backs from WC2018 Defensive Actions vs Pressure

Dot size proportional to minutes played
Minimum minutes played : 180



Presented to you by : Soumyajit Bose (@Soumyajit5209314)

STATSBOMB

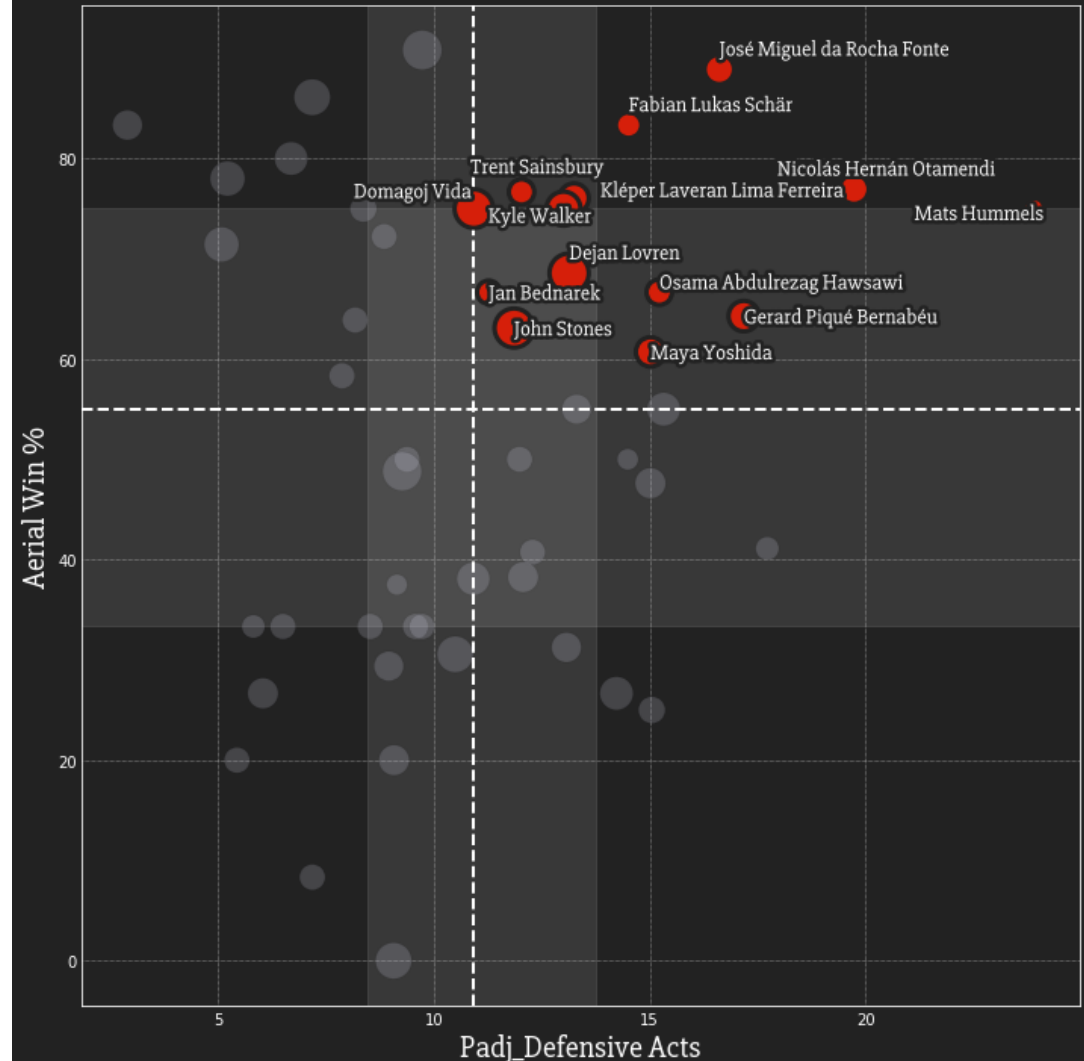


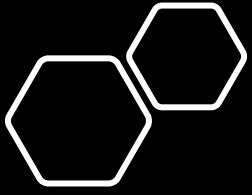
Aerial Dominance and Defensive Acts

- Standout names - Fonte, Schar, Otamendi, Hummels, Pepe, Sainsbury, Vida, Walker, Lovren, Hawsawi, Pique, Bednarek, Stones, Yoshida

Evaluating Center-Backs from WC2018 Defensive Acts and Winning Aerials

Dot size proportional to minutes played
Minimum minutes played : 180



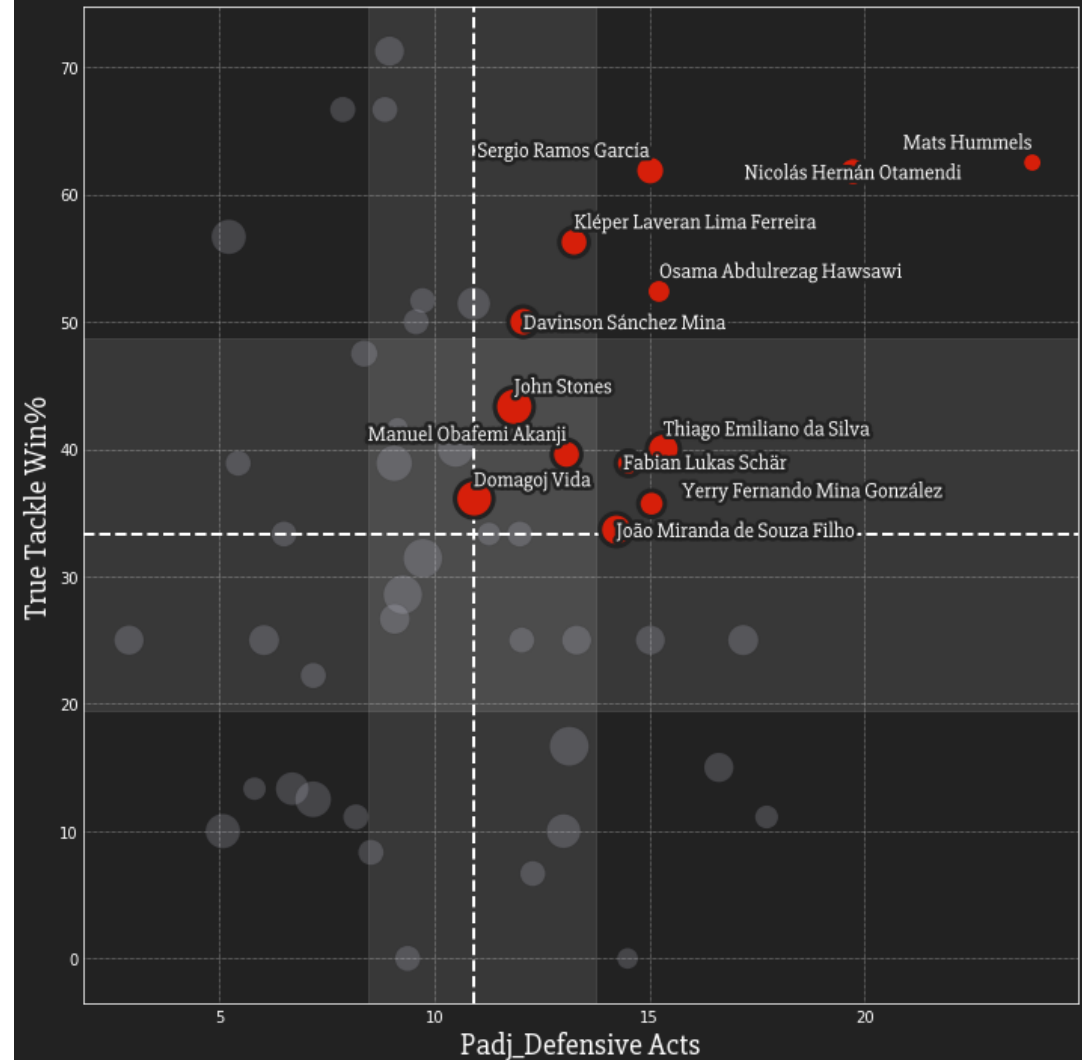


Defensive Acts and Duel Wins

- Standout names : Hummels, Otamendi, Ramos, Pepe, Hawsawi, Mina, Stones, Thiago Silva, Schar, Akanji, Vida, Gonzalez, Miranda

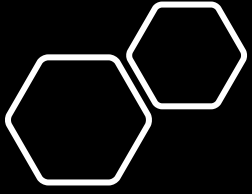
Evaluating Center-Backs from WC2018 Defensive Acts and Winning Duels

Dot size proportional to minutes played
Minimum minutes played : 180



Presented to you by : Soumyajit Bose (@Soumyajit5209314)

STATSBOMB



Updated list of names that have stood out repeatedly

Absolute standouts – Ramos, Pique,
Hummels, Alderweireld, Maguire, Kjaer

- Followed by – Rojo, Walker, Meriah.
- Let's have a closer look at the top 6 names by removing the clutter of the scatter plots. We will look at bar charts for each player in the next 6 slides (showing percentile ranks in different attributes).

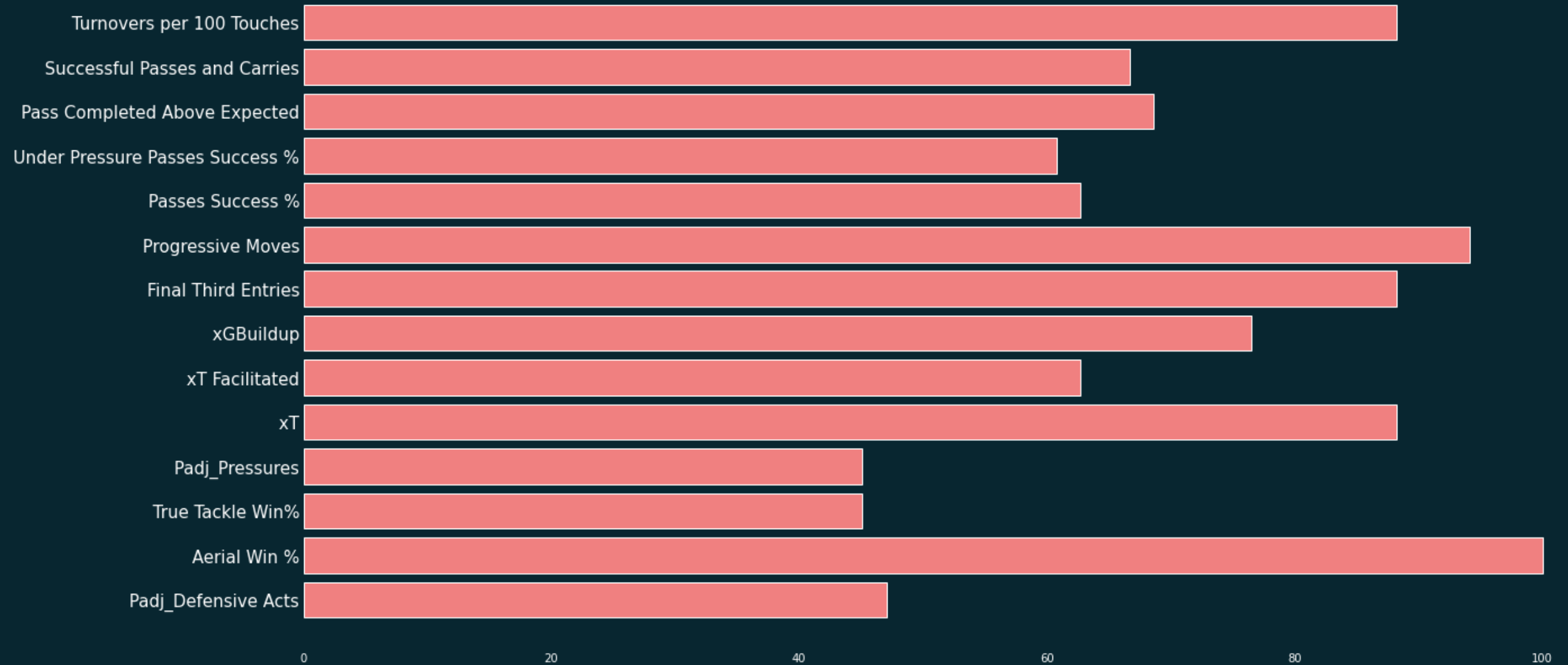
Gerard Piqué Bernabéu WC 2018

Created by : Soumyajit Bose



Harry Maguire WC 2018

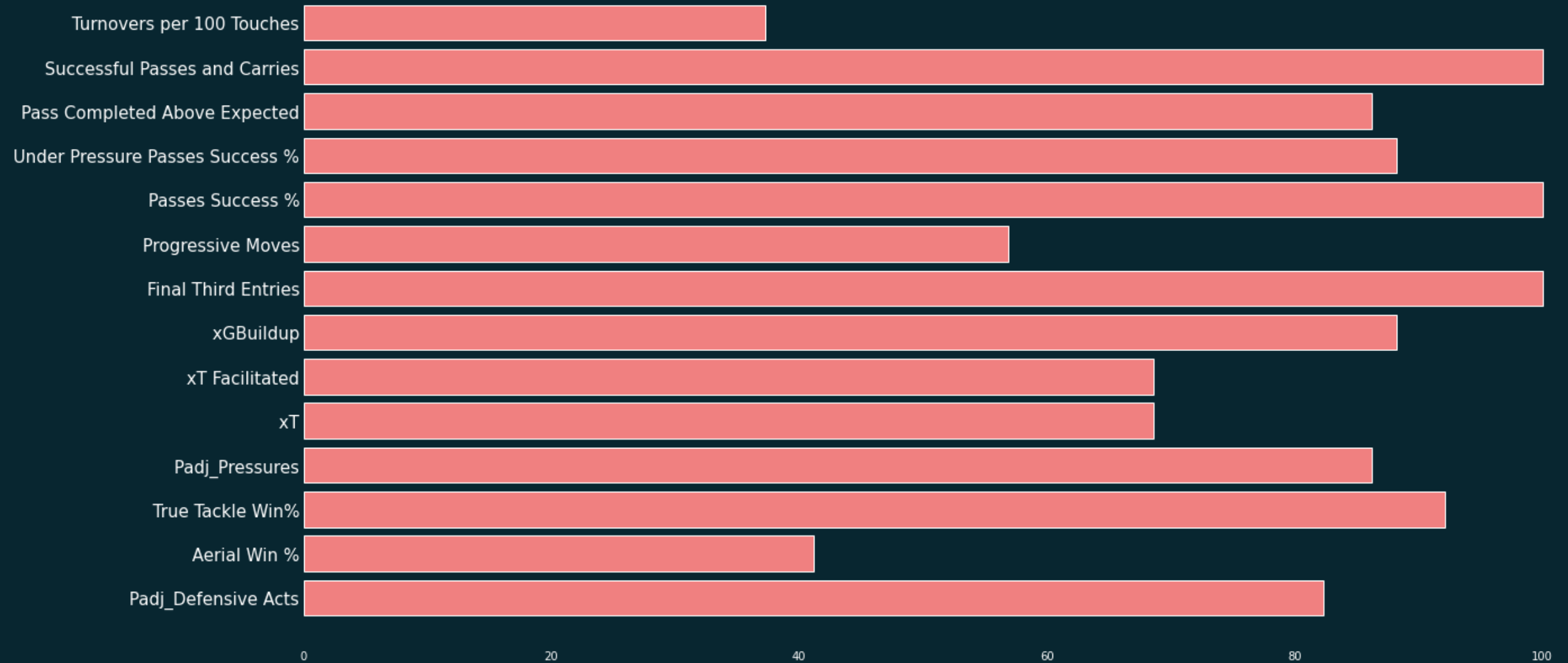
Created by : Soumyajit Bose



Sergio Ramos García

WC 2018

Created by : Soumyajit Bose



Mats Hummels

WC 2018

Created by : Soumyajit Bose



Simon Thorup Kjær

WC 2018

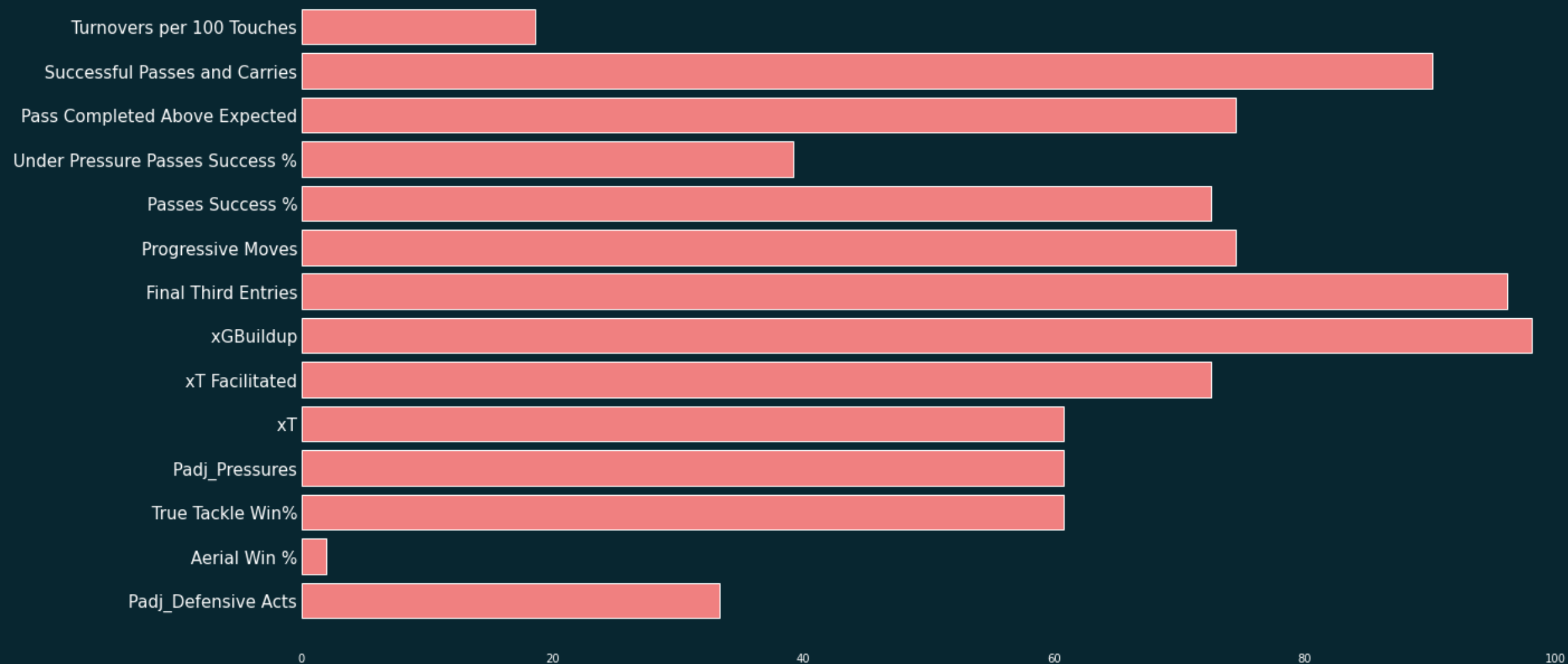
Created by : Soumyajit Bose

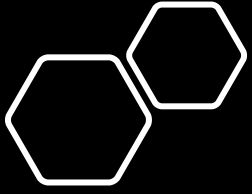


Toby Alderweireld

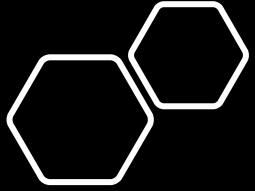
WC 2018

Created by : Soumyajit Bose

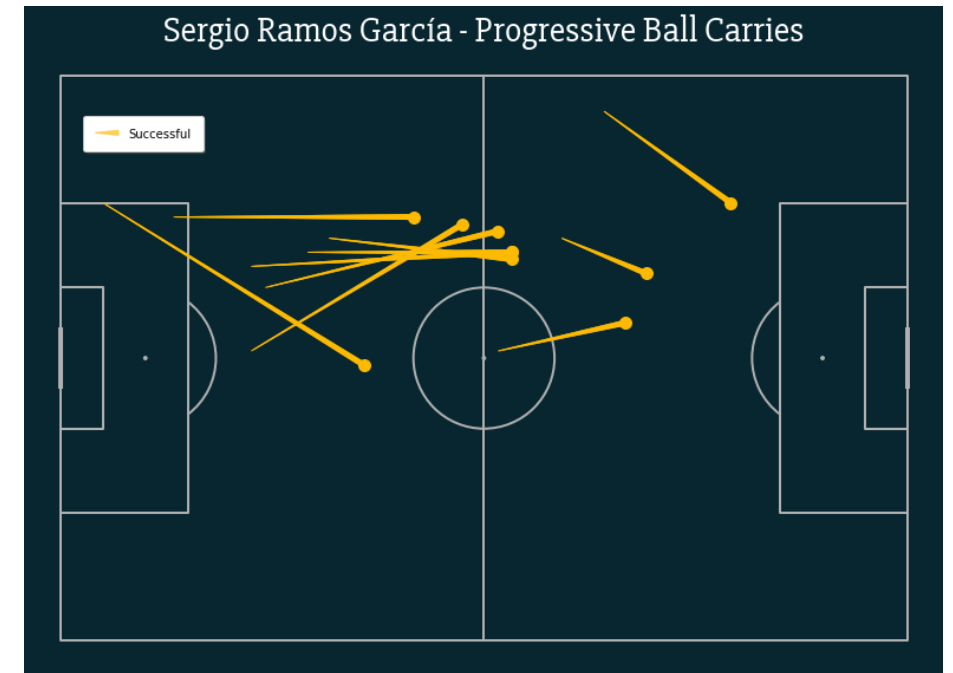
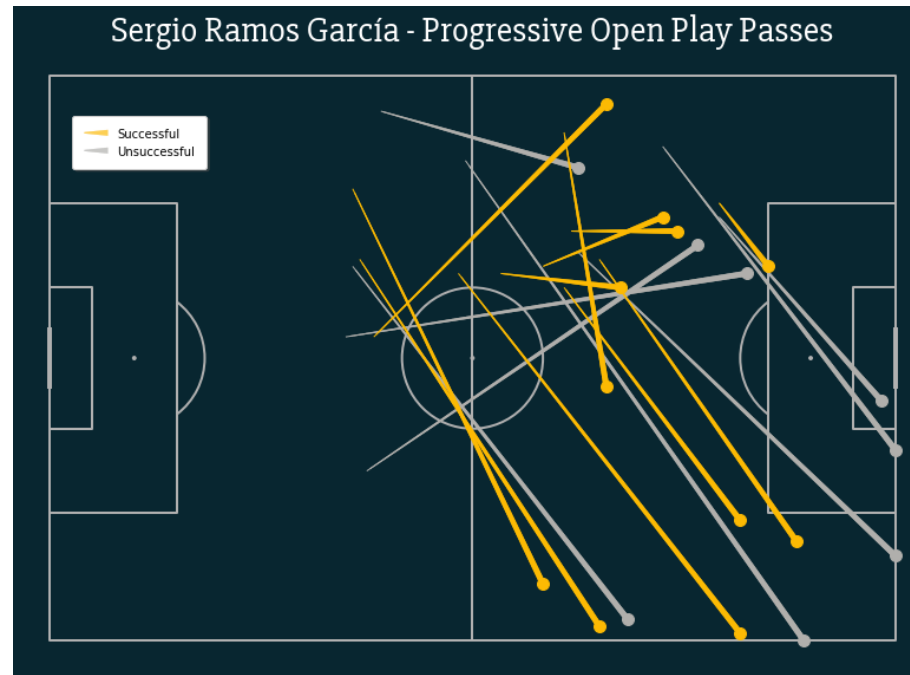


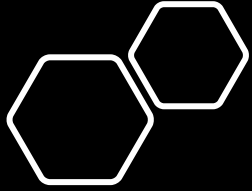


Sergio Ramos and Mats Hummels stand out the most. It's a tough choice between Gerard Pique and Harry Maguire. I lean towards Maguire as he has fewer turnovers and better defensive duel win %, while the possession metrics are fairly comparable.

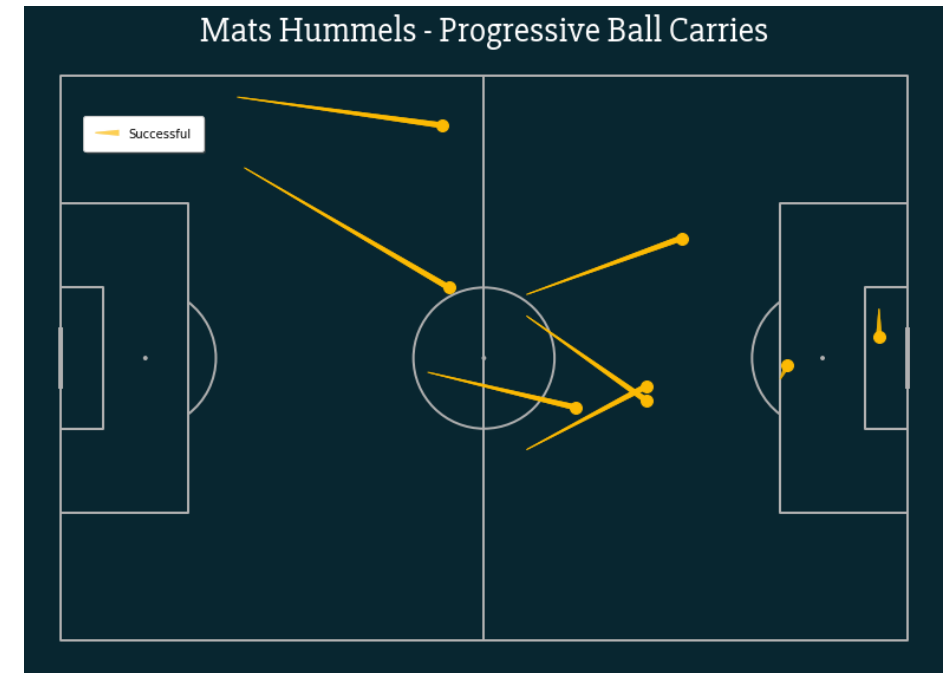
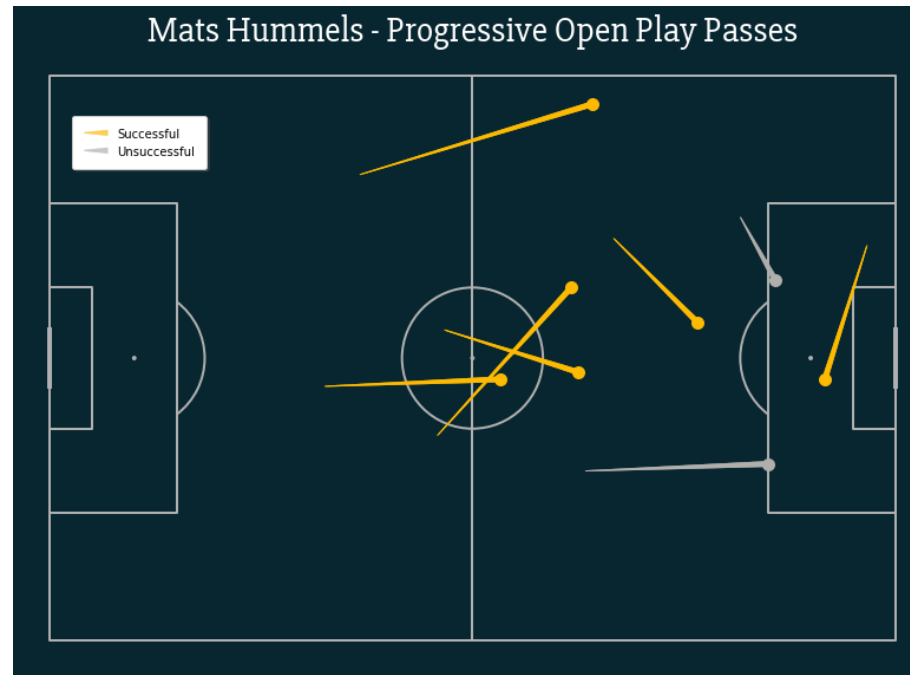


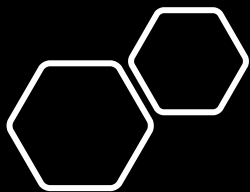
Sergio Ramos
Progressive Passes
and Carries – lots of
cross-field diagonal
balls, and stepping
up through the
center when
carrying.



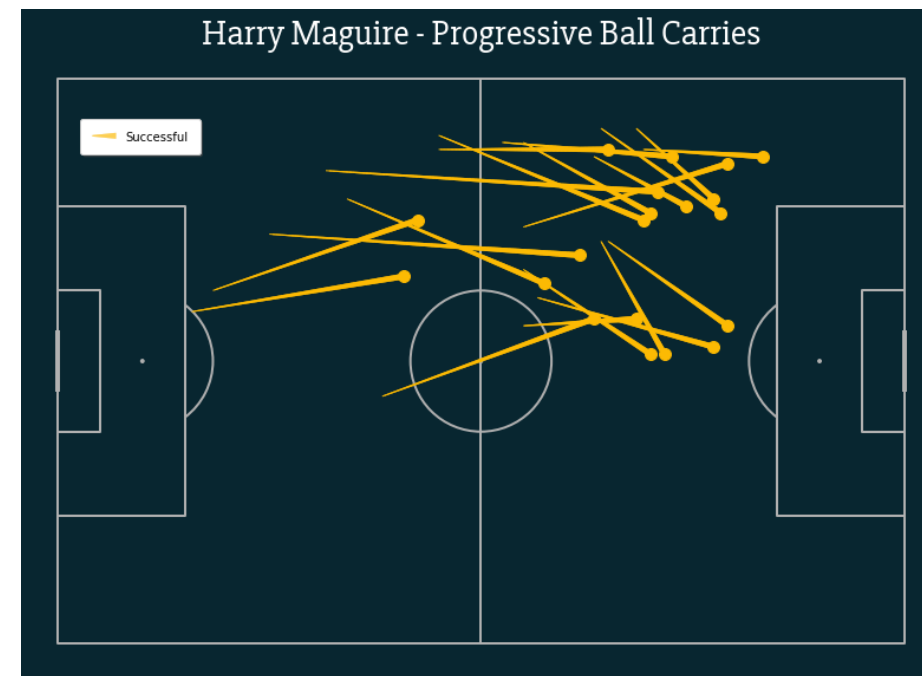
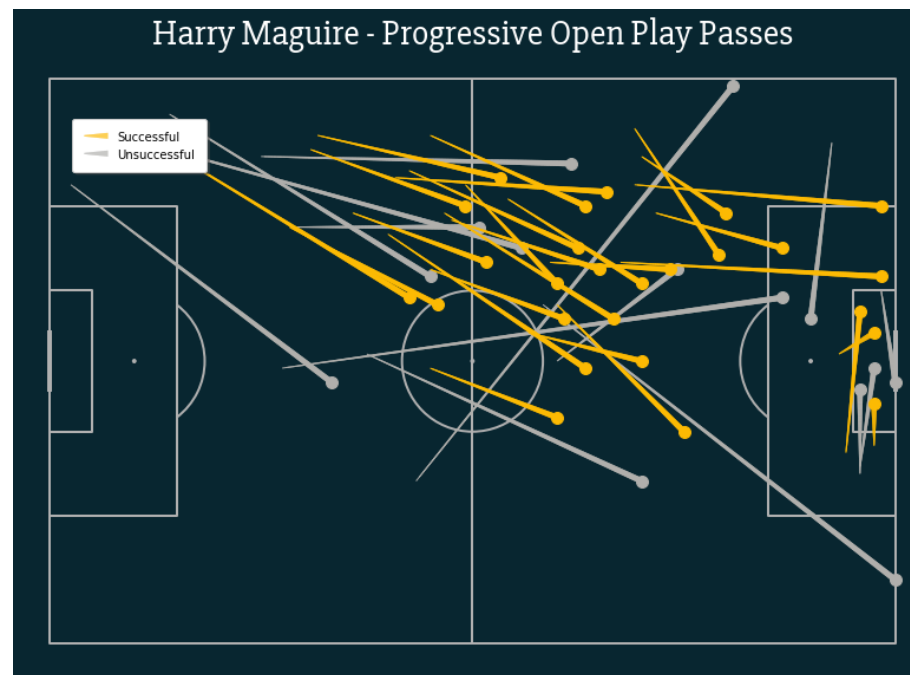


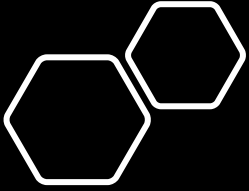
Mats Hummels
Progressive Passes
and Carries – small
sample size, but
mostly though the
center of the pitch.
More vertical.





Harry Maguire
Progressive Passes and
Carries – lots of half-
space probing. Long
balls into the penalty
area as well.





- Statsbomb open data was used to identify ball-playing abilities of center back during the World Cup 2018.
- Potential caveats – small playing time and sample size for players.
- Top 3 ball-playing center backs selected – Sergio Ramos, Harry Maguire and Mats Hummels.
- Their attributes and progressive passing/ball-carrying depicted visually.
- Thanks to Lee Dunn at Norwich City FC for this wonderful opportunity.