



Expected Threat (xT) Model Attacking Midfielder Recruitment

Arsenal Head Scout Report - Summer 2018

BACKGROUND & NEED

With Mesut Özil's likely departure, we've developed a data-driven approach to identify his replacement. Our analysis shows that our current playing style features:

- High forward pass ratio (61%)
- Strong emphasis on central progression (23%)
- Significant focus on final third entries (31%)

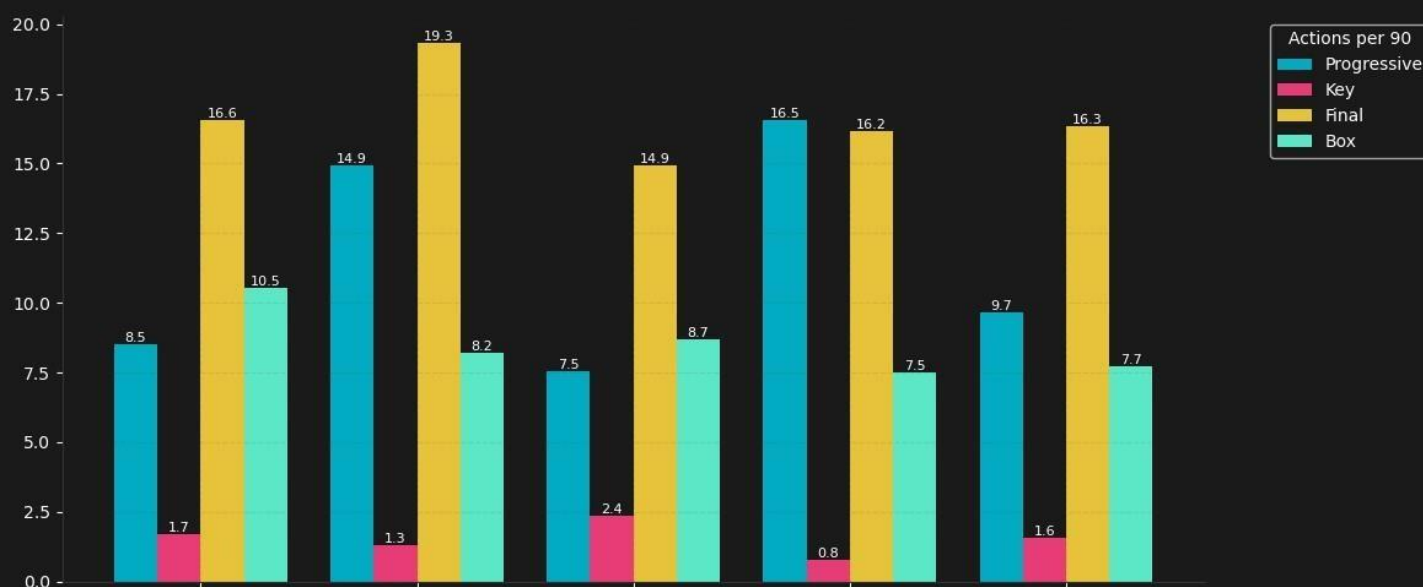
To maintain our attacking effectiveness, we've created an Expected Threat (xT) model specifically designed to evaluate creative midfielders who can both orchestrate play and progress the ball.

THE MODEL EXPLAINED

Our Expected Threat (xT) model uses Ordinary Least Squares (OLS) regression to calculate the threat value of each action. This is an action based model, meaning it evaluates specific actions impact rather than purely positional data.

- . Progressive passing - How effectively they move the ball forward
- . Final third success - Their ability to operate in attacking areas
- . Key passes - Direct chance creation
- . Box entries - Getting the ball into dangerous areas
- . Successful passes - Ball retention
- . Attacking third presence - Positioning in advanced areas

Elite Creator Comparison



As shown in the bar chart above, we've compared the top candidates across these key metrics, measuring their actions per 90 minutes.

WHAT THE MODEL ASSUMES

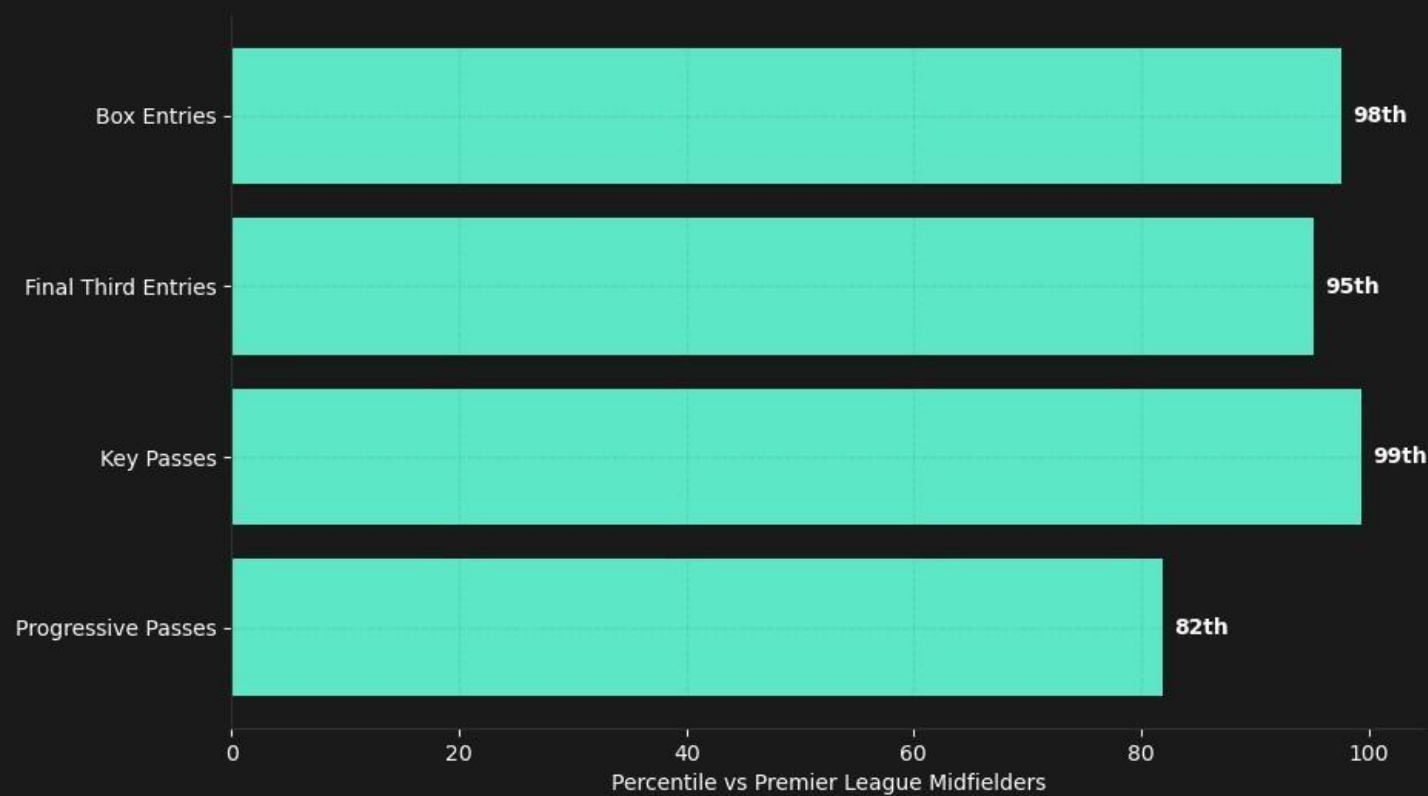
To properly interpret the results, it's important to understand the model's key assumptions:

- The most valuable actions are those that progress play or create chances
- Moving the ball from midfield into the final third is particularly crucial
- Both direct (key passes) and indirect (progression) chance creation matter
- Ball retention through successful passing supports attacking play

KEY FINDINGS

After analyzing over 600,000 events across Europe's top five leagues, our model identified Luis Alberto as the ideal candidate. His profile stands out particularly well when compared to Premier League midfielders:

Player Profile: Luis Alberto



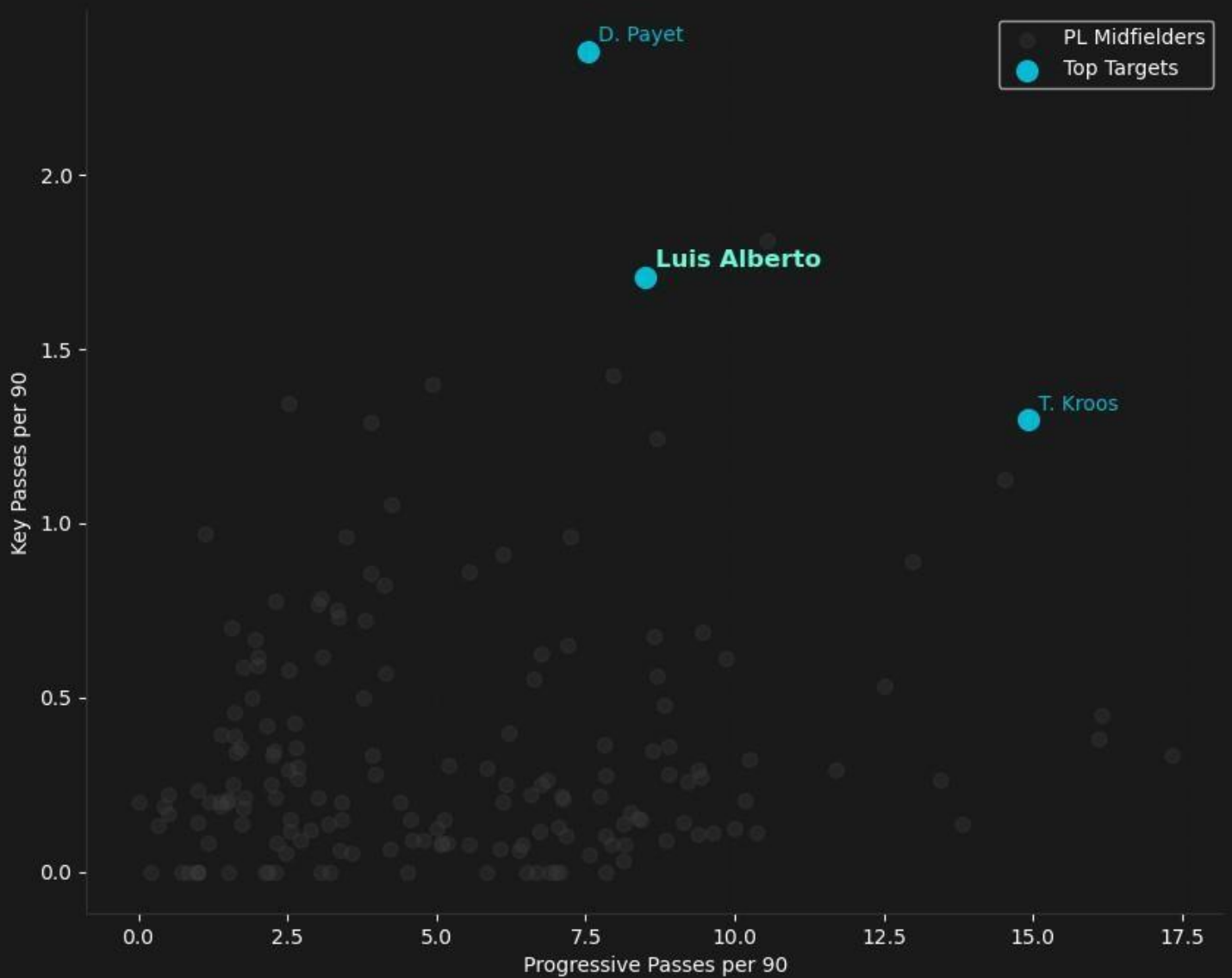
As shown above, Luis Alberto ranks exceptionally high across all key metrics: 99th

- percentile for key passes
- 98th percentile for box entries
- 95th percentile for final third entries
- 82nd percentile for progressive passing

COMPARATIVE ANALYSIS

When plotting progressive versus creative actions, we can see how our top targets compare to the broader midfielder population:

Progressive vs Creative Actions



This visualization shows Luis Alberto's balanced profile between pure creators like Payet (higher key passes) and pure progressors like Kroos (higher progressive passes), making him ideally suited to our needs.

CONCLUSION

Based on our xT model's comprehensive analysis, Luis Alberto emerges as the ideal candidate to maintain our creative output while adding more vertical threat to our play. His balanced profile across all key metrics suggests he would effectively fill the gap. The model's strength lies in its holistic evaluation of both direct chance creation and build-up play, helping us identify players who can both orchestrate attacks and progress the ball effectively. This balanced approach ensures we find a player who can maintain our technical standards while adding new dimensions to our attack.