


# Building a Data Department at KU Women Soccer

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*Hi! I'm Atif!*





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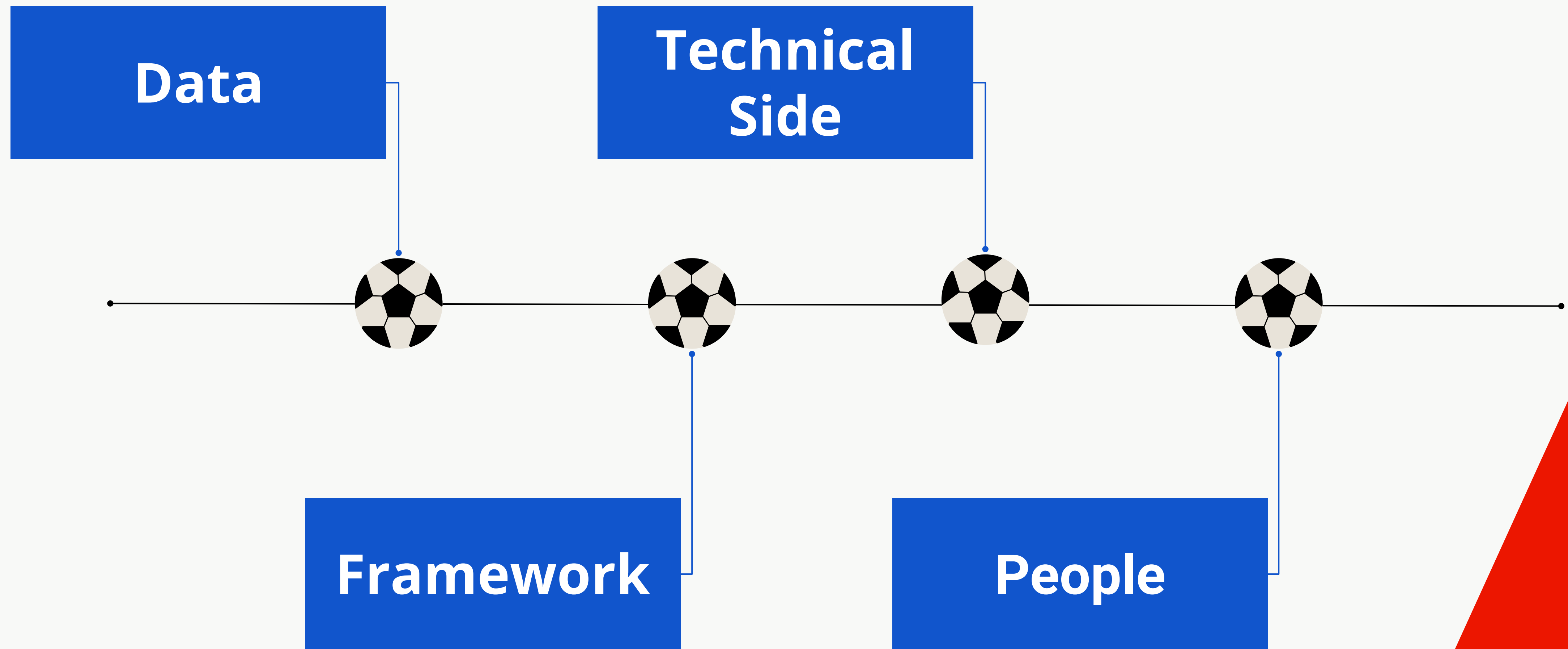
**SoccerTact**



# Introduction to Sports Analytics

Sports analytics is the practice of using data to gain insights into teams and players performance and make strategic decisions to give teams a competitive edge.

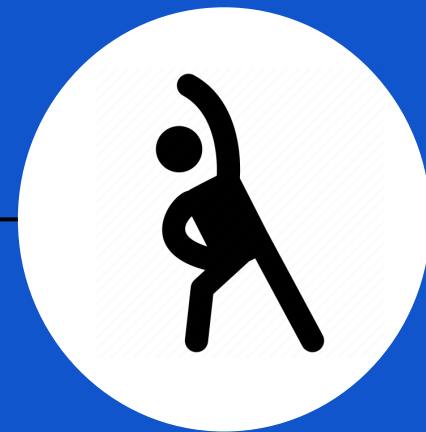
# Building an Analytics Department



# Data in Sports



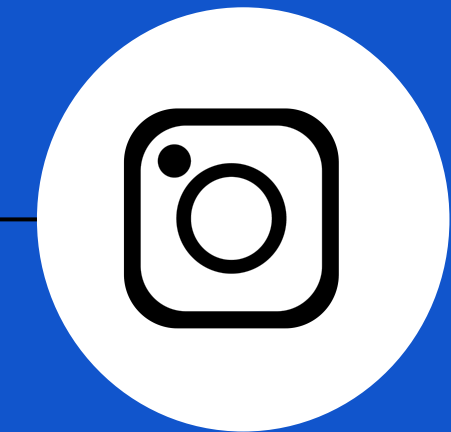
**Match**



**Physical**



**Financial**



**Social Media**

# Application of Data in Sports

- ✓ Improve In-game Performance
- ✓ Scouting and Discovering New Talent
- ✓ Sport Science Applications
  - Injury Prevention
- ✓ Business Applications
  - Contracts
  - Media Deals
  - Fan Engagement
  - Economics





# Data Translators



Data Analysts



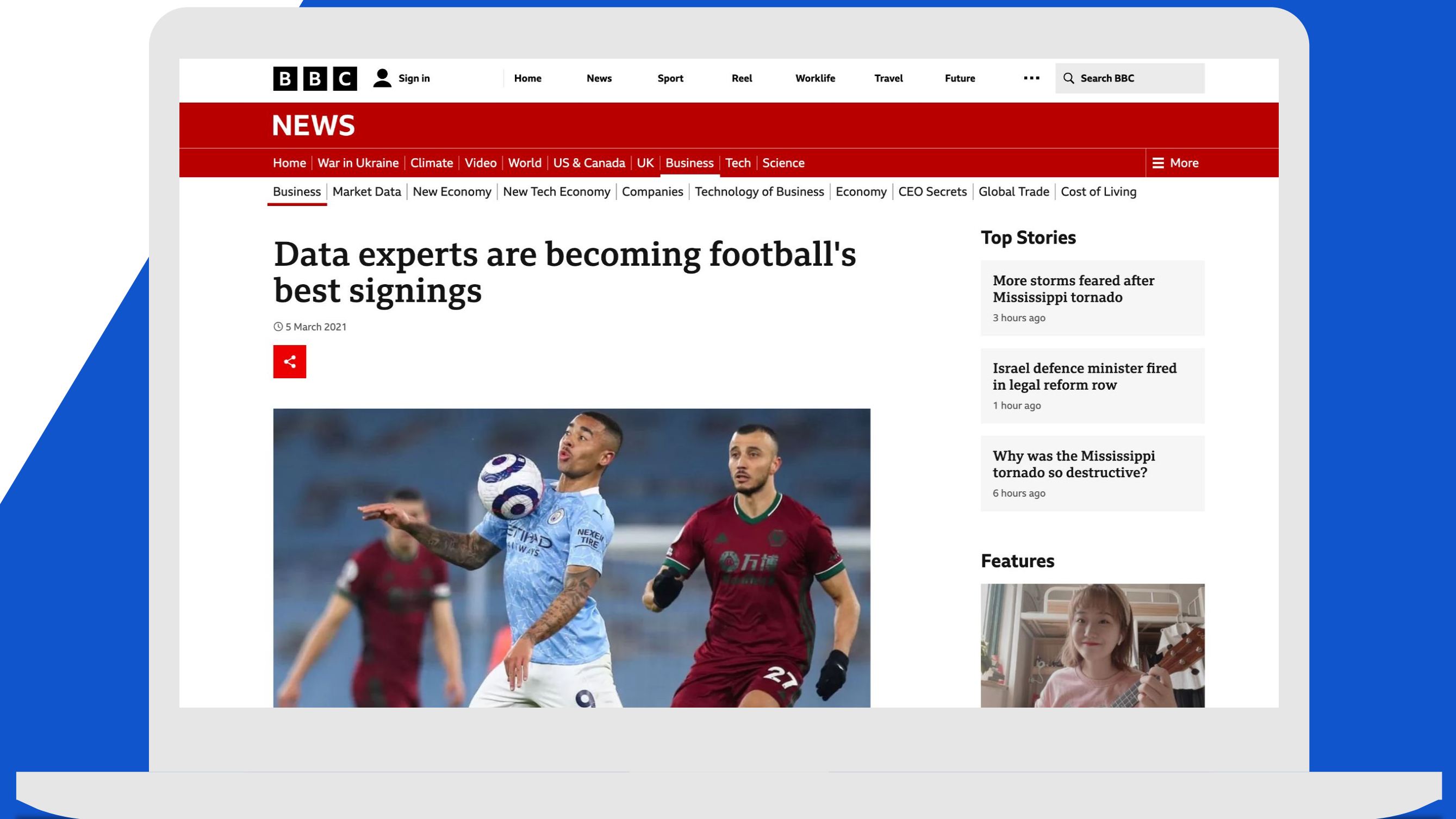
Data Scientists



Performance Analysts

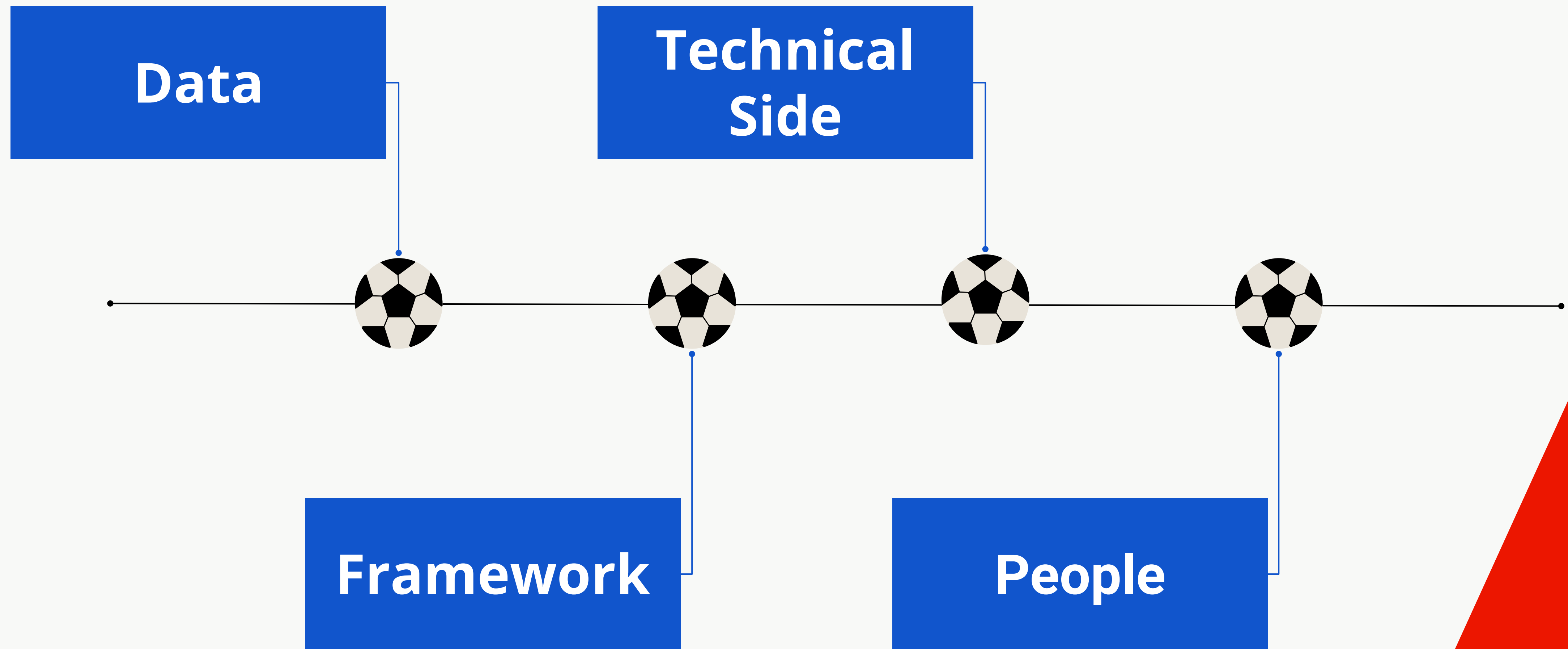


Technical Analysts





# Building an Analytics Department



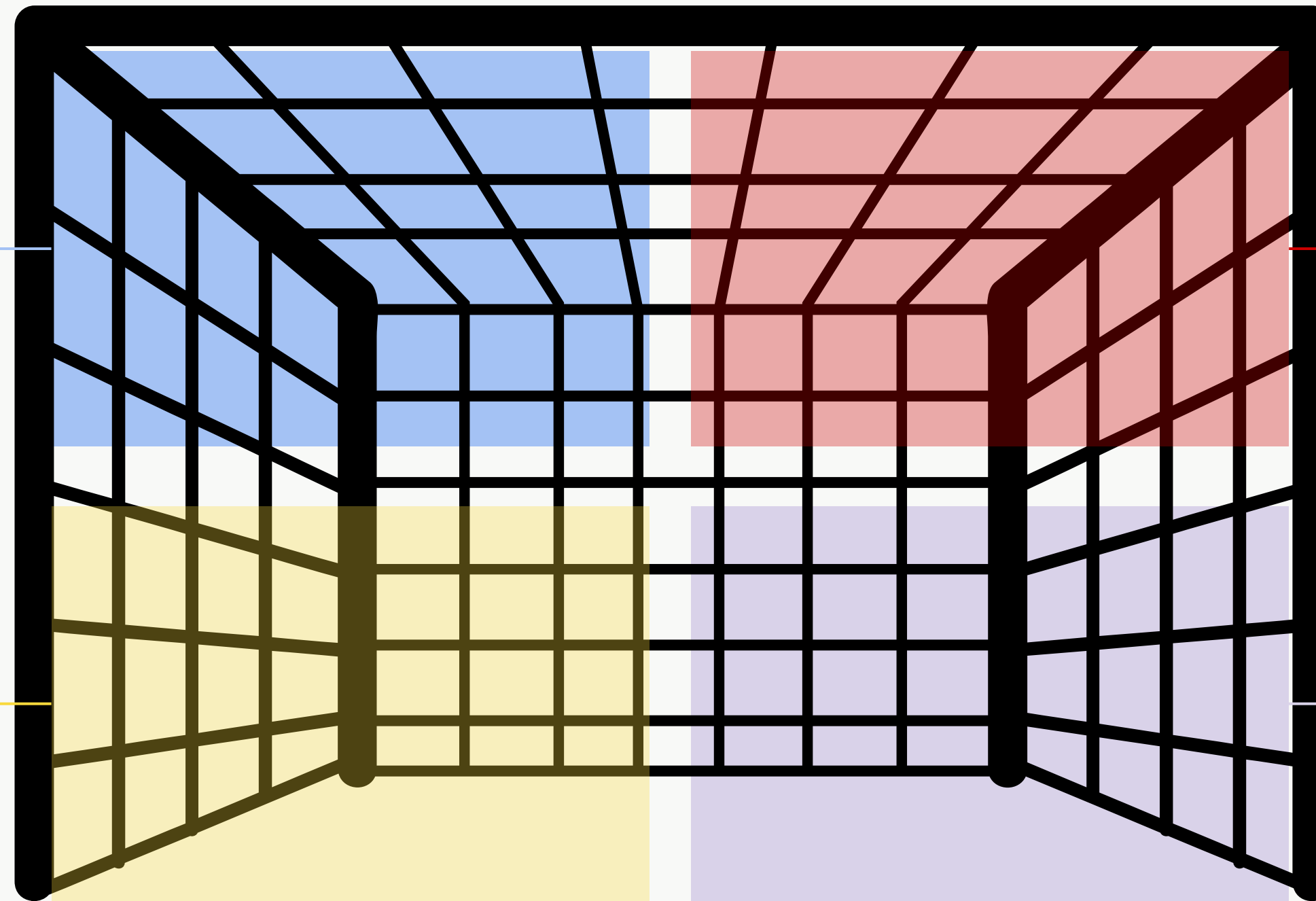
# Framework

Measurement

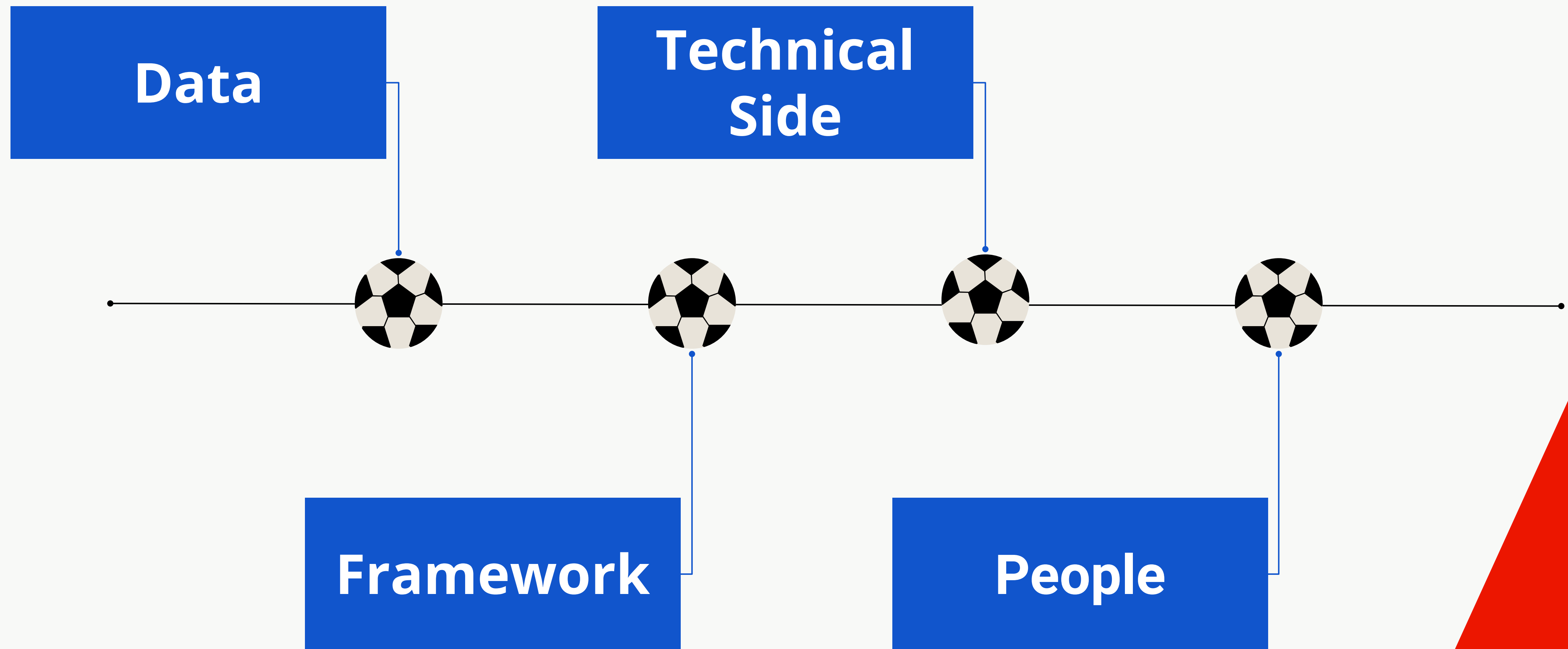
Action

Strategy

Synergy









# Building an Analytics Department

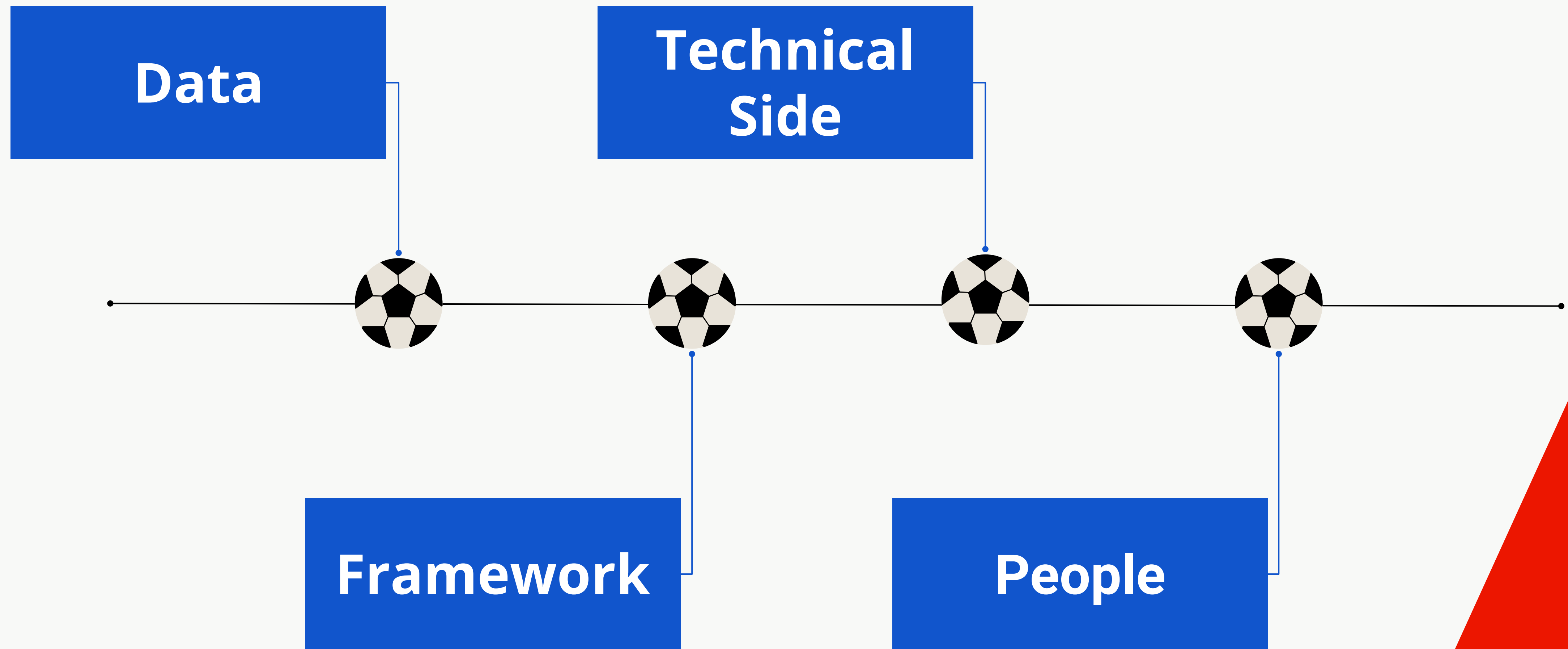


# The Technical Pipeline

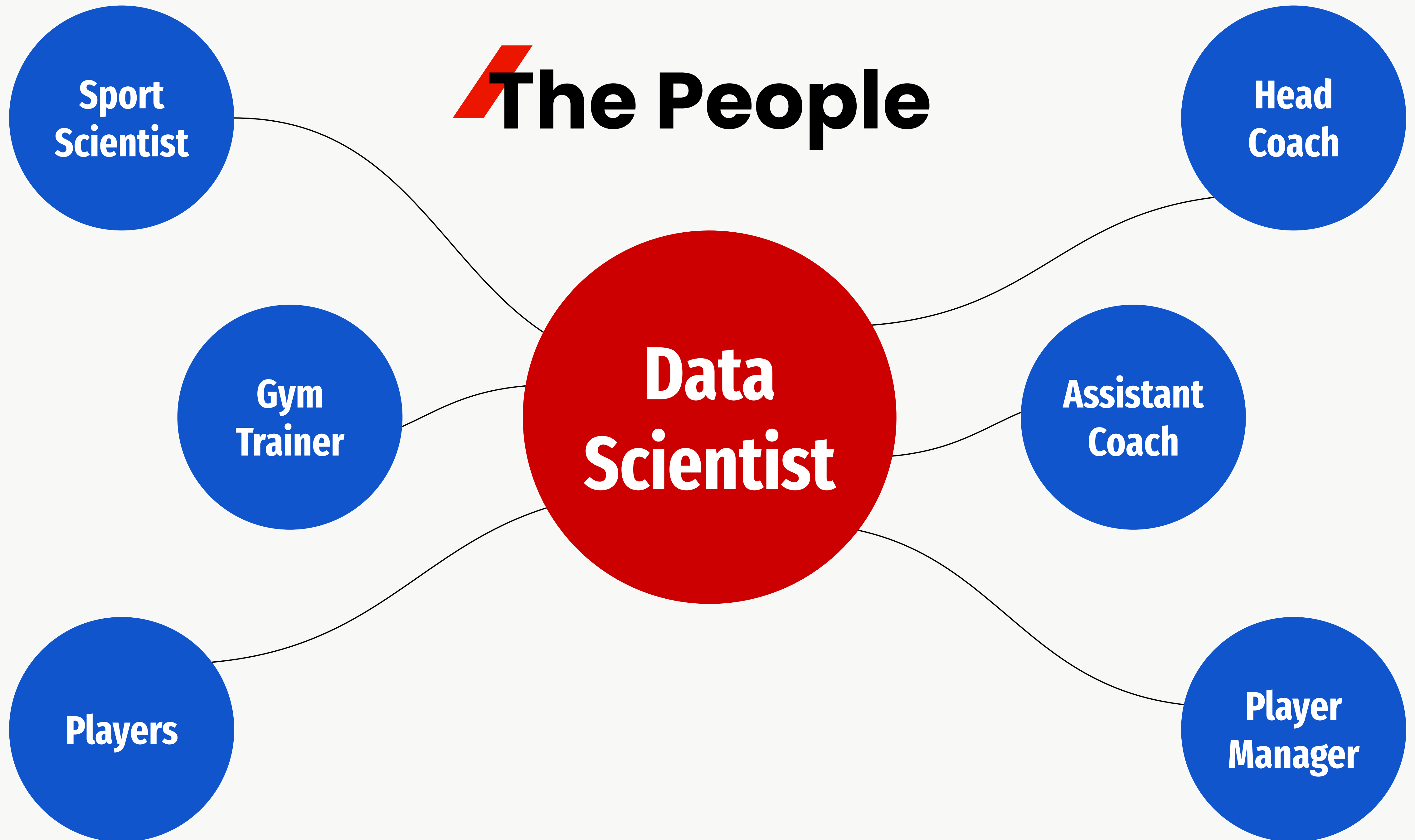


Data Sources	Data Storage	Extracting Insights	Delivery Methods
  		<p>Pre-Match &amp; Post-Match Reports</p> <p>KPI's</p>	 Google Drive  iMessage

# Building an Analytics Department



# **The People**



# The Challenges

**Have to Wear a lot of Hats**

- Data Scientist
- Frontend Engineer
- Backend Engineer
- Analyst



**Feeling like an Outsider**



**Not Knowing what to Focus on**



**Resistance to Change**





# Key Lessons

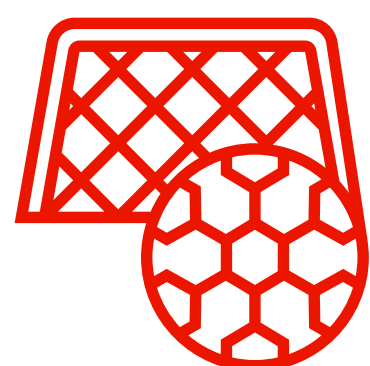
- ✓ **Communication is Important**
- ✓ **Automation**
- ✓ **Ask Questions**
- ✓ **Take Extra Time to Annotate and Explain**



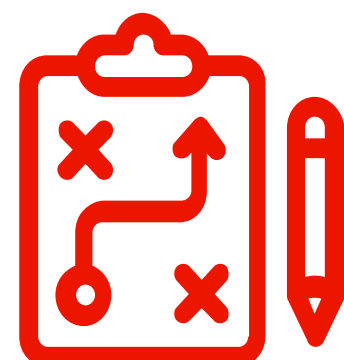


# **SOC CERTACT**

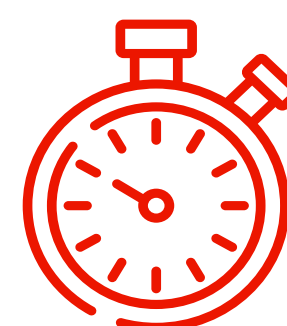
## **Your Personal Data Department**



**Extract data  
from  
sources,  
transform  
and stores  
in database**



**Develops  
insights  
from data**



**Implements data  
science &  
machine learning  
model to develop  
advance insights**



**Provides  
scouting  
reports**



**Provide a  
user friendly  
UI for no  
technical  
staff**

# SOCCERTACT



**VS**



**OKLAHOMA SOONERS PRE MATCH ANALYSIS**

# OKLAHOMA KPI - 15 GAMES

**Goals: 26**

**Total Shot: 289      Successful Shots: 53**

**Total Passes: 6062      Successful Pass: 4166**

**Attacks form Flanks**

**Left- Flank: 1269**

**Middle-Flank: 1678**

**Right-Flank: 1387**

**Total Sequences: 15658**

**Run of play: 12579**

**Counters: 1828**

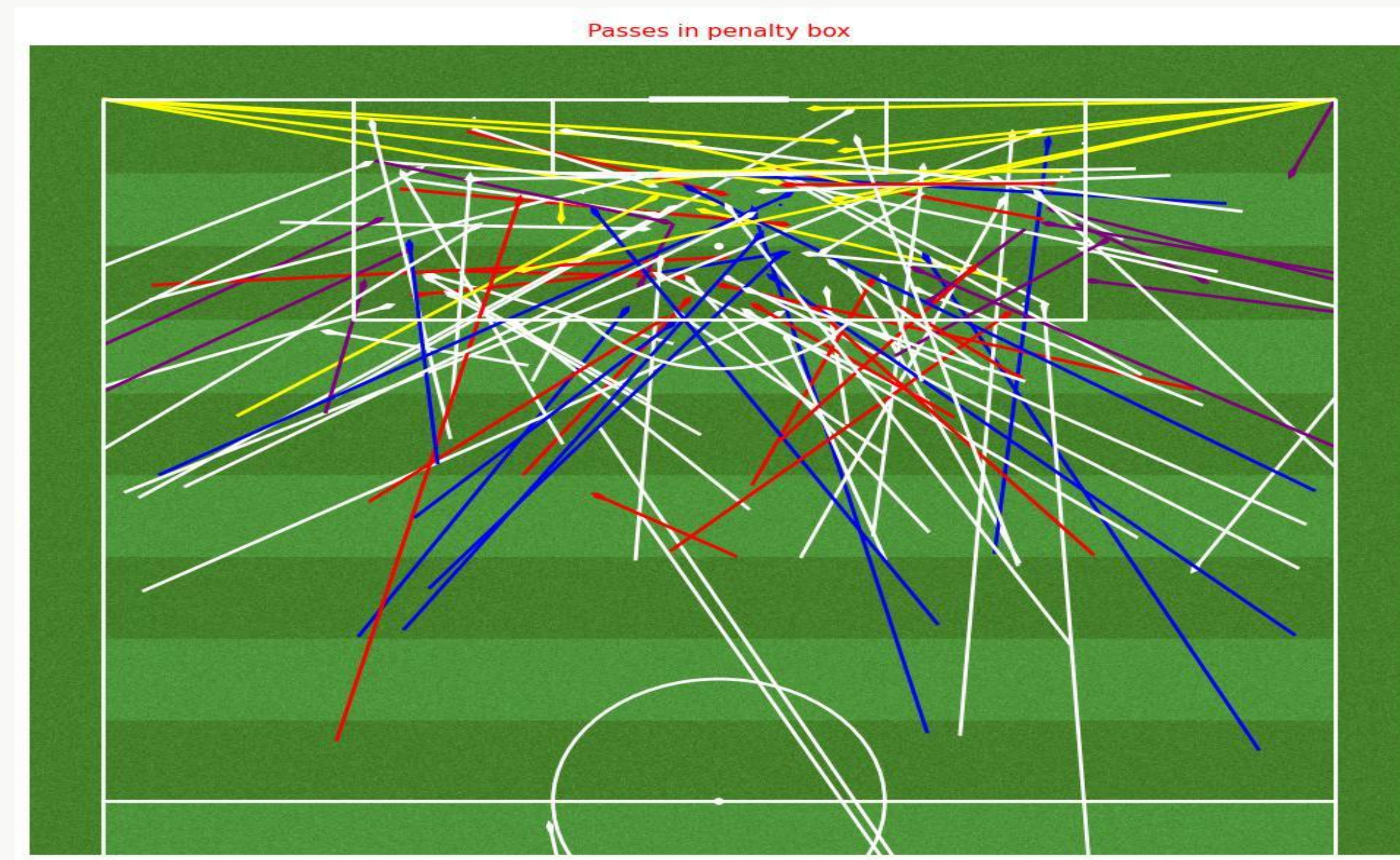
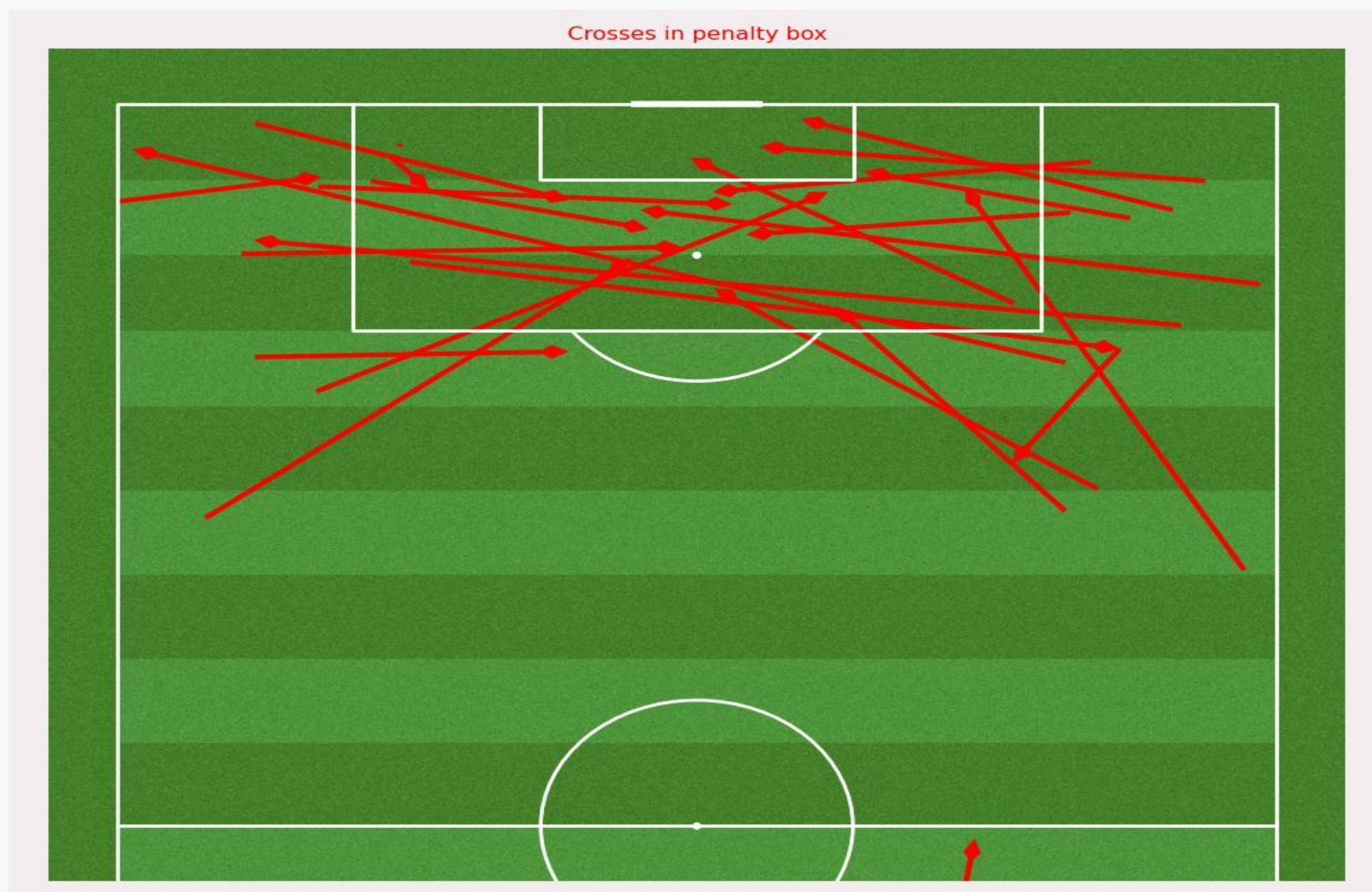
**Corners: 77              Successful: 27**

**Freekicks: 71              Successful Freekicks: 12**



# PASSES INTO THE PENALTY BOX

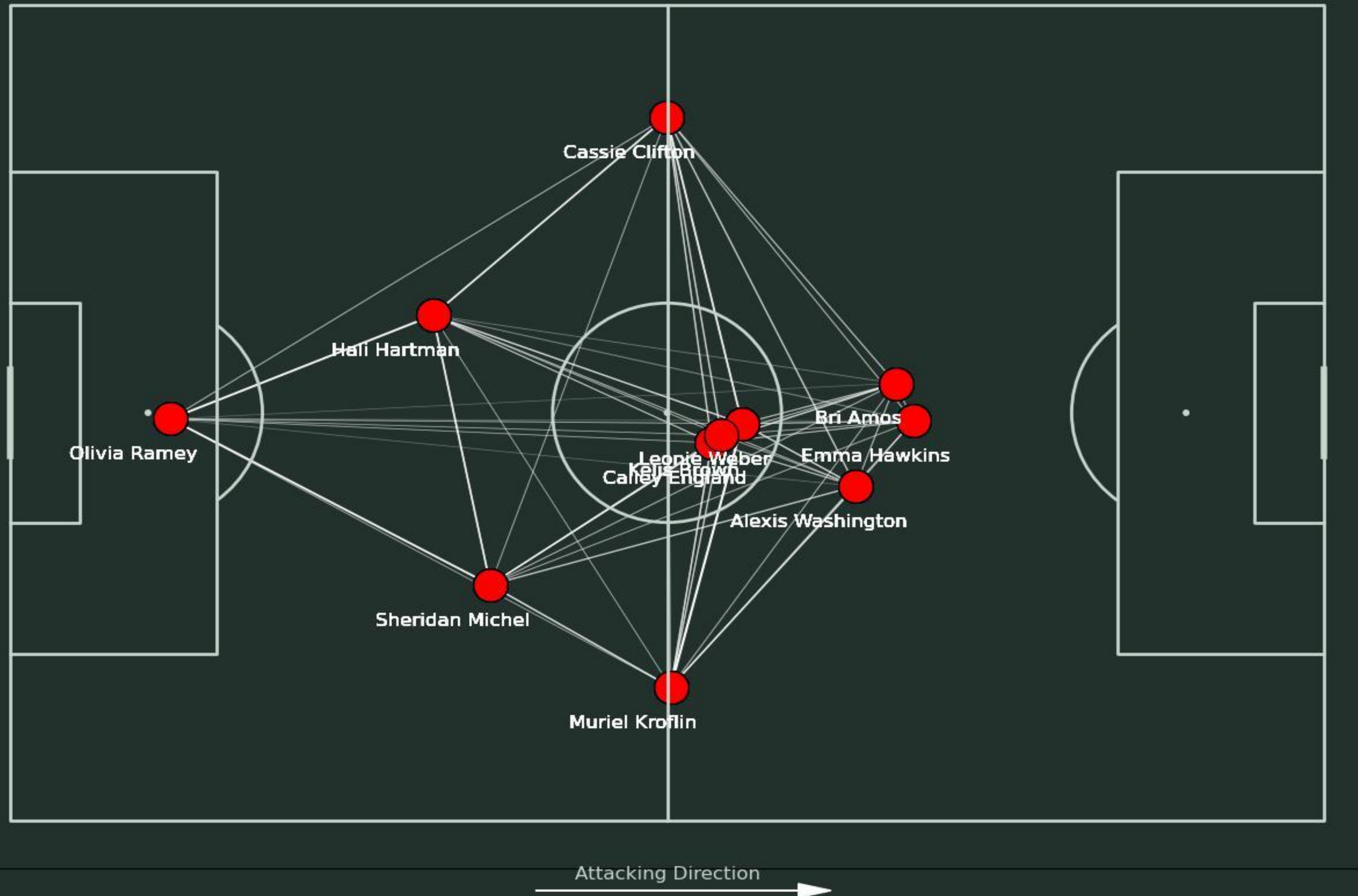
**Cross Attempted: 86**    **Cross completed: 24**  
**Pass Attempted: 340**    **Pass Completed: 135**  
**Run of Play: 229**        **FreeKicks: 24**  
**Counters: 39**        **Corner: 35**  
**Throw-Ins: 0**        **Other: 13**



- Run-of-Play
- Free Kick
- Throw-In
- Corner
- Counter



# PASSING NETWORK FOR OKLAHOMA



**What does it tell us ?**

**Passing Networks gives us a glimpse at a team possession approach.**

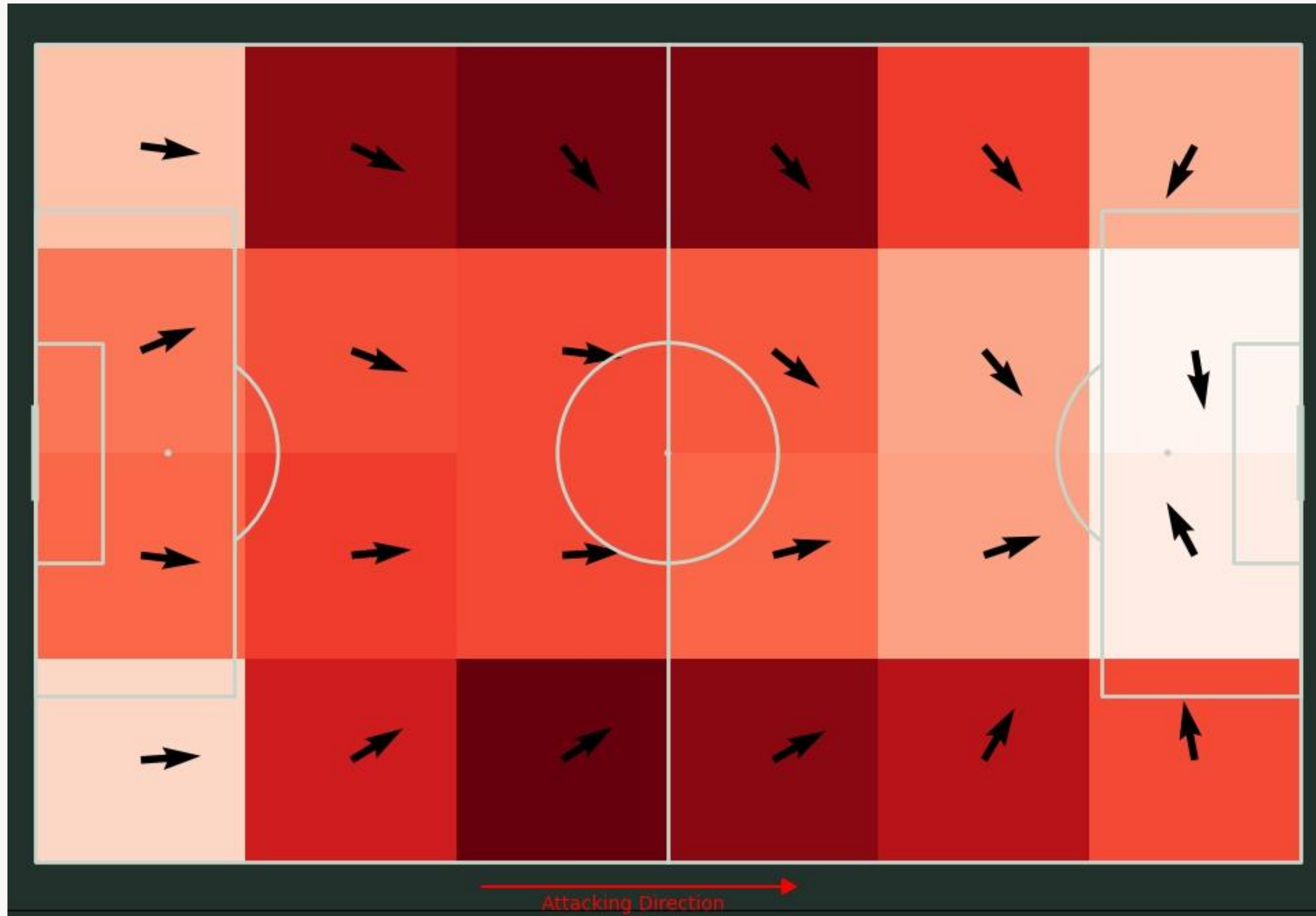
**Its shows us the average position a player takes during a match.**

**Tell the average shape of a team.**

**It also tells us who passes to whom and how often.**

**The darker the line connecting 2 players the more passes played between them.**

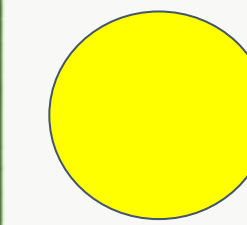
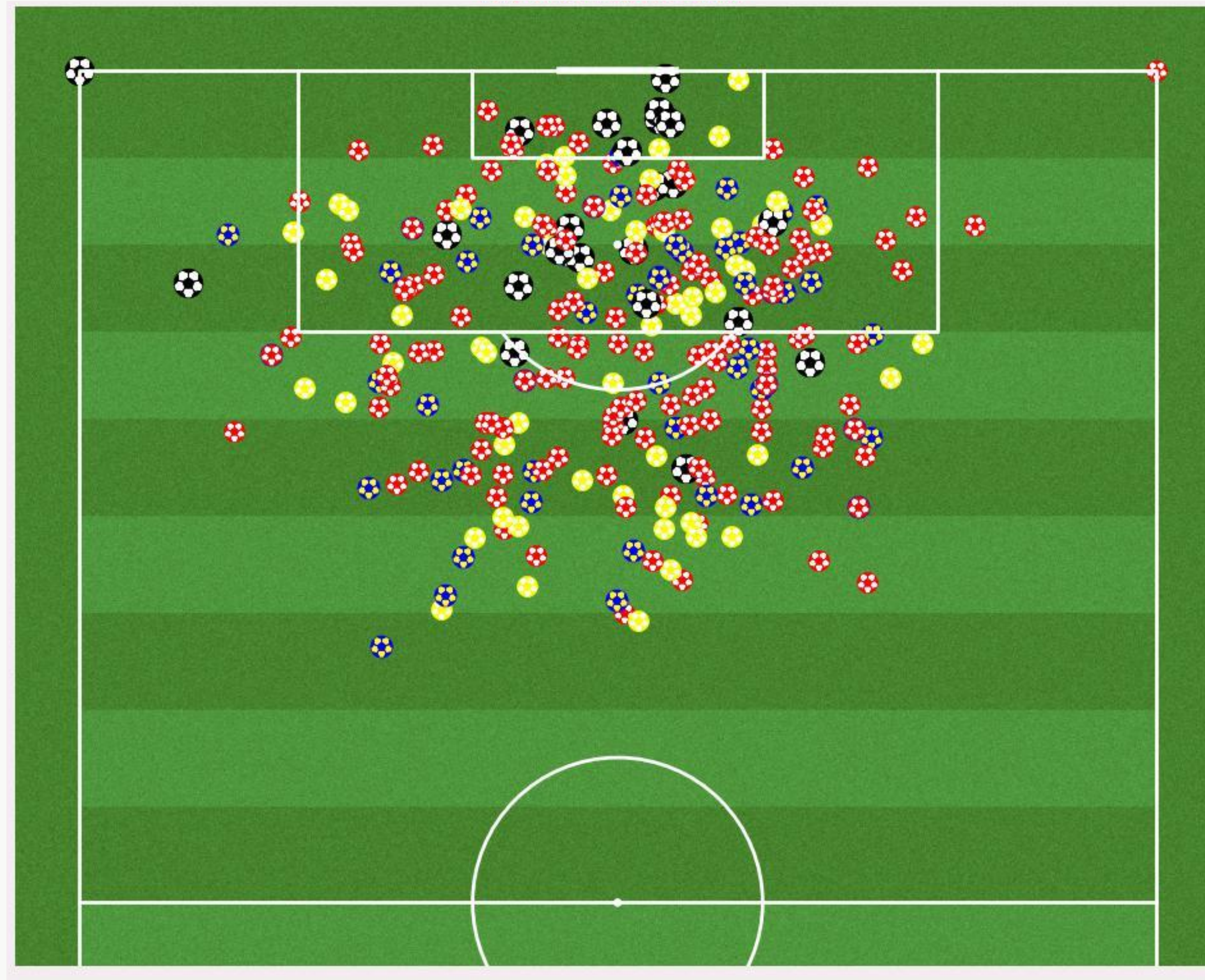
# PASS FLOW



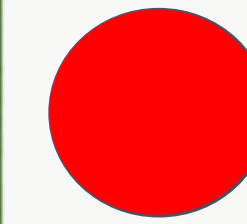
**PASS FLOW DIAGRAMS SHOW US THE PREFERRED DIRECTION A TEAM PASSES FROM A CERTAIN PART OF THE PITCH. THE SHADES OF RED TELLS US THE PERCENTAGE OF PASSES THAT ORIGINATED FROM THAT BIN.**



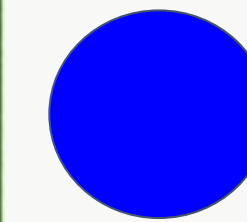
# SHOT ANALYSIS



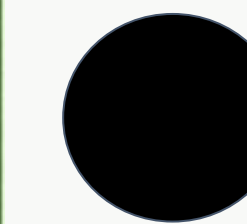
**ON TARGET**



**OFF TARGET - HIGH**



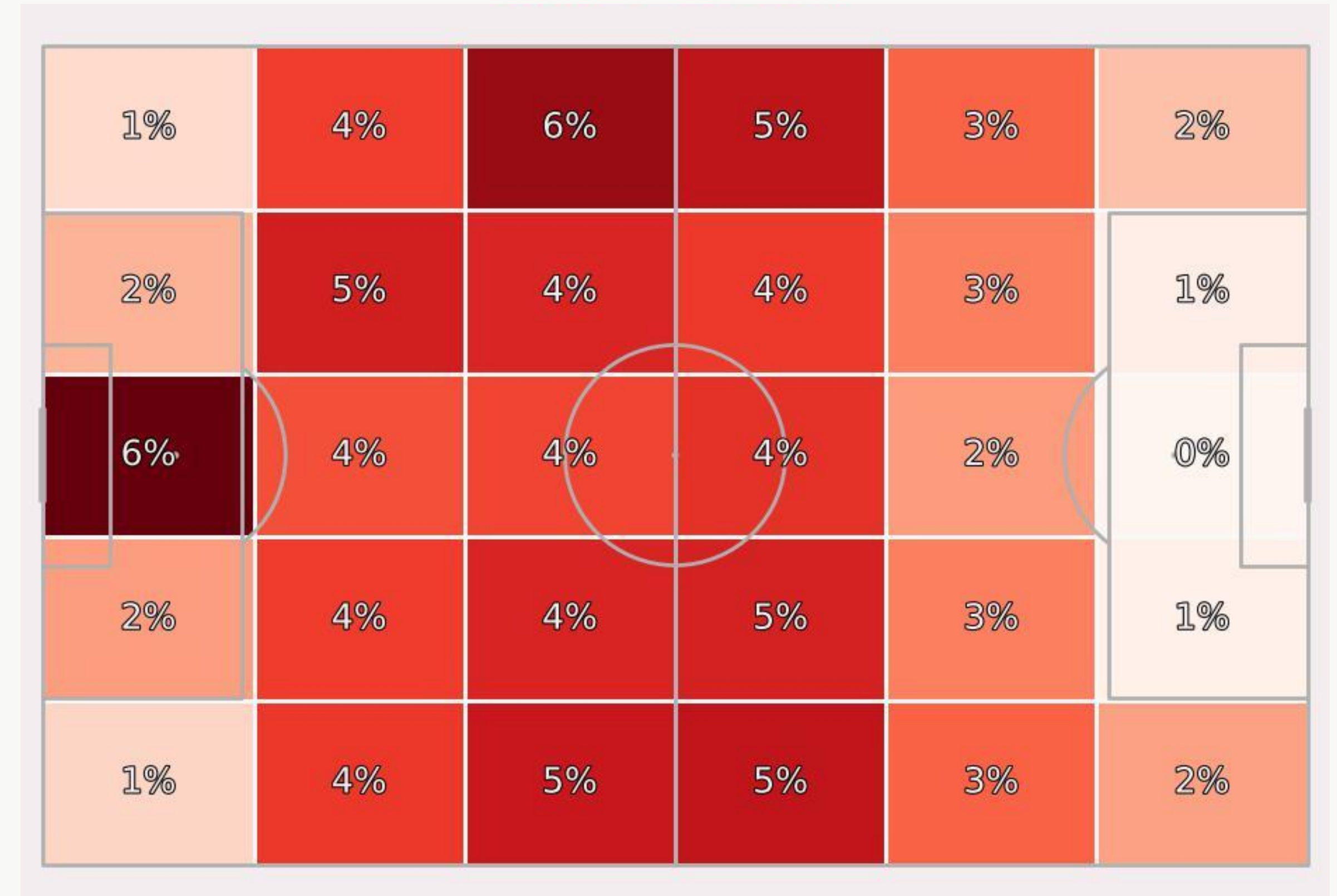
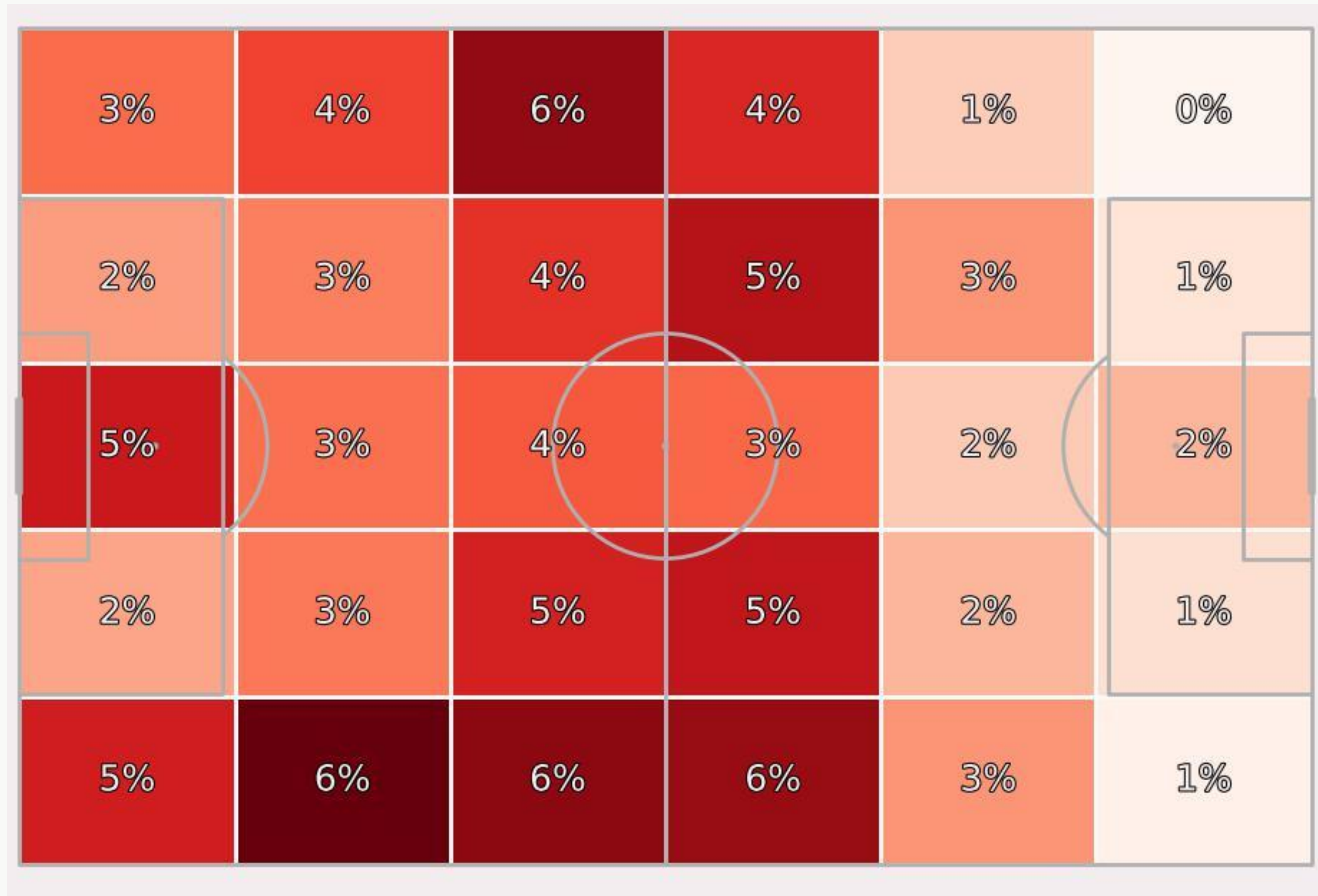
**OFF TARGET - WIDE**



**GOAL**



# SUCCESS HEAT MAPS



THE HEAT MAPS SHOW THE PERCENTAGE OF SUCCESSFUL ACTIONS (PASS, DUELS) IN DIFFERENT ZONES. OTHER AVAILABLE ACTIONS INCLUDE ( LOST BALLS, TACKLES, DRIBBLES, INTERCEPTIONS, BALL RECOVERY)





THANK YOU