Passes can come in all forms. There are many different choices surrounding passes, and many different playstyles. This strategy focuses on the value of each pass. It is a risk and reward analysis of each pass to see which passes are the best choices, and see which players tend to make these passes more often. This methodology not only rewards a player who both plays safe when there is a high risk if the ball is turned over and who plays risky when there is a low risk high reward situation, but it also uses this to display the decision making of a player when making a pass, a very difficult thing to quantify.

I chose to analyze a winger as I believe this methodology displays their skills best. A winger is a key position on offense and defense. A player must be able to play passes that set up goals, but at the same time, they must work back and make accurate and safe passes to get the ball out of the back. While I am not analyzing work rate, which is important for this, and some positions prioritize going forward much more than helping defend, these scenarios will still occur for any winger. Therefore, high quality passing decision making and accuracy is key for the position.

There are a few key assumptions in this methodology. I chose not to include offside passes. Sometimes it is the fault of the receiver straying offside, and sometimes it is the fault of the passer choosing to pass to someone offside. Since more often than not it is the fault of the receiver, I decided that it would lower the value of through balls and benefit those who rarely play balls in behind. A big assumption I made was that I assumed each pass had a direct effect on the current/next possession. With more time, I could weight each pass based on how removed the pass was from a goal, but for this project, I decided to base it off of one possession, since a pass has too little effect on anything beyond that.

This methodology doesn't heavily promote one style of play over another. It promotes both playing safe when necessary — low risk of turnover and low risk of scoring — and taking chances when they can — passes with a high risk of turnover, a high chance of scoring, and a low risk of conceding. If we just look at passing completion, we give a stronger preference to players who take less risks and play the easy passes all the time, which is sometimes the best choice but not always. Looking at the value of the pass gives equal preference to players, no matter how much of a risk taker they are, as it weights the pass completion of a pass against the risk and reward of that pass.

This methodology does have some cons though. One big con was that I only weighted passes against other passes, not taking into account if a shot, dribble, or other action was a better choice. This methodology still captures a player's decision making well when it comes to passes, but including these other actions in a bigger report would likely display decision making even better. I also don't value shot-assists any higher than a pass out of the back if those two passes resulted in the same shot, but since I am comparing players within their positions, this isn't too much of an issue. This methodology also doesn't take into account the scenario the game is in. It doesn't acknowledge that a team may be more focused on scoring than not conceding when losing near the end of the game. While passes during this focus may have a higher expected goals against, most teams often don't care if they lose by one or two at that point in the game. They would rather go for a tie, so the expected goals against doesn't matter as much. While this methodology doesn't take that into account, these scenarios take up only a fraction of all of the passes, so the average risks of each pass shouldn't be affected too much. With more time and data, I could consider these scenarios, or remove them to ensure no outliers.

With more data and time, I would focus on including more information in each type of pass, considering more scenarios, and dividing players into more specific groups based on more specific positions, gender, opponent difficulty, and competition difficulty. More data would allow these more specific divisions to all have enough data to be valuable. I would also work to remove the cons listed above by taking into account more information about each event. With more time, I would take into account the match 360 data to find where players are around the field during each event, along with the distance of each pass, since these can have an effect on if a pass is more valuable or more dangerous. Taking into account the height of each pass helps with this, but still doesn't show the whole story. I would also take into account the result of the event following each pass, as even a safe pass could lead to a turnover in the next pass if it is a pass that puts a teammate in a bad position.

I would also value different types of passes differently. I valued missed passes that went out the same as passes that were intercepted in this methodology, but with more time and data, I could use player locations to decide how dangerous an interception is at any point on the flight path of the ball, not just how dangerous each pass is. This would need more data as well, as it would create even more possible passing scenarios.

While I could take much more information into account with more time and data, I believe that this methodology greatly shows the value of passes on average, and in turn the quality of players' average passing and decision making abilities.