# An introduction to the problem/opportunity statement regarding New Castle Club Payment Opportunity

Football or Soccer game is perhaps one of the unopposed most popular game in the world. It has the largest fan base all over the world, with the latest word cup in Russia having a global view of approximately 4 billion. From this back drop, also football teams have acquired a large community of fans in their backyard and also all over the globe. Especially the teams with long and rich history such as Newcastle club. Newcastle United football club was founded in the year 1892 after the merging of two former Tyneside clubs which are Newcastle East End and Newcastle West End. In 1983 it was elected to the football league and became an English professional club. It has been a member of the English Premier League in for many seasons from when it was founded. Having been a top tier in English premier league for a long time, it has gone for relegation in the second tier for only three years with 2016 being the latest. It has also won 4 champion leagues, 6 FA cup and a charity shield. In the latest years the team has had poor performance of almost being the last in the top tier primer league. Mike Ashely has been the owner of the club since the year 2007 to 2020. Under his leadership, the team performed poorly because he did not invest in the club, making it to undergo two relegations. Currently, Newcastle has acquired a new owner which is the Saudi Arabia's Public Investment Fund, which is headed by the crown prince Mohammed Bin Salman. The New Owner has shares of 80%. Considering the change of leadership in Man city club brought a tremendous difference in performance for Manchester City, winning championship title and Fa cups, the people are excited for the new changes coming to the club to boost its performance. This report focuses on how to improve the performance of the club under the leadership of the new owner. From the reviews, the people are happy that the club is not on the hands of one person, but it is back to the people and with the right management put in place to help steer the club to the right direction with better performance.

# Theory to link problem/opportunity statement with business intelligence/data analytics system

Data analysis and intelligence business wise Business have become a crucial aspect of any academic field or business. It adequately gives insights and valuable information to business and other fields. Business that has reached a turnover of 13.2% in 2017 is the technology software closely followed by Retail and store with a turnover of 13.0%( Michael Booz, 2015). They have largely attributed their success due to some form of business analytics. A Business Intelligence Dashboard hence becomes an important tool for a business. It provides an intuitive format that is easy to read and understand the trends and analytics in the business. The Business intelligence dashboard gives details of sets of interactive maps or charts that enables a user to drill further using different parameters to get exciting results. Forecasting of business performance can be achieved through these data analytics. A most profound and significant and way of achieving this is by using the Key Performance Indicators or rather abbreviated as (KPIs). This KPIs are used to systemize the forecast processes to help the decision makers to check and evaluate their business strategies in order to achieve the long-term aims and goals. The most important thing is that this process analyses the key perfomance indicators of a player and evaluates his contribution to the team. This analysis starts by focusing on:

a) the cost of transfer of the player to the Newcastle football team,

b) then after the cost of the transfer, has the player been of profit to the team?

C) what value has he added to the team.

The value and contribution added to the team is based on the following key indicators, the number of minutes played, the total points the team acquired through him, bonus, points per game, selected by percentage and the status of the player whether he is available or not available.

# Critical analysis and justification of developed dashboard (MS Excel Dashboard)

The formulation of a dashboard is essential in evaluating the perfomance of a player. The dataset used is the one of Newcastle city players regarding their perfomance. The used dataset includes all the critical performance Indicators and features of the team's player and their overall performance since they joined the club. This gives the picture of the level of return on investment. From the results gotten in the Dashboard, the first chart in the Dashboard, is the position vs cost chart. This chart shows the position which the player plays, be it forward, mid, or Defender. The other graph complimenting the first graph is the in the Dashboard shows the player and the cost of transfer and also the age, of the player in the team. This gives us the total cost of the player in regards to his position. It also gives us the key performance of the position the player plays in. The key performance shown include the sum of price of the player selected, sum of total games played by the player and also the sum of Goals the team obtained through the player.

The next graph in line is the Attacker’s Statistic chart. The Attacker’s Statistic chart underscore the main point in the Dashboard as it shows a bar graph of the essential key performance indicator of the player in the attack category of the game. The markers or attributes that are categorized as offensive play or attack play are the key performance indicators that are used to get the player’s attack statistics. This offensive play attributes that players possess can be quantified through some of the following metrics for measuring key performance attributes. They include the This is some of the most important key performance metrics that are considered to measure up the contribution of the player to the team in general sum of shots per goal (shot/g. This is the sum of specific shots kicks that player made in order to score. This is inclusive of shots on target and shots off target. The second one is the sum of SOT per goal (sot/g), The third attribute is the sum of cross per goal. This is the sum of crosses that the player gave to assist in scoring a goal. The fourth attribute is the sum of AccCross per Goal (AccCross/g). The Fifth attribute is the sum of Key Pass per goal (key pass/g). This is the sum of the key pass that the player gives in assisting in goal scoring. This includes the long passes and shot passes that were really essential or key essential in scoring goals. Then last but not least which is the sixth one is the dribble attributes of the player (AttDribb/g). This are the dribble attributes that helped in scoring goals through the selected player in the dashboard. There are other attributes involved, but this one were specifically selected as the ones that really assisted in Goal scoring. This are the key performance metrics or indicators that quantifies or actualize the players offensive play in the field, hence dabbed the attackers Statistics in this report analysis.

The next one is the Defender’s statics chart. This chart is rendered in a bar graph or column chart so to say, in order to show the levels or the proportion of the Defensive play that the selected player has. The Defensive play can be measured or quantified and visualized using the defensive play attributes. This are the key performance indicators in terms of measuring the Defensive statistics of a player. In this dashboard report, the defensive attributes that we have looked at include the following. The first of all is the sum of recoveries. This basically involves the recovery agility and ability that the player has in ensuring that they recover the goals they were scored or recover a lost ball from their opposing team. The second attribute is the sum of clearance. This basically entails the clearing of the ball in case of endangering offense play by their opponents in other words it is clearing of the ball from the danger zone. The next attribute the is the sum of intercepts. This entails the ball interception in the case of a pass or a cross of the ball from the opposing team. In other words, is the interruption of the ball, preventing it from reaching the targeted opponent. Therefore, the sum of the player’s intercepts contributes largely to his defensive play statistics. The next attribute in the line Is the sum of tackles. Tackling is a football move that is essential in a player especially those playing the defense positions. The primary and most important purpose of a tackle is to disposes the opponent off the ball. Therefore, the sum of tackling’s the player participated in highly contribute the player’s defensive play statistics. Sum of Giveaways is the next attribute we are going to focus on. This entails the loosing of the ball to the other team. The loosing of the ball can be in many forms i.e. through the interceptions, fumble, or other inadvertent miscue that results in the opposition gaining possession of the ball. This sum of the giveaways also contributes to the defensive play statistics in both positive and negative way. If the sum of giveaways is more it contributes negatively but if it is less it contributes positively to the defensive statistics. The last attributes that is focused on this analysis is the Duel attribute (Sum of ADuel/g). The last figure in the dashboard includes the table which is shows the general information of the player. This include the age, sum of games played, sum of assists and sum of sum of goals of the player. All of this attributes combined give us the perfect picture, visualization and quantification of the defense Statistics. With the implementation of the slices, we can easily manipulate the output of each chart in the graph. Also with the help of slices, all the charts are connected in that case, a change in player’s name in the name slice will cause all the other chats to update in real-time with the relevant data for that player. Also when the position or status is selected with a set of player already selected in the name, slice, it gives the number of player in that position or status with their key performance metrics or indicators in real-time. This, therefore, makes it easier for the team management to critically analyses which players added value to the team which one did not base on which factors and how can the mitigate or make correction in order to realize improvement in the future.

# Conclusion and recommendations for the successful implementation and use of a BI / DA solution in Newcastle United FC

Interpretation and Analysis of data has gotten a huge demand in the process of making decisions. This entails the procedure of collecting the required data, dividing it into structured and unstructured data and performing analysis techniques using relevant suitable software, of which in this case is excel software tool. Decision making process involves decision makers to get to know and gain an understanding of the problems facing the organization and to examine the data in an informed and meaningful way. This is made possible by performing data analysis to the data first which organizes, interprets, structures and presents the data into useful and meaningful information. The charts generated during the analysis are entered into a dashboard. The dashboard provides a good user interface with dataset visualization charts that can be a good source of information and of help to the decision makers to make good and informed decisions on their business or organizations. The dashboard can also show projections or forecast using the already set parameters, this therefore helps the decision maker to observe the trends and provide mitigation strategies where they are required. Therefore reflecting on this dashboard analysis, the data was able to be analyzed and organized into a well-constructed dashboard to give insights to the company in terms of performance of the team based on the contribution of the player, observing the trends, and predicting the future based on key performance indicators or metrics given in regards to the cost of investment which is the cost of acquiring a player, and mitigating where the negative trends are observed in order to improve the general performance of the team.

**References**