ABERDEEN ZOMBIES CLUB DATA

Improving small scale sports club finance management with Power Bi

MAIN PURPOSE

- As a sports club with a large number of players, tracking who attends different sessions and when they have paid fees is a critical part of ensuring the club can continue to operate and cover costs such as venue hire.

- Tracking player fees can be made more difficult with club incentives for new players attending their first session and different rates being applied based on the player's position (e.g., netminders, coaches).

- Players also have different payment behaviours, as the club accepts pre-payment or pay-and-play options, and players decide which works best for them.

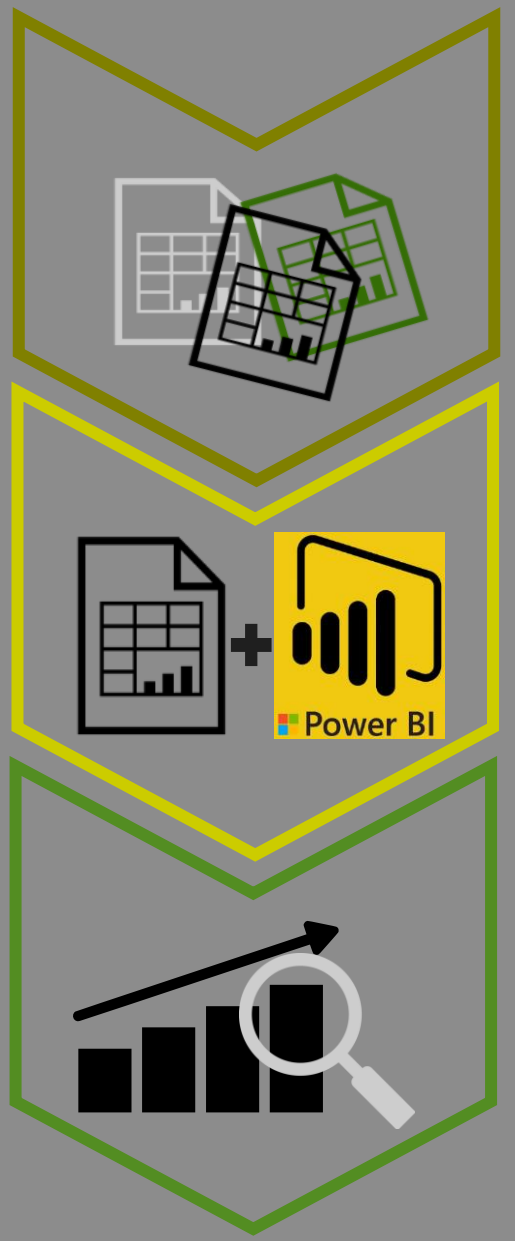
- Additionally, as the club began attending BIPHA league games, game fees also needed to be considered in any monitoring system.

EXISTING SYSTEM

- Previously, attendance was tracked via a Google Sheet document, with a new file created for each year.
- Attempts were made to trial different layouts and organizational systems to find a more efficient and maintainable method, but difficulties were encountered with all past approaches.
- A single large grid of players and training session dates with checkboxes for attendance was difficult to follow as the sheet grew. It was easy for the user to lose track of the correct row or column, and matching up payments with attendance wasn't easy to view at a glance.
- While having a separate sheet for each player made it easier to match player attendance to their payments, this approach made it harder to keep player lists in order and find the correct player sheet when needed, particularly as club membership has grown.

NEW APPROACH TO DATA STORAGE

Rebuilding the underlying data for long term ease of use



NEW SYSTEM

- To reduce the mental load of locating individual players and creating sheets for new players, a new transactional approach has been introduced.

- Attendance and payments are logged as “events,” with a secondary category for attendance type to manage the different costs for netminders, players, and coaches.

- The attendance cost is managed on a main costing sheet, which allows different event costs to be automatically assigned based on the event name and an active cost period. This allows costs to be adjusted if necessary should venue costs increase or decrease.

Date	Player Name	Event	Attendance Type	Value
dd/mm/yy	Full Name	Training / Game / Payment / etc	Player, Netminder Coach	xx.xx

Event	Start Date	End Date	Cost	Break Even Players
Training Game etc	dd/mm/yy	Dd/mm/yy Null if active period	xx.xx	

NEW SYSTEM

- An expense page is used to track outgoing club costs over time.
- Categories can be assigned to identify key areas of spending, e.g., venue hire, league game fees, and equipment purchases.
- A final additional sheet was added to track players' jersey orders and existing number usage to avoid clashes.

Date	Value	Invoice Number	Category
dd/mm/yy	xxx.xx		Hall, Equipment etc

Number	Name on Jersey	Jersey Size	Player
xx	Surname		Full Name

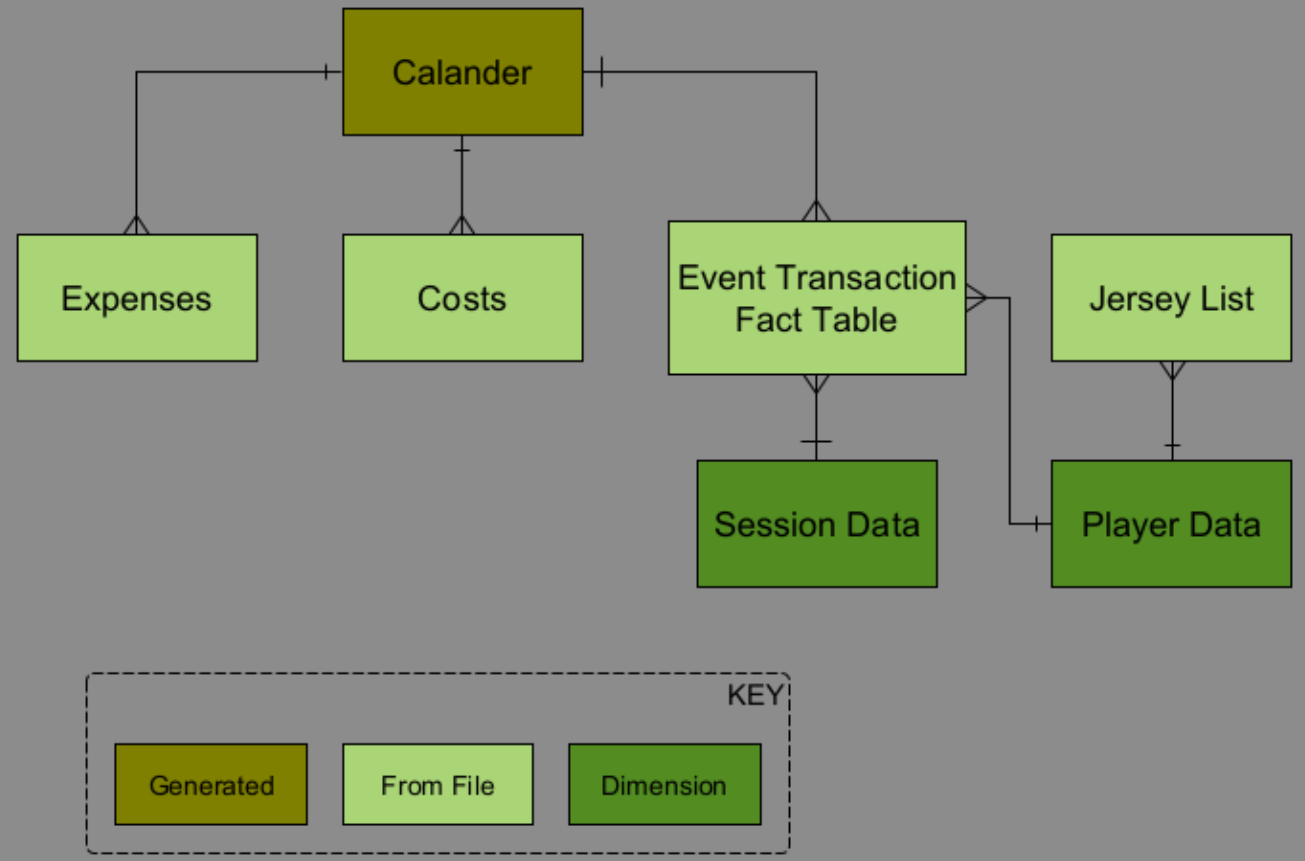
DATA MODEL DESIGN

Steps Carried Out

- Loading and cleaning the raw data and breaking out key data groups.
- Additional dimension tables covering session data (key metrics for how individual sessions performed) and player data are created.

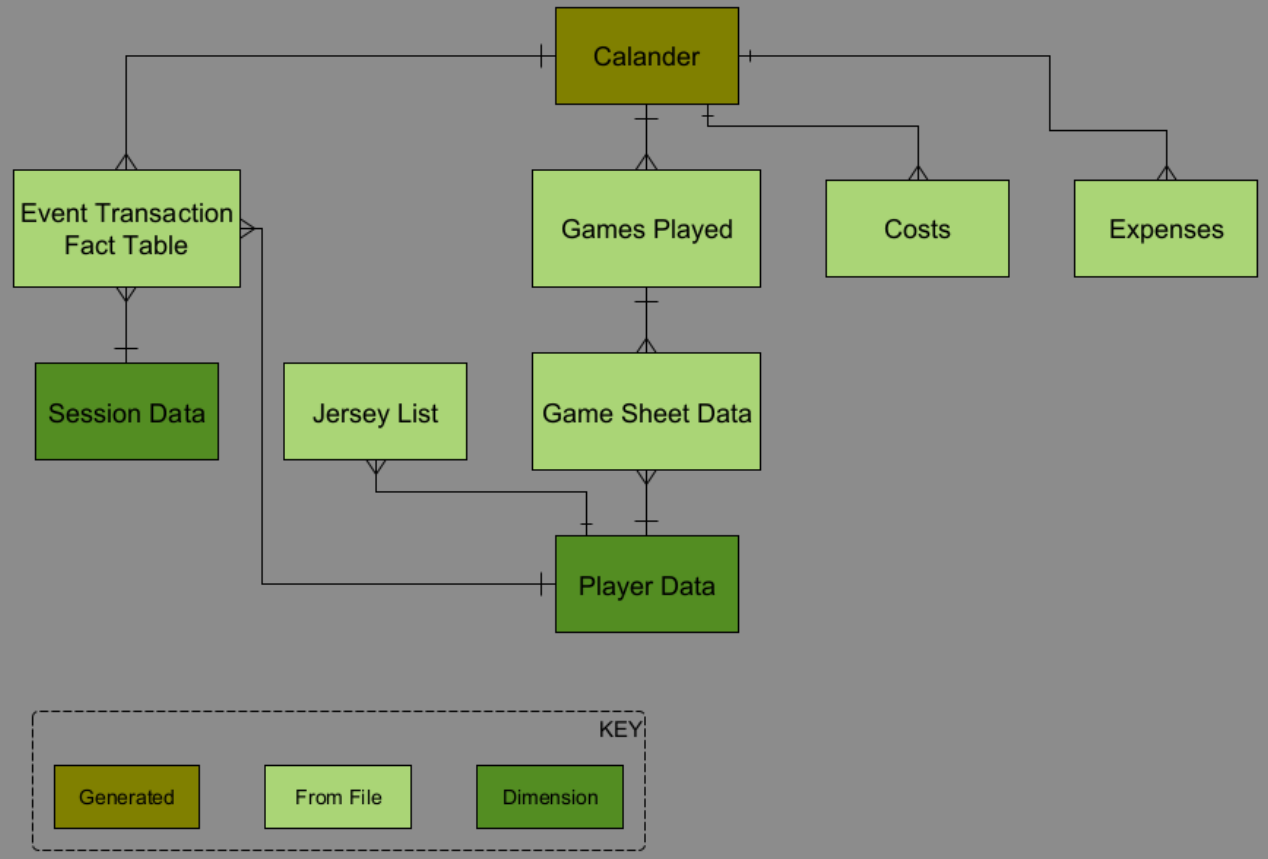
Benefits:

- The player data allows new players to automatically be recognized by name, and a record of attendance, payments, and debt/credit to be maintained with no additional effort by the user.



DATA MODEL EXPANSION

- For both individual player interest and club game stats monitoring—a non-critical but "of interest" task—the data model and files were updated to also import a second transaction-style file of "game data.“
- This log includes the game, player, and game events noted from official game sheets, covering key items such as goals scored, assists, penalties, and penalty minutes. Additionally, there is an overview sheet of all games played (opponent, date, game number of the day, scores, etc.).
- This enabled the monitoring of current player league performance and will later allow for comparisons when multiple seasons have been played and included in the data.

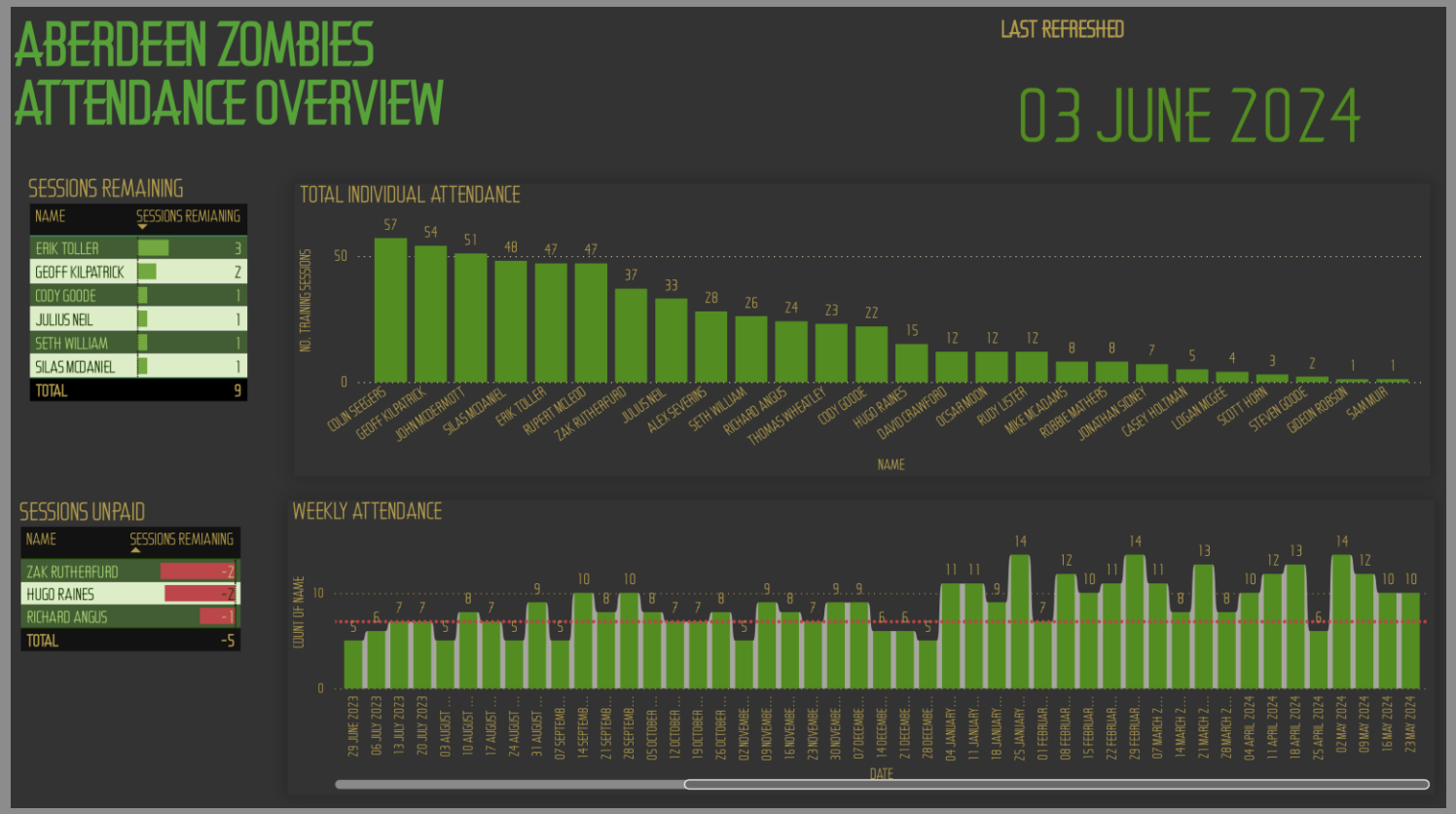


GENERATED REPORTS

Monitoring Players and Viewing Club Finances

Data has been anonymised and financial data has been modified to preserve individuals and club privacy

OVERVIEW



- Key areas of which require regular review are the players with current debt or credits to their names.
- Simple charts showing weekly session attendance numbers and total session attendance counts for individual players are added for the interest of the club.
- These provide very straightforward visuals for current and past trends in attendance numbers, and identify the players who attend the most often—this is of particular interest to the long-standing members of the club.

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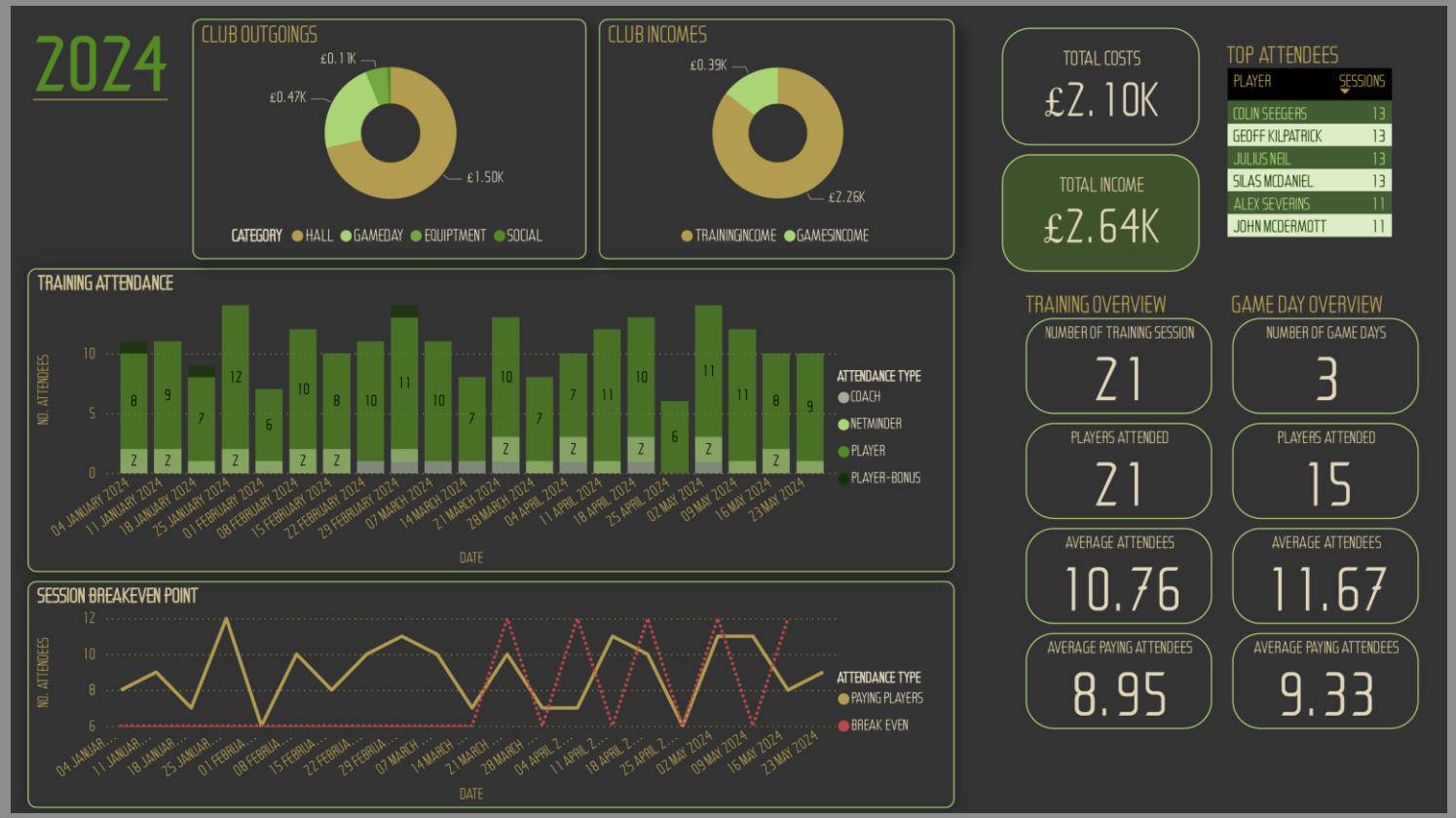
CLUB FINANCIAL STANDING



- Developed to provide a more in-depth view of club attendance and financial standings for a particular year, some key metrics monitored include:
  - Total costs to the club
  - Total income to the club
  - Breakeven attendance needed for each session
  - Attendance at each session
- This allows the club to monitor financial standing throughout the year, ensuring sessions remain feasible based on visible trends and determining funds available for equipment or social events.

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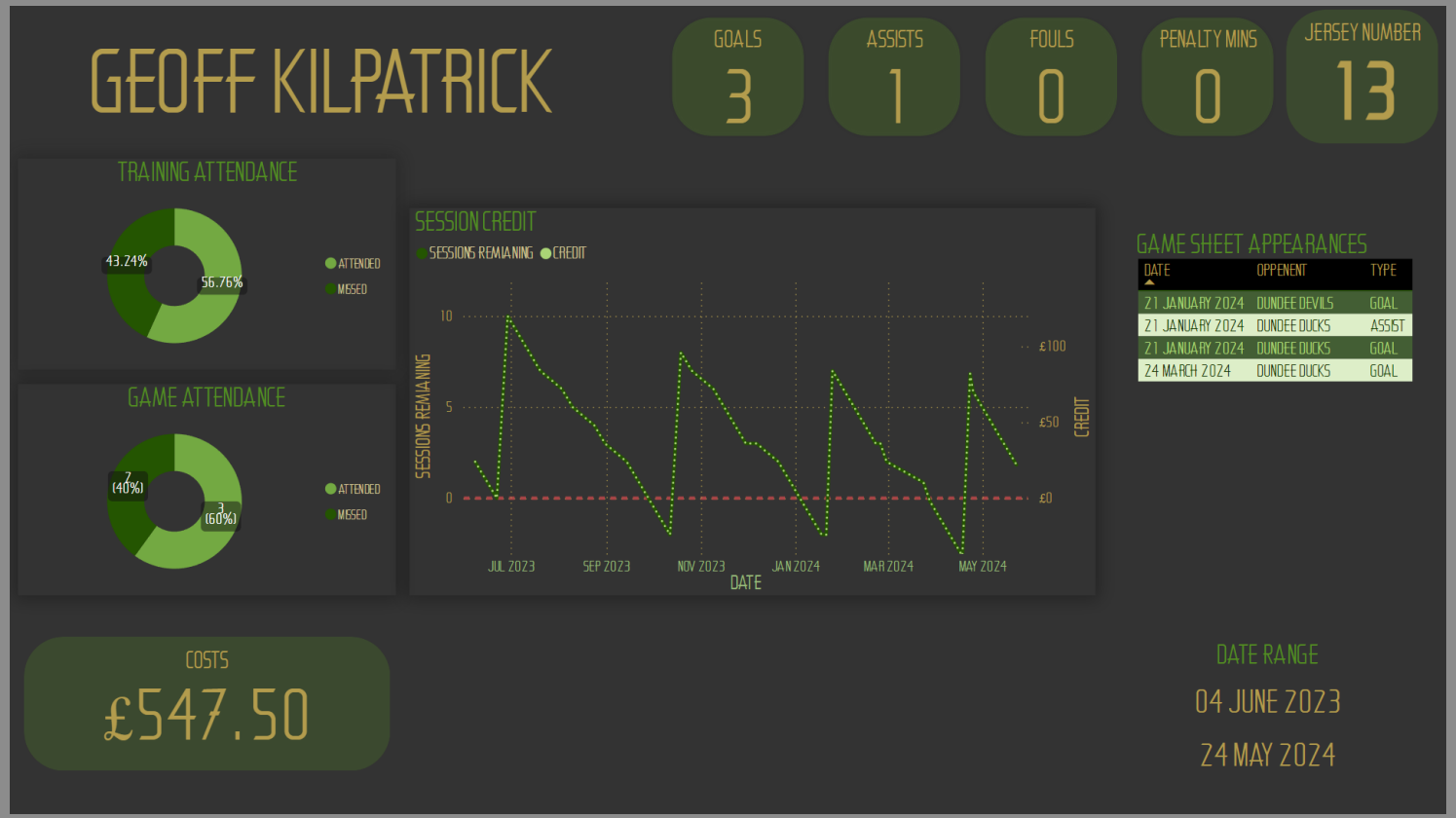
INDIVIDUAL PLAYER STATS



- This was created as a simple view of all the club information for a specific player over a set period of time (in this example, the last 6 months), allowing a comprehensive look at their overall attendance behaviour, their player stats from league games, and their typical payment behaviour.
- Key aspects include:
  - Do they prepay or pay on the day?
  - A habit of slipping into debt and needing reminders about due fees.
  - How much they have spent on training and game fees.
- As a club that no longer handles cash, this is useful for reconciling transactions on the club account.

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Further plans:

- *Data solution currently being tested. Changes may be made as the year progresses to better reflect the needs of the club*
- *Year to year comparisons can be carried out at the end of 2024 as there will be a complete data set to assess club growth and use this to plan for the 2025 period.*
- *Long term areas of interest would be to look at the trends in game stats, highlighting the monitorable improvements for players and the team as a whole. , changes in the margins of game results between seasons etc.*