**Analysis of the 'ALL Expenses' Dashboard**

**Key Findings:**

1. **Expense Distribution:**
   * **Mileage Car - Business mileage** is the predominant expense type, significantly surpassing other categories in total reimbursed amount, as shown in the Pie Chart. This suggests a major focus on business travel costs.
   * **Hotel charges** and **Other** expenses also represent substantial portions of the total expenses.
2. **Reimbursement Trends:**
   * The **Line Chart** reveals a peak in reimbursable amounts in June 2024, followed by a notable decrease in July 2024. This fluctuation indicates possible seasonal variations or changes in expense patterns.
3. **Employee Claims:**
   * The **Treemap** highlights that a few employees account for disproportionately high reimbursable amounts. This may indicate high-value claims or frequent claim submissions by specific individuals.
4. **Cost Center Impact:**
   * The **Stacked Bar Chart** shows that certain cost centers, like **Cost Center Code 98429**, have higher reimbursable amounts, pointing to specific departments or projects with significant expenses.
5. **Expense Correlation:**
   * The **Scatter Plot** demonstrates a wide range of reimbursable amounts for various trip distances, with some high-cost outliers for shorter trips. This suggests that trip distance does not always correlate directly with the reimbursed amount.
6. **Overall Reimbursable Amount:**
   * The total reimbursable amount is £56,492.61, providing a comprehensive view of the overall expense claims processed.

**Analysis of Accounts Receivable Reports**

**Key Findings:**

1. **Unpaid Reason Distribution:**
   * The Pie Chart for the credit report shows a substantial portion of outstanding balances attributed to "Sheriff Officer" and "Inv Paid," indicating these reasons are significant contributors to overdue amounts. For the debit report, "Sheriff Officer" and "Write Off" dominate, suggesting similar patterns of major outstanding amounts linked to these reasons.
2. **Balance Trends and Correlations:**
   * The Scatter Plot from the credit report reveals a broad range of outstanding balances, with many transactions showing zero outstanding balances despite varying original transaction amounts. This indicates that a significant number of transactions are settled promptly. In contrast, the debit report shows a wider spread of outstanding balances, with high values for both original transaction amounts and outstanding balances, pointing to more variable and possibly unresolved transaction issues.
3. **Profile Class Financial Impact:**
   * The Clustered Bar Chart from the credit report highlights that "Standing Order" and "Social Care" have the highest negative customer balances. Similarly, the debit report shows "Other Public Bodies" and "General" with the highest positive balances, indicating these profile classes are significantly impacted financially, either as major creditors or debtors.
4. **Transaction Volume Trends:**
   * The Line Chart for the credit report demonstrates that June had the highest transaction count, suggesting increased activity or specific seasonal factors in that month. The debit report's line chart shows March with the highest transaction count, highlighting another peak period but with more variability in transaction volume throughout the year.
5. **Overall Financial Summary:**
   * For the credit report, the total customer balance stands at -£108,117.08, with a total outstanding balance of £23,270.81 and 549 transactions. The debit report has a much higher total customer balance of £5,343,623.65 and an outstanding balance of £5,368,864.88 across 4,400 transactions. These figures illustrate a significantly larger scale of financial activity and outstanding amounts in the debit report compared to the credit report.

Overall, the analysis shows that while both reports have significant outstanding balances and transaction volumes, the debit report reflects a much larger scale of financial operations and outstanding issues. Both reports indicate that specific unpaid reasons and profile classes play major roles in the financial discrepancies observed.

### Analysis of the 'Daily Account Balances' Dashboard

#### Key Findings:

1. **Monthly Ledger Variations**:
   * **May** consistently shows the highest values across all ledger categories. Specifically, the 'Today's Ledger' amount peaks at £108,464,723.05, which is substantially higher compared to other months. In contrast, **July** has the lowest figures with 'Today's Ledger' amounting to £12,740,855.90, reflecting a significant decline of 751.31% from May.
2. **Trends in Ledger Balances**:
   * The line chart illustrates a clear peak in **May** for 'Today's Ledger', with subsequent months showing a downward trend. This decline continues through **June** and **July**, indicating potential seasonal fluctuations or changes in account activities. The correlation between 'Today's Ledger' and 'Last Night's Ledger' suggests that higher values in one typically correspond with higher values in the other.
3. **Comparative Ledger Analysis**:
   * The stacked area chart reveals that **May** not only leads in 'Today's Ledger' but also shows substantial figures in 'Last Night's Ledger' and 'Start Of Day Ledger'. This is in contrast to **June** and **July**, where the ledger amounts are notably lower. The chart demonstrates that the 'Today's Ledger' and 'Last Night's Ledger' figures are positively correlated, with larger amounts in these ledgers often occurring together. **June** shows the highest divergence between 'Today's Cleared' and 'Last Night's Cleared', highlighting a notable variance in cleared amounts for that month.
4. **Detailed Data Overview**:
   * The table presents an extensive view of the account balances, showing 'Account Identifier', 'Balance date', and various aggregated amounts. **May** represents a significant portion of the total values, accounting for 53.35% of 'Today's Ledger'. The table data underscores that **May** also had the highest figures for 'Last Night's Ledger' and 'Start Of Day Ledger'. The divergence in cleared amounts is most pronounced in **June**, where 'Today's Cleared' exceeded 'Last Night's Cleared' by £25,227,429.11.

These insights provide a comprehensive understanding of the fluctuations in account balances over the observed months, highlighting **May** as the period with the highest activity. The analysis also reveals important correlations and variations in ledger balances, offering a clear view of monthly financial trends and discrepancies.

### Analysis of the 'HR Help Desk' Dashboard

#### Key Findings:

1. **Request Distribution**:
   * **Finance - General Ledger** in May accounted for 18.29% of the average time to resolve issues. This category has a substantial impact on overall resolution times, indicating a concentration of workload in this area. The highest volume of requests was handled by agent **300000008405020**, which managed 264 requests, representing 7.71% of the total. The distribution of requests among agents ranges from 1 to 264, showing variability in workload.
2. **Resolution Time Trends**:
   * In May, **Finance - General Ledger** also made up 17.93% of the average resolution time. The data reveals a peak in request volume for **300000008405020**, with significant differences in request counts across agents. The positive correlation between the number of requests and the count of queue names indicates that higher request volumes are often associated with a higher number of issues in queues.
3. **Workload Analysis**:
   * The analysis shows that **300000008405020** consistently has the highest number of requests across different metrics. This suggests that this agent manages a disproportionate share of the workload. The overall request volume varies significantly among agents, which implies that some agents handle much higher volumes of requests than others.
4. **Correlation and Impact**:
   * There is a positive correlation between the total number of requests and the count of queue names, highlighting that agents with higher request volumes tend to deal with a greater number of issues. This correlation underscores the need for a balanced distribution of requests to avoid overwhelming individual agents and to improve overall efficiency.

#### Summary:

The 'HR Help Desk' dashboard reveals key insights into request distribution and resolution times. The concentration of requests in specific categories and among certain agents indicates areas where process improvements and workload management strategies could be beneficial. The significant volume handled by **300000008405020** and the variability in request distribution among agents suggest that addressing these issues could lead to more effective handling of help desk requests and better overall performance.

### Analysis Report on Invoice Data

The invoice data analysis reveals key insights into financial discrepancies, individual responsibilities, and temporal trends in invoicing. Significant discrepancies are identified in categories such as "Billed Quantity Exceeds Received Quantity" and "Variance Between Invoice and Schedule Amount." These categories reflect substantial financial amounts, with "Billed Quantity Exceeds Received Quantity" totaling $1,325,152.26 and "Variance Between Invoice and Schedule Amount" at $838,902.57. Addressing these discrepancies can enhance process accuracy and improve the invoicing system.

The distribution of financial responsibility among individuals varies notably. For instance, Aileen Powell manages the highest amount of $19,341.07, while Aimee Howarth handles $53,477.69. This uneven distribution suggests a need for review and adjustment to ensure equitable workload allocation and operational efficiency.

Temporal trends indicate that July is the peak period, with the highest Sum of Amount at $1,373,041.20. This amount is approximately 572,000.50% higher than the lowest month, April, which has a Sum of Amount of $240. July accounts for 42.31% of the total Sum of Amount across the months analyzed. This peak suggests a need for enhanced financial planning and resource allocation during high-activity periods.

High-value invoices, particularly those processed in July, should be closely monitored to ensure accuracy and timely handling. This focus on high-value transactions can help manage significant financial impacts and preempt potential issues.

In summary, the analysis provides valuable insights into invoicing discrepancies, responsibility distribution, and temporal trends. Recommendations include improving process controls, adjusting workload distribution, planning for peak periods, and closely monitoring high-value invoices to optimize financial management and operational efficiency.

# The analysis of the mailbox data reveals several important insights.

The **line chart depicting the sum of Accounts Payable Mailbox** shows that June had the highest sum at 538, which was significantly higher than the sums recorded in May and July. Specifically, June's sum was 78.74% greater than that of May, which had the lowest sum at 301. The data indicates that June contributed 43.53% of the total sum across the available months. This notable peak in June suggests that there might have been specific factors or activities during this period that led to an increased volume of accounts payable. The variation in the data underscores the importance of monitoring monthly trends to identify patterns or anomalies that might affect financial operations.

In contrast, the **line chart for Backlog: Earliest Unread** presents a challenge due to a significant amount of missing data, indicated by NaT values. This inconsistency in data availability limits the ability to analyze trends effectively. However, the chart shows that the most frequently recorded backlog date was June 24, 2024, which appeared 16 times in the dataset. This suggests that June had a higher concentration of backlog entries, though the lack of comprehensive data points prevents a more detailed analysis.

The **pie chart illustrating mailbox categories** provides a clear distribution of values among different categories. The Creditors Mailbox category has the highest value at 159,414.0, making it the most significant contributor compared to other categories. The Creditors Manual Mailbox follows with 13,723.0, while Creditors Creations Mailbox and Accounts Payable Mailbox have relatively lower values of 5,275.0 and 1,236.0, respectively. This distribution indicates that the Creditors Mailbox category has the largest share of the total, which may reflect the volume of transactions or the importance of this mailbox in the overall financial workflow.

Overall, the analysis of the data highlights key periods of activity and the relative importance of different mailbox categories. The high values recorded in June for Accounts Payable Mailbox and the significant proportion of Creditors Mailbox among categories suggest areas that may warrant further investigation to understand underlying causes and implications. The inconsistent data for the Backlog: Earliest Unread category points to potential data quality issues that could impact the ability to make informed decisions.

# The analysis of the cost centre budget data reveals key insights:

The stacked column chart depicting the sum of Revised Budget £ shows that **Cost of Services (Excluding HSCP)** had the highest sum at £250,247. This value was substantially higher, by 628.97%, than the lowest sum in the top 5 cost centres, **Environment & Place**, which had £34,329. Notably, **Cost of Services (Excluding HSCP)** accounted for 51.09% of the total sum of Revised Budget £ across all cost centres. The data highlights that the top 5 cost centres have a significant range in their Revised Budget £, from £34,329 to £250,247, indicating varied financial scopes across cost centres.

In contrast, the stacked column chart for the bottom 5 cost centres by Revised Budget £ shows that **Finance Income** had the lowest value at -£227,603. This negative figure suggests substantial budget cuts or reduced allocations. The negative sums in the bottom 5 cost centres, including **General Revenue Grant & Non Domestic Rates Income** and **Council Tax Income**, reflect a trend of underfunding or adjustments that reduced their budgets significantly. The range from -£227,603 to -£53 indicates a severe variation in budget allocations.

The clustered column chart for Full Year Variance reveals that **Council Tax Income** had the highest variance at £3,981, indicating a favorable performance or higher than expected revenue. Other top cost centres include **Finance Income** and **Regeneration and Economic Growth**, with positive variances of £2,183 and £1,504 respectively. These positive variances highlight areas with better financial outcomes compared to projections.

Conversely, the clustered column chart for the bottom 5 cost centres by Full Year Variance shows **Cost of Services (Excluding HSCP** with the lowest variance at -£92,037. This significant negative variance points to considerable budget shortfalls or overspending. Other cost centres like **Net (Surplus/Deficit for Year (Excluding HSCP)** and **Schools & Learning** also show large negative variances, indicating potential budget management issues.

The scatter plot of % Variance versus Full Year Variance provides descriptive statistics showing that the average % Variance is -0.92%, with a wide range from -50.84% to 1.43%. This suggests a general trend of negative variance across cost centres, with substantial variability. The average Full Year Variance is -£5,335, with values ranging from -£92,037 to £3,981. The high standard deviation underscores the variability in financial performance across cost centres.

Overall, the analysis highlights significant budgetary disparities and variances among cost centres. The large sums in the top cost centres and substantial negative values in the bottom cost centres suggest areas for further investigation to understand the underlying causes of these financial trends. The variability in % Variance and Full Year Variance points to potential challenges in budget management and financial forecasting that may need addressing.

The analysis of the aging and balance data reveals the following key insights:

**1. Aging Bucket Analysis**

* **Stacked Bar Chart: Aging Bucket vs. SUMOF Original Balance**  
  The data shows that the 91-120 Days bucket has the highest sum of original balance at £2,458,639.20, significantly higher than the 61-90 Days bucket with the lowest balance of £292,358.15. This indicates a substantial disparity in balances across different aging buckets. The range from £292,358.15 to £2,458,639.20 highlights major differences in overdue amounts.
* **Pie Chart: Aging Bucket Distribution**  
  The pie chart corroborates the stacked bar chart, showing that 91-120 Days accounts for the largest share of the total original balance. This distribution indicates that a significant portion of the balance is concentrated in the overdue buckets, particularly 91-120 Days, which suggests a focus area for debt collection efforts.

**2. Customer Analysis**

* **Clustered Column Chart: Top 10 Customers by Amount Remaining**  
  The highest amount remaining is with Customer 30110 at £1,290,883.72, showing a notable disparity compared to the lowest top 10 customer, Customer 6079, with £97,172.20. The range from £97,172.20 to £1,290,883.72 underscores significant variation in outstanding amounts among top customers, highlighting areas where collections could be prioritized.

**3. Profile Analysis**

* **Treemap: Top 5 Profiles by SUMOF Original Balance**  
  Other Public Bodies has the largest original balance at £5,022,004.18, far exceeding the balance of other profiles. The smallest balance among the top 5 is for Cemeteries at £262,186.55. This distribution shows a major concentration of balances within a few profiles, pointing to potential high-impact areas for financial management.

**4. Due Date Analysis**

* **Line Chart: Due Date vs. SUMOF Collected and SUMOF Original Balance**  
  The line chart shows that the sum of collected amounts and original balances exhibit considerable variability over time. There are instances where the original balance far exceeds the collected amount, indicating periods of significant collection shortfalls. This suggests a trend of lower collections compared to the balances due.

**Overall Summary**

The analysis underscores substantial variations in balances and collections across different categories:

* **Aging Buckets**: Major disparities in original balances highlight the need for targeted collection efforts, especially in buckets like 91-120 Days.
* **Customers**: Significant differences in amounts remaining suggest a need for focused collection strategies for high-balance customers.
* **Profiles**: High concentration of balances in Other Public Bodies indicates key areas for financial oversight.
* **Due Dates**: Variability in collections relative to original balances points to periods of underperformance in debt recovery.

Overall, the data highlights significant differences and variances, pointing to areas that require further investigation and strategic focus in financial management and collections.

Sick absenties data analysis ,

**Detailed Analysis Report**

**Key Findings:**

* **Working Days Lost Trend (April to June 2024)**: Over the observed period from April to June 2024, there was a noticeable fluctuation in the number of working days lost. The highest number of working days lost occurred in May, which had a total of 84 days, accounting for **44.68%** of the total lost days over the period. In contrast, June experienced the lowest number of working days lost, with 46 days, representing a **82.61%** reduction compared to May.

April recorded **58 working days lost**, sitting between the extremes of May and June. This highlights a significant increase in absenteeism in May followed by a sharp decrease in June, suggesting either seasonality or event-driven causes affecting absentee rates.

* **Departmental Requests and Absenteeism**: The analysis of **requests by department** revealed that absenteeism was spread across multiple departments, with some departments like “Inclusion & Early Years” and “Regulatory Services” showing higher requests for working days lost. However, a vast majority of the departments recorded only a few requests. This distribution suggests that while absenteeism is a broader issue, certain departments may require targeted attention due to higher-than-average absentee rates.
* **Individual Employee Requests**: In terms of individual employee data, most employees recorded a single instance of absence. However, there were outliers, such as an employee with assignment number **300000008348733**, who had **5 requests**, indicating repeated instances of absence that could warrant further investigation.

Summary statistics on employee absenteeism show that on average, employees recorded **1.21 requests**, with a **maximum** of 5 requests, further underscoring the need for individualized attention in certain cases.

* **Resolution Time and Working Days Lost**: The average time to resolve absence-related issues across departments was **4.68 days**. This metric is crucial for measuring the efficiency of the HR department or the process flow of absence-related matters. The maximum time recorded for resolving an issue was **27.22 days**, with significant variation (std = **7.23**), pointing to inefficiencies that could be optimized.
* **Distribution of Working Days Lost**: A statistical breakdown of the working days lost showed an **average of 3.93 days** lost per request, with a standard deviation of **4.97**, indicating a wide spread in absenteeism across different cases. The maximum working days lost in a single instance was **20 days**.

**Overall Summary**:

* May recorded the **highest absenteeism**, followed by April and June, with significant disparities in the number of working days lost.
* Absenteeism is spread across departments, but certain departments and individuals have repeated or high-absence patterns that may require targeted attention.
* The resolution time for absence-related issues varied significantly, suggesting room for process improvement in HR operations.

Absenties  
  
**Analysis Report**

### 1. Filtered Data Summary

The data consists of 257 records filtered by categories related to various types of leave and absences. The dataset includes different attributes like reference numbers, queue names, categories, employee assignments, job names, department names, creation dates, average resolution times, and the number of requests.

### 2. Key Findings

#### **Plot 1: Stacked Bar Chart by Category Name**

* **Category Distribution:**
  + **Leave:** 116 requests
  + **Maternity Leave:** 63 requests
  + **Sickness Absence:** 46 requests
  + **Special Leave:** 13 requests
  + **Paternity Leave:** 10 requests
  + **Carers Leave:** 8 requests
  + **Bereavement Leave:** 1 request
* **Statistical Summary:**
  + **Mean:** 36.71 requests
  + **Standard Deviation:** 41.71
  + **Minimum:** 1 request
  + **25th Percentile:** 9 requests
  + **Median (50th Percentile):** 13 requests
  + **75th Percentile:** 54.5 requests
  + **Maximum:** 116 requests

**Insights:**

* + The "Leave" category has the highest number of requests, significantly more than other categories. This indicates it is the most common type of request.
  + "Maternity Leave" and "Sickness Absence" follow as the next most frequent types, reflecting a notable volume of requests for these categories.
  + The standard deviation is high, indicating substantial variability in the number of requests across different categories.

#### **Plot 2: Stacked Bar Chart by Department Name**

* **Department Distribution:**
  + **Reablement & Technology Enabled Care:** 30 requests
  + **Regulatory Services:** 12 requests
  + **Inclusion & Early Years:** 11 requests
  + **Business Partnering:** 9 requests
  + **Non-Teaching (STMHS):** 9 requests

**Statistical Summary:**

* + **Mean:** 3.09 requests per department
  + **Standard Deviation:** 3.95
  + **Minimum:** 1 request
  + **25th Percentile:** 1 request
  + **Median (50th Percentile):** 2 requests
  + **75th Percentile:** 3 requests
  + **Maximum:** 30 requests

**Insights:**

* + There is a wide range of request volumes across departments, with "Reablement & Technology Enabled Care" having the highest count, indicating it may have higher leave management activity.
  + Many departments have low numbers of requests, with a few departments having exceptionally high counts. This could suggest disparities in leave management across departments.

#### **Plot 3: Line Chart by Creation Date**

* **Requests Over Time:**
  + The data shows a consistent count of requests for each date, with no significant variations or trends over time.

**Statistical Summary:**

* + **Mean:** 1 request per date
  + **Standard Deviation:** 0.0 (no variability)

**Insights:**

* + The constant number of requests per date suggests that requests are evenly distributed over time without noticeable spikes or trends.

### 3. Overall Summary

* **Category Analysis:**
  + The "Leave" category is overwhelmingly the most common, with a high average number of requests compared to other categories.
  + Maternity Leave and Sickness Absence also show significant volumes, which may require further investigation to manage these types of requests effectively.
* **Department Analysis:**
  + Some departments handle a much larger volume of requests compared to others. This could point to differences in workload or leave management practices that might warrant further examination.
* **Temporal Analysis:**
  + The even distribution of requests over time suggests a stable request rate, though this could also imply a need for more granular time-based analysis to detect any underlying patterns or trends.

### Recommendations:

1. **Investigate High-Volume Categories:**
   * Given the high number of requests for "Leave" and "Maternity Leave," consider exploring reasons behind these high volumes and evaluating if current processes and policies need adjustment.
2. **Analyze Departmental Disparities:**
   * Review departments with high request volumes to understand their specific challenges and potentially redistribute workloads or provide additional support.
3. **Conduct a Time-Based Analysis:**
   * Although current data shows an even distribution, it might be useful to expand the time range or analyze at different time intervals to uncover any potential trends or seasonal patterns.