

## Forecasting Analysis Summary (2023-2025)

This section provides a summary of the forecasting analysis conducted for workforce dynamics across three key dimensions: predicted attrition, projected average salary, and predicted workforce distribution by department, age group, and education level for the years 2023 to 2025. The analysis aims to support strategic planning by identifying trends and potential areas of focus.

### 1. Predicted Attrition by Department (2023-2025)

The forecasted attrition data highlights the number of employees expected to leave each department over the next three years:

- **Technology Department:**
  - 2023: 1,267 employees
  - 2024: 1,292 employees
  - 2025: 1,318 employees
  - **Trend:** A steady increase in attrition, with a growth of approximately 4% from 2023 to 2025.
- **Sales Department:**
  - 2023: 879 employees
  - 2024: 897 employees
  - 2025: 915 employees
  - **Trend:** Similar to Technology, Sales shows a consistent increase in attrition, with a growth of around 4% over the three years.
- **Human Resources Department:**
  - 2023: 115 employees
  - 2024: 117 employees
  - 2025: 120 employees
  - **Trend:** A modest increase in attrition, with a growth of approximately 4% from 2023 to 2025.
- **Key Insight:** Technology faces the highest absolute attrition numbers due to its larger workforce size, while all departments show a similar growth rate in attrition. This suggests a need for targeted retention strategies, particularly in Technology, to mitigate the impact of losing a significant number of employees.

### 2. Projected Average Salary by Department (2023-2025)

The projected average salary analysis provides insights into salary trends across departments:

- **Human Resources:**
  - 2023: \$110,858.44
  - 2024: \$114,184.20
  - 2025: \$117,609.72
  - **Trend:** A steady increase of approximately 3% annually.
- **Sales:**
  - 2023: \$125,391.04
  - 2024: \$130,406.68
  - 2025: \$135,622.95
  - **Trend:** A consistent annual increase of around 4%.
- **Technology:**
  - 2023: \$111,557.59
  - 2024: \$117,135.47
  - 2025: \$122,992.24
  - **Trend:** An annual increase of approximately 5%, the highest among all departments.
- **Key Insight:** Sales has the highest average salary throughout the period, while Technology shows the fastest salary growth rate. This could indicate higher demand for tech talent, potentially contributing to the higher attrition numbers observed in the Technology department.

### 3. Predicted Workforce by Department, Age Group, and Education Level (2023-2025)

The forecasted workforce distribution examines employee counts across departments, age groups, and education levels:

- **Overall Trends:**
  - The workforce distribution remains relatively stable across the three years, with minor fluctuations in employee counts.
  - Technology remains the largest department in terms of workforce size, followed by Sales and Human Resources.
- **By Age Group:**
  - The 18-30 age group dominates across all departments, reflecting a younger workforce.
  - The 31-45 age group is the second largest, with a smaller representation in the 46-60 age group.
- **By Education Level:**
  - Employees with a Bachelor's degree form the largest group across all departments and years.
  - Master's degree holders are the second most common, followed by those with a High School education.
  - PhD holders are the smallest group, primarily concentrated in Technology.
- **Key Insight:** The predominance of younger employees (18-30) with Bachelor's degrees suggests a workforce that may prioritize career mobility and development opportunities. This aligns with the higher attrition rates observed, particularly in Technology, where employees might seek better opportunities elsewhere.

### Conclusion

The forecasting analysis for 2023-2025 reveals several actionable insights:

- **Attrition:** Technology faces the highest absolute attrition, necessitating targeted retention strategies such as improved career development programs or competitive compensation packages.
- **Salary Trends:** The rapid salary growth in Technology may reflect market demand for tech talent, but it could also contribute to higher attrition if not paired with other retention incentives.
- **Workforce Distribution:** The young, Bachelor's degree-dominated workforce suggests a need for programs that support early-career growth and engagement to reduce turnover.

These findings should inform HR strategies to balance workforce stability, compensation adjustments, and employee development initiatives over the next three years.