# EMPLOYEE ATTRITION ANALYSIS



# AGENDA

- Problem Statement
- Background
- Techniques Implemented
- Dashboard Showcase
- Key Insights
- Recommendations

# PROBLEM STATEMENT

XYZ company which was established a few years back is facing around a 15% attrition rate for a couple of years. And it's majorly affecting the company in many aspects. In order to understand why employees are leaving the company and reduce the attrition rate XYZ company has approached an HR analytics consultancy for analyzing the data they have. You are playing the HR analyst role in this project and building a dashboard that can help the organization make data-driven decisions

# **BACKGROUND**

- What is an attrition?
   Departure of employees from the organization for any reason is called Attrition.
- How does high attrition impact an Organization?
  - 1. The reputation of the company is affected.
  - 2. Hinder a company's ability to execute long-term strategic plans.
  - 3. Increased cost new hiring & training.
  - 4. Disruption of daily operations & reduced productivity.

# TECHNIQUES IMPLEMENTED

### IN DATA-MODELLING

- Data Profiling to analyze data quality and completeness using Power Query's profiling tool.
- Performance Optimization
  - 1. by removing duplicates.
  - 2. by removing unnecessary columns like employee count, over18, and standard hrs.
  - 3. by replacing null values in various satisfaction score columns with zero, as the scale is 1-4, for better calculation and analysis.
- **Developed Custom Metric** Utilized M-Language in Power Query Editor to create the 'Average Satisfaction Score' column. This custom metric calculates each employee's average satisfaction across multiple metrics such as 'JobSatisfaction', 'EnvironmentSatisfaction', 'WorkLifeBalance', and 'JobInvolvement', for more insightful performance analysis.
- Created Bin Columns Utilized Power Query's conditional column tool to create three new columns 'Age(Bin)', 'Home Distance(Bin)', and 'Monthly Income(Bin)'. These columns categorize 'Age', 'DistanceFromHome', and 'MonthlyIncome' into specific ranges, enhancing data analysis and insights.

DAX Formulas & Measures –
 DAX Formulas used – COUNTA, COUNT, CALCULATE, AVERAGE, AVERAGEA.
 Measures Created – Attrition Count; Attrition Rate; Retention Count; Retention

Rate; Average Satisfaction Score of all employees, current employees, and attritted employees.

### IN DATA-VISUALIZATION

- Slicers: Employed slicers to analyze data across different layers and dimensions.
- Drill-through Options: Enabled drill-through capabilities on each page for detailed, context-specific insights.
- Menu Button: Added a menu button for streamlined navigation between report pages.
- Clear Filter Button: Implemented a bookmark-based clear filter button to remove all applied filters and reset drill-throughs.
- **Navigation Arrows**: Included navigation arrows at the bottom for easy back-and-forth movement between report pages.

# DASHBOARD SHOWCASE

### EMPLOYEE ATTRITION ANALYSIS

#### DECODING EMPLOYEES DEPARTURE



By Demography



By Job Structure



By Satisfaction Score



By Income



By Time



By Other Reasons



BY **DEMOGRAPHY**  Gender AII

180

17%

31-35

75

9%

36-40

54

41-45

168

21%

26-30

**Business Travel** AII

Department AII

Job Role AII

Job Level AII



3699

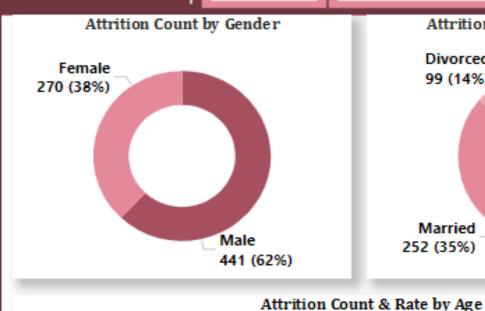
Current **Employees** 

Retention Rate

711

Attrition Count

**16%** Attrition Rate



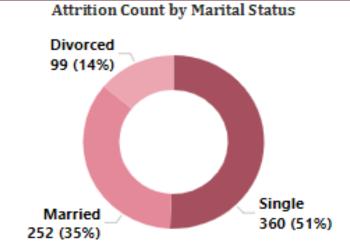
Attrition Count — Attrition Rate

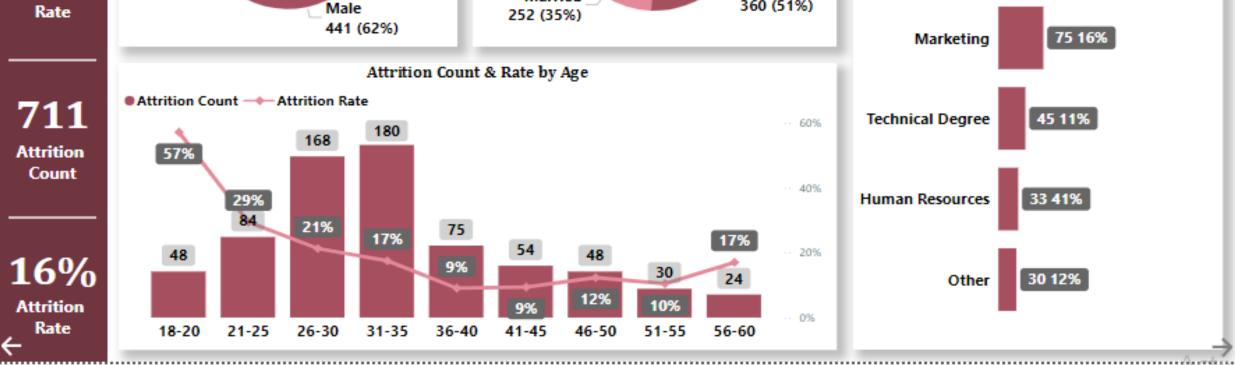
29%

21-25

48

18-20





17%

24

56-60

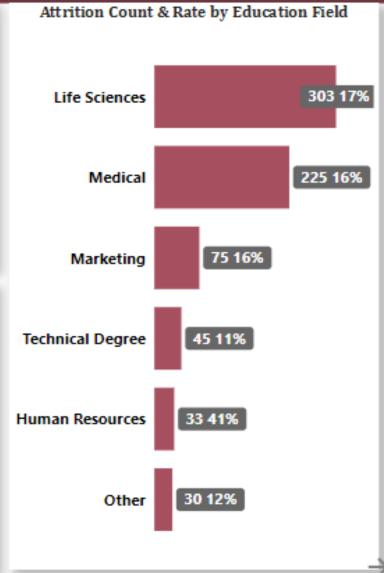
30

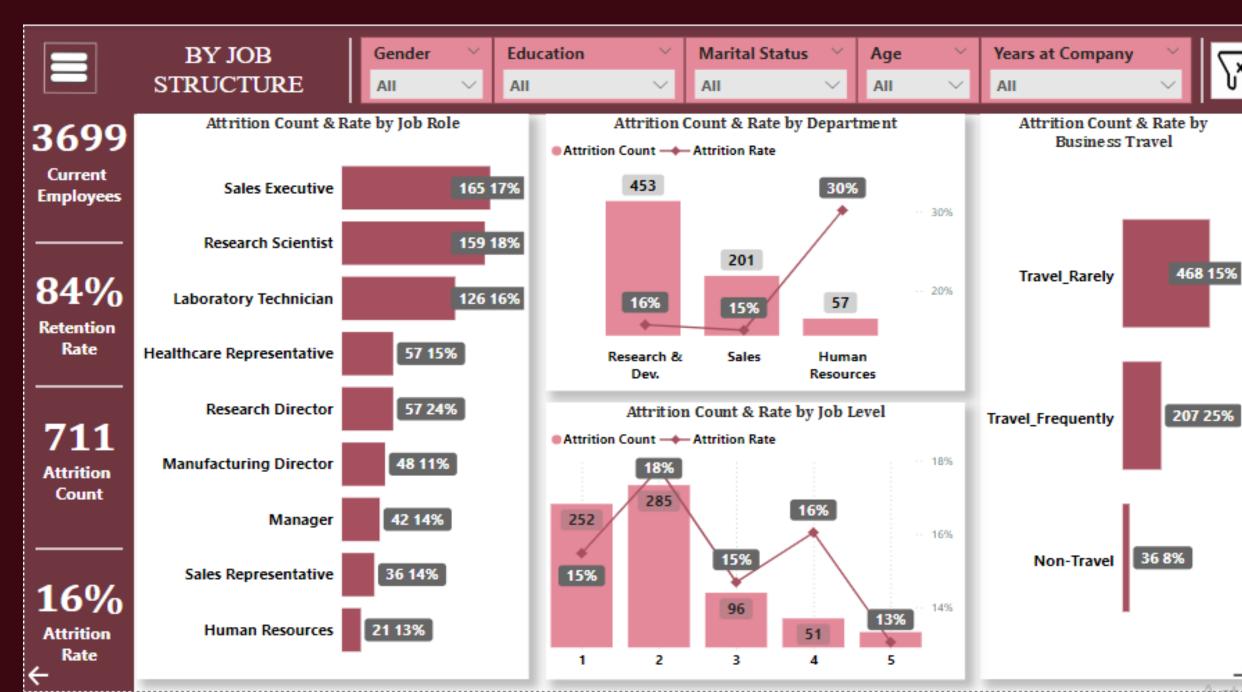
10%

51-55

12%

46-50



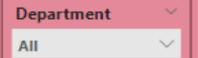


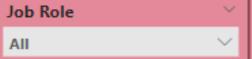


BY SATISFACTION

Gender	~
AII	V

Education	~
AII	~





Job Level ×



3699

Current Employees 2.72

Avg Satisfaction Score

84%

Retention Rate

711

Attrition Count

16% Attrition Rate 2.75

Avg Satisfaction Score
- Current Employee

2.57

Avg Satisfaction Score
- Attrited Employee

EnvironmentSatisfaction	Jobinvolvement	JobSatisfaction	WorkLifeBalance	Average Satisfaction Score	Attrition Count
3	3	1	3	2.50	23
3	3	4	3	3.25	21
1	3	3	3	2.50	20
1	3	1	3	2.00	18
4	3	1	3	2.75	18
1	3	2	3	2.25	15
1	3	4	3	2.75	15
2	3	1	3	2.25	15
2	3	3	3	2.75	15
3	3	3	3	3.00	15
4	3	3	3	3.25	15
1	2	1	3	1.75	12
1	2	2	3	2.00	12
4	3	3	2	3.00	12
1	2	3	3	2.25	9
1	3	3	2	2.25	9
1	3	4	4	3.00	9
2	2	3	3	2.50	9
2	3	2	2	2.25	9
2	3	4	2	2.75	9
3	2	3	3	2.75	9
3	3	2	3	2.75	9
4	1	3	3	2.75	9
					Acti



Gender Education AII

Job Role AII

Job Level



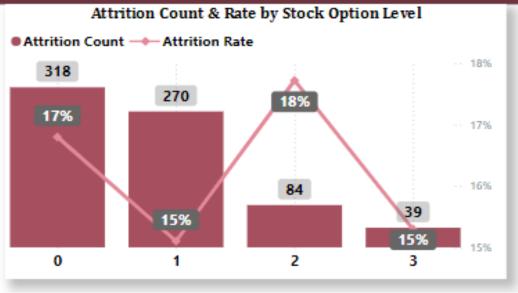
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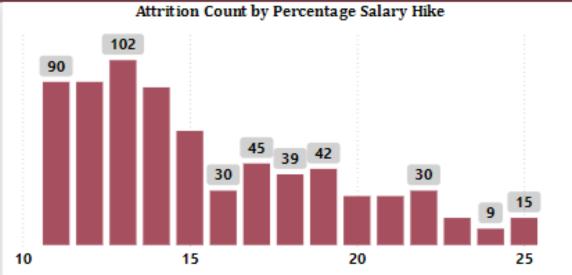
Current **Employees** 

Retention Rate

711 Attrition Count

16% Attrition Rate

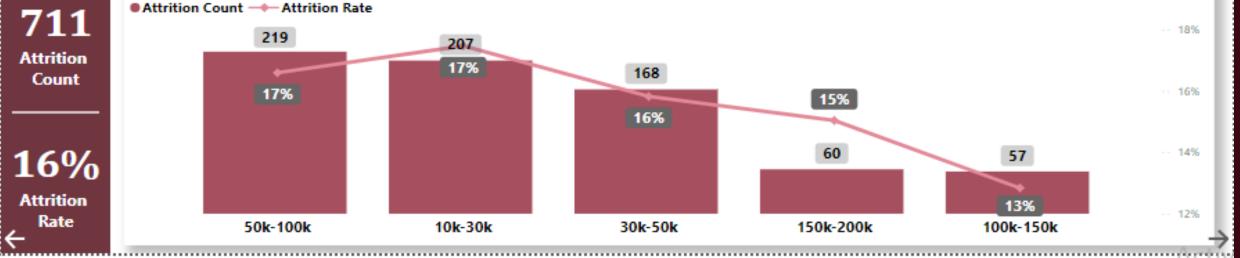




Attrition Count & Rate by Monthly Income

Department

AII





BY TIME

Gender

AII

Education

Department

Job Role All Job Level

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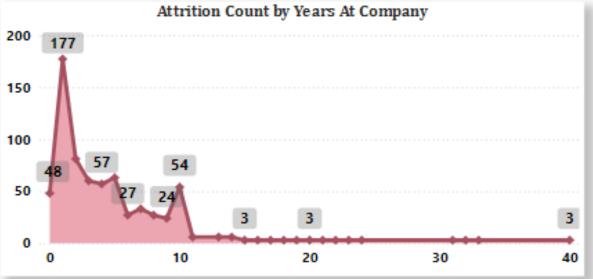
Current Employees

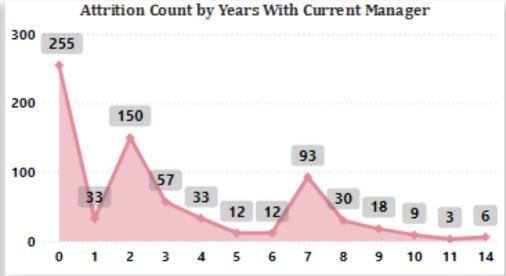
84% Retention

Rate

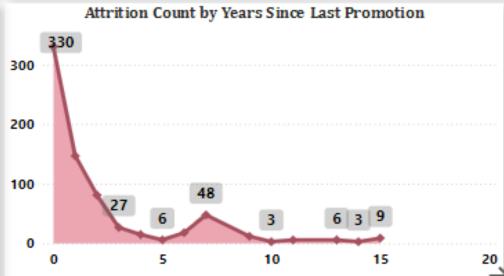
711 Attrition Count

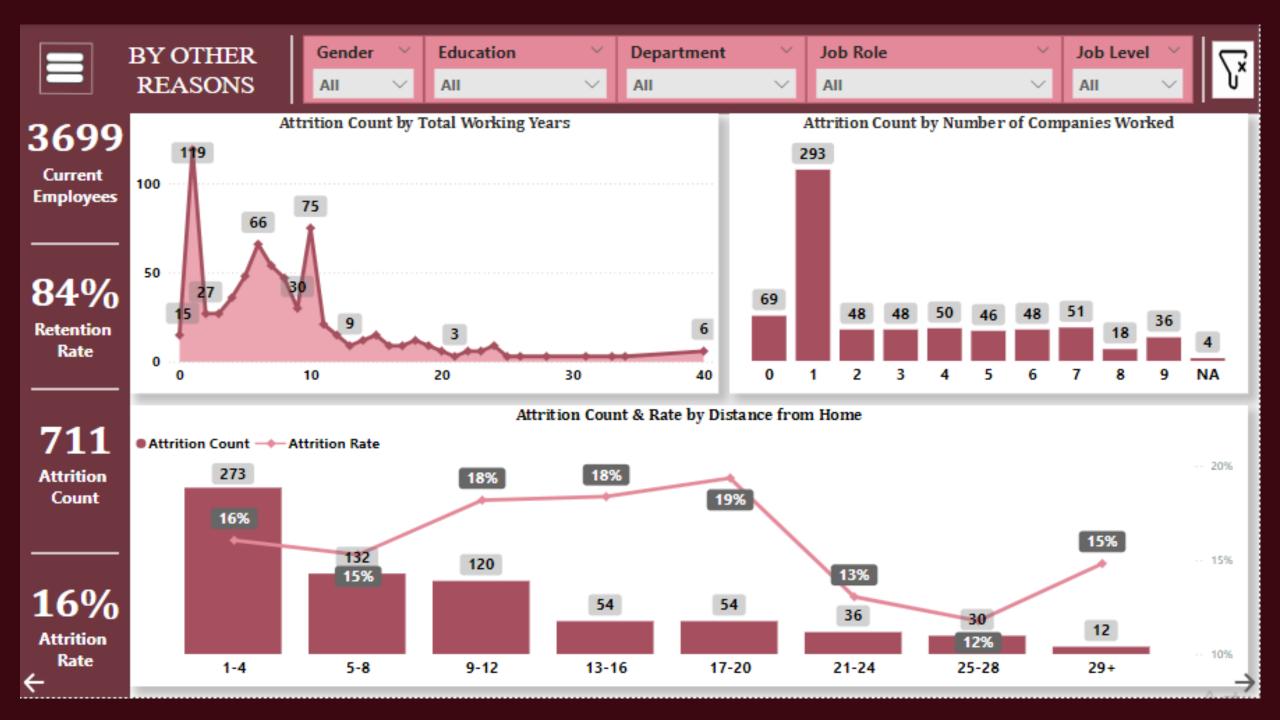
16% Attrition Rate











# KEY INSIGHTS



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**Current Employees Count** 

711

**Attritted Employees Count** 

84%

**Retention Rate** 

16%

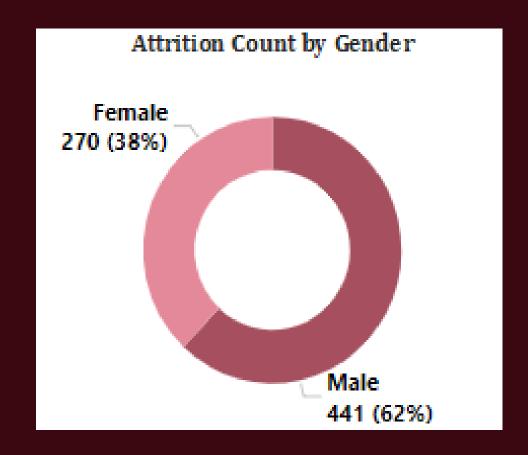
**Attrition Rate** 



# DEMOGRAPHY BASED INSIGHTS

#### **BY GENDER**

Attrition Count as well as Attrition Rate for males(17%) is higher than for females(15%).

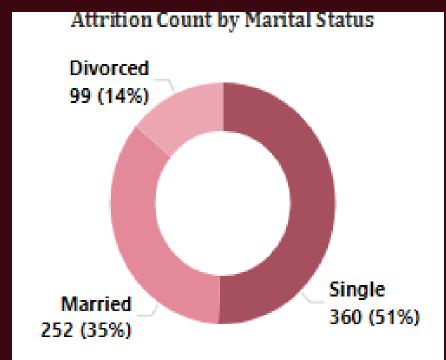


#### BY MARITAL STATUS

- Single Employees: Highest attrition count (360) and rate (26%).
- Married Employees: Second-highest attrition count (252) and rate (12%).
- Divorced Employees: Lowest attrition count (99) and rate (10%).

#### Reasons:

Single employees face fewer personal & family constraints, compared to married employees so they're more inclined to frequent job changes for career growth, while the latter prefer job stability.



#### **BY MARITAL STATUS:**

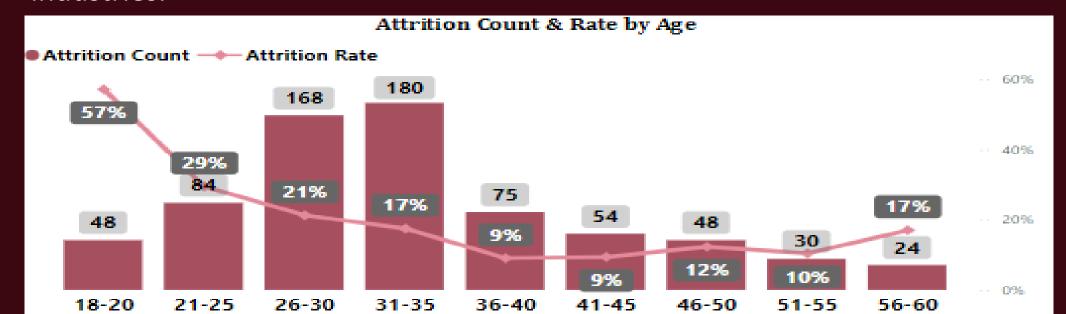
- Married Females have a slightly higher attrition rate at 13% compared to married males at 12%.
- Single Males have a higher attrition rate at 27% compared to single females at 23%.

- Married females face comparatively higher work-life balance challenges due to more family responsibilities than males.
- Single males could have different career expectations and work culture experience than single females could be the reason for the difference in attrition rate

#### BY AGE GROUP

- 49% of employees are in the age range of 26-35, which has a high attrition count too.
- The age range 31-35 has the highest attrition count of 180, followed by 26-30 (168) and 21-25(84).

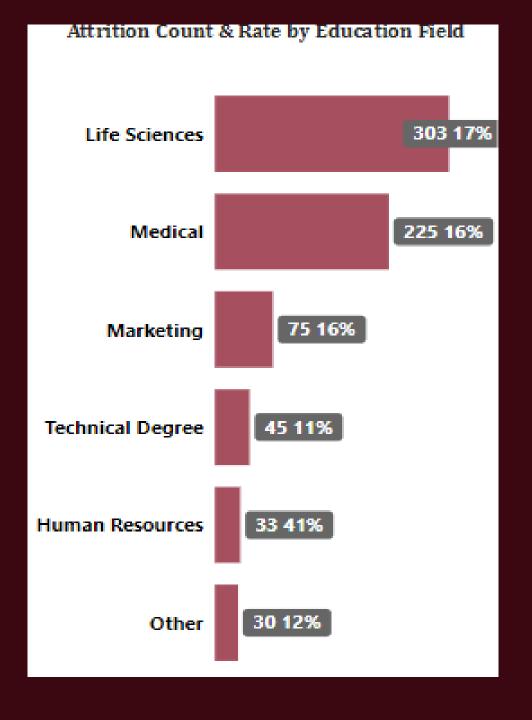
- > 26-35: With good experience by this age they might be seeking new opportunities.
- ➤ New work-life balance challenge as it's a most preferred marriage age too.
- ➤ 21-25: at the early career stage they might want to explore different roles & industries.



#### BY EDUCATION FIELD

- Life Science has the highest attrition count of 303, followed by Medical at 225.
- Attrition Rate is highest in Human Resources at 41%, followed by Life Science at 17%.

- > High Stress, burnout, and job dissatisfaction-
  - Due to constant innovation & research pressure in life science.
  - Due to the emotional and mental impact of medical fieldwork.
  - Due to managing complex employee relations human resource field
- > Limited career growth opportunities.





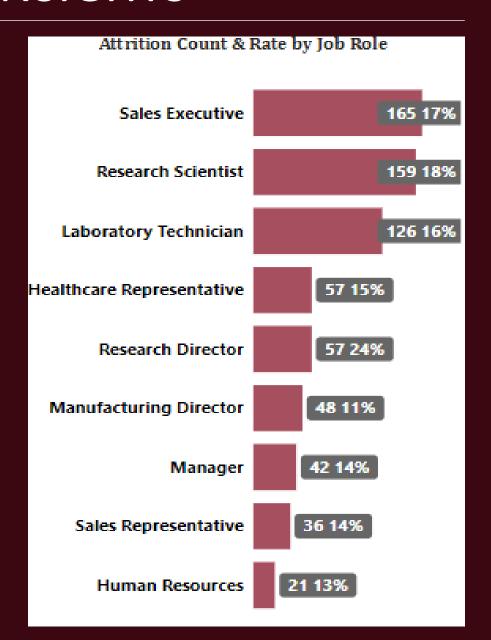
### JOB STRUCTURE BASED INSIGHTS

#### BY JOB ROLE

- Sales Executives (165) have the highest attrition count, followed by Research Scientists (159) and then Laboratory technicians (126).
- Attrition rate is highest among Research Directors(24%).

#### Reasons:

> Due to relatively exhaustive & stressful job roles, causing dissatisfaction



#### BY DEPARTMENT

- Research & Development has the highest attrition count of 453, which is 64% of all attrition.
- The Human Resources department has the highest attrition rate of 30%.

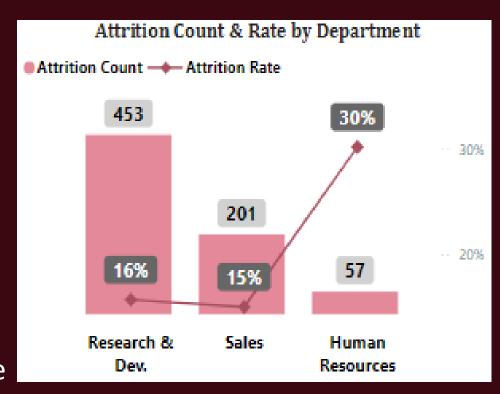
#### Reasons:

#### **Research & Development-**

- ➤ High Stress, burnout, and job dissatisfaction due to constant innovation & research pressure.
- ➤ Limited career advancement opportunities in some research roles.

#### **Human Resource-**

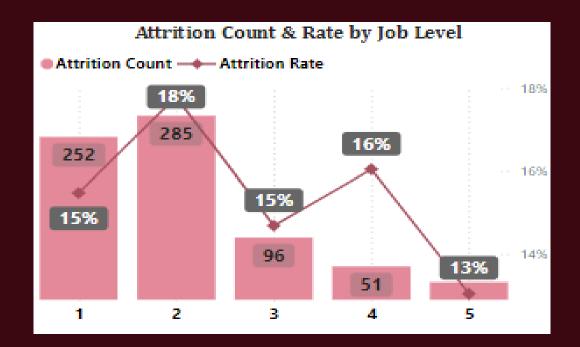
Handling complex employee relations; challenges due to changing organizational structure & limited opportunities



#### BY JOB LEVEL

- 75% of the workforce belongs to these job levels.
- The highest attrition count of employees is at job level 2 (285), followed by job level 1 (252).

- ➤ Job Level 2 often involves significant responsibilities without the corresponding authority, recognition, or compensation, leading to stress and burnout.
- > Might find better growth prospects outside
- ➤ **Job Level 1** is an entry-level position that involves repetitive tasks and limited responsibilities, potentially leading to lower job satisfaction.
- > Entry-level employees might be more likely to explore different roles and industries.
- Might struggle with adapting to the organizational culture.
- Lower Compensation



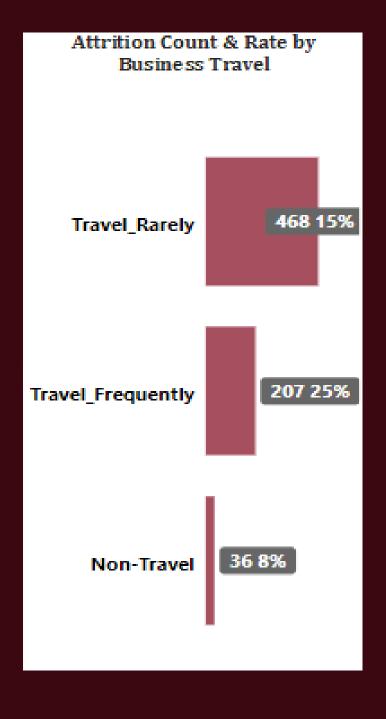
#### BY BUSINESS TRAVEL

For better insights, we have analyzed it with respect to age range and marital status.

Those travelling frequently have a high attrition rate of 25%, while the attrition count is highest for those travelling rarely.

Age Range & Frequent Travelling.

- 21-25 years employees have an attrition rate of 67%.
- 26-30 years employees have an attrition rate of 33%.
- 31-35 years employees have an attrition rate of 28%. Marital Status & Frequent Travelling.
- Singles have an attrition rate of 39%.
- Divorced have an attrition rate of 25%.
- Married have an attrition rate of 16%.



- ➤ Younger employees might be struggling with the demands of frequent travel, therefore have a high attrition rate, while older employees with more experience are able to better handle it so have a low attrition rate.
- ➤ Singles, could be due to the lack of a proper support system are not being able to handle frequent travelling well compared to married who have a better support system and stability



# SATISFACTION SCORE BASED INSIGHTS

- The calculated Average Satisfaction Metrics include the score of employees' environment satisfaction; Job Involvement; Job Satisfaction & Work-Life balance, on a scale of 1-4.
- The Average Satisfaction Score of all employees is 2.72.
- The Average Satisfaction Score of current employees is 2.75.
- The Average Satisfaction Score of attritted employees is 2.57.
- Highest Attrition count of 23, of employees with a satisfaction level of 2.50.

Employee Satisfaction Scores and Departure Patterns

#### 1. High Satisfaction (Score 3 and Above)

- Employees in this category who are leaving the organization have moderate scores in work-life balance and job involvement, & high in other metrics. So, likely seeking better opportunities elsewhere.

#### 2. Moderate Satisfaction (Score Between 2 and 3)

- These employees have poor to moderate scores in 2-3 metrics or a single extremely dissatisfied score, indicating a mixed level of dissatisfaction and possible concerns in specific areas.

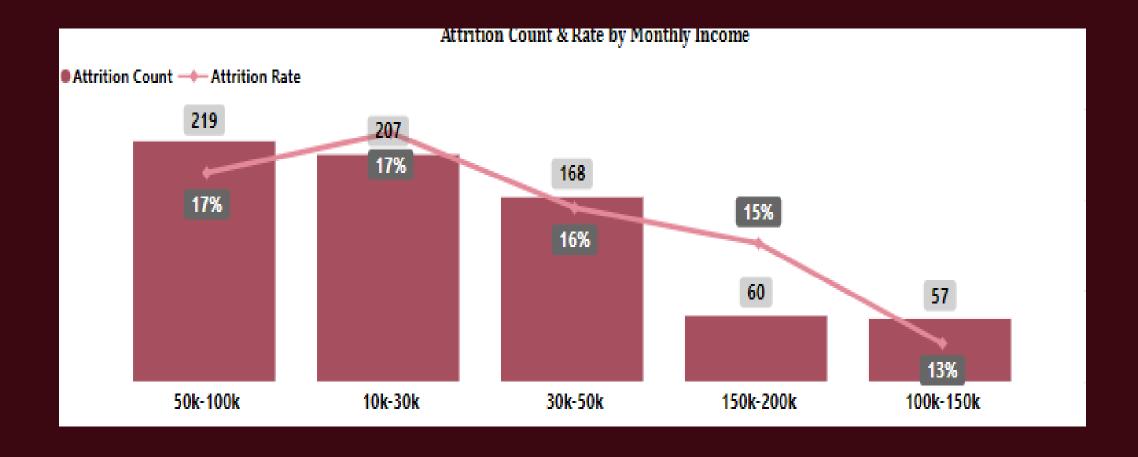
#### 3.Low Satisfaction (Score Between 1 and 2)

- These employees are departing with strong dissatisfaction in at least two metrics and with others showing a moderate level of satisfaction. Suggests significant issues impacting their overall satisfaction

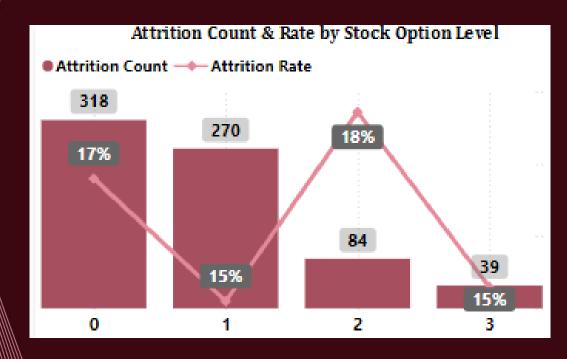


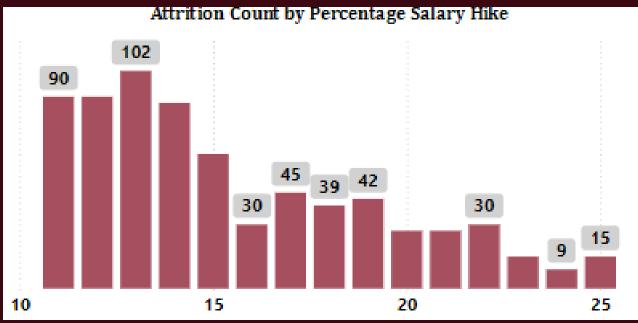
### **INCOME BASED INSIGHTS**

- 53% of attritted employees(375) are in the salary range of 10k 50k.
- 31% of attritted employees(219) are in the salary range of 50k 100k



 Employees with higher stock option levels and percentage hikes are less likely to leave the organization.







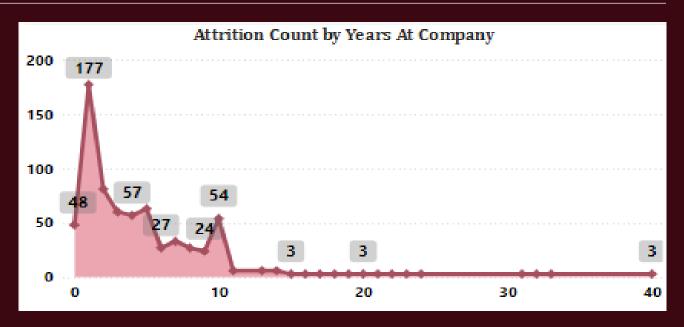
## TIME BASED INSIGHTS

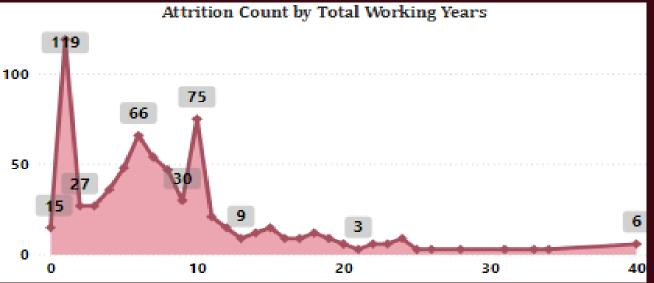
#### BY YEARS AT THE COMPANY

- Highest attrition count after 1 year of experience.
- Another peaks after 5 years &
   10 years, and then the attrition count drastically decreases

#### BY TOTAL WORKING YEARS

Similar to the above, at 1 year the attrition is highest and the peak of attrition is at 1 year, 5year & 10year, and then the attrition count drastically decreases.



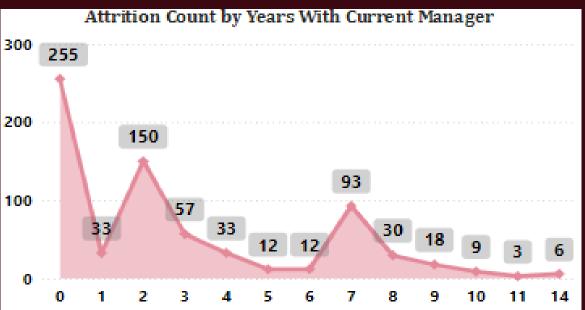


- ➤ **After 1 year,** they might be finding better opportunities with some experience either in terms of role or salary & not seeing growth prospects with us.
- > After 5 years, employees may feel stagnant in their roles.
- Work-life balance.
- Burnout.
- ➤ After 10 years, some employees might be planning for retirement or considering major career changes.
- Seek higher compensation or better benefits.
- > Over 10 years, lower attrition count due to feeling of loyalty.
- Reaching career plateau.
- Mostly at higher position which they don't want to abandon.

#### YEARS WITH CURRENT MANAGER

 Employees with fewer years with the current manager have a high attrition count, 255 with less than a year of work association

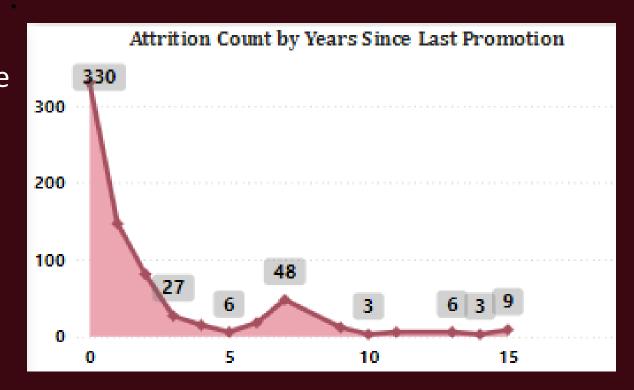
- ➤ Might be due to a lack of rapport & understanding. causing miscommunication of expectations & feedback.
- ➤ Different working styles could be causing difficulty in adjustment and frustration among employees.



#### BY YEARS SINCE LAST PROMOTION

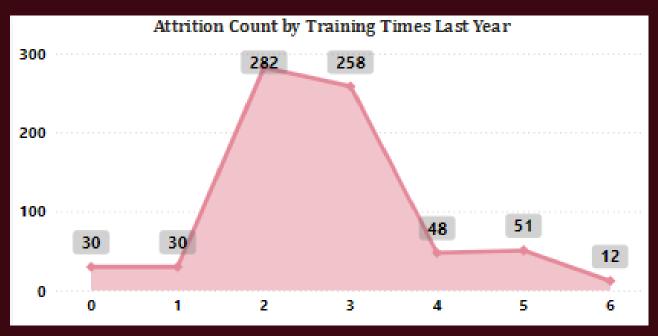
- Employees with recent promotions are leaving more.
- Attrition count of 330 with a promotion of less than a year

- Unmet expectations in terms of designation or compensation.
- Mismatch between employee skills and role requirements causing frustration.
- Increased stress due to increased responsibilities.



#### BY TRAINING TIMES LAST YEAR

- Employees who were given training 2-3 years ago have a high attrition count.
- While those provided 0-1 year ago and over 3 years ago have a very low attrition count



- > Training 2-3 years ago, these employees might be leaving either because they don't find it enough for their further growth or finding better opportunities with such training and its experience.
- ➤ Provided training 0 -1 years ago, are still at an early stage of their roles after training and those with training given over 3 years have developed a better connection and job satisfaction, therefore low attrition.



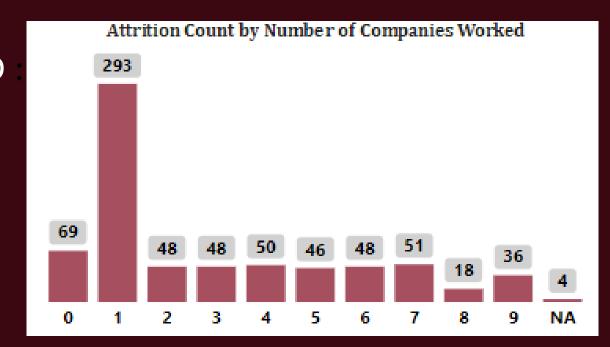
### INSIGHTS BASED ON OTHER REASONS

#### BY NUMBER OF COMPANIES WORKED

 41% of attritted employees previously worked in 1 company only, attrition count of 293



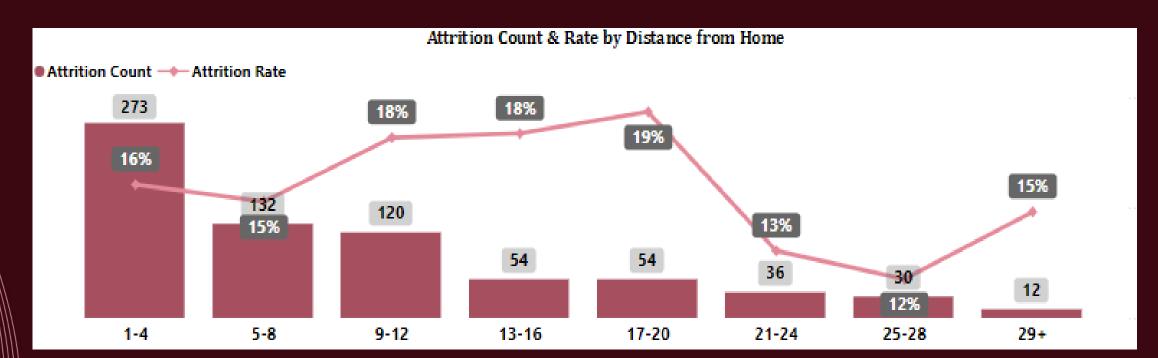
- Unmet expectations at the new job.
- > Difficulty in adjusting to the new environment.
- > Lack of exposure to different working environments.
- Constant comparison to previous organization.
- Desire for immediate growth.



#### BY OFFICE DISTANCE FROM HOME

- Attrition count increases with decreasing distance of office from home.
- 38% of attritted employees live within 1-4 km of distance from home.

- ➤ Better networking & community near office area facilitating easier job switching options.
- Employees living nearby may have to work extended hours or have more responsibilities which is increasing stress among them.



# RECOMMENDATIONS

- To retain new employees, leverage the experience of long-serving employees by involving them in training and mentoring programs to inculcate confidence of great career prospects among newly hired.
- Offer professional development opportunities like upskilling programs, reimbursement of tuition fees, etc.
- Establish open channels for feedback where employees can voice their opinions and suggestions for improvement.
- Conduct regular one-on-one meetings to discuss their job satisfaction, career goals, and any concerns they may have.
- Create and communicate clear career development plans with milestones and timelines for promotions.
- Create clear pathways for career advancement in different job roles & education fields.
- Offer leadership training & development programs to prepare employees for higher-level positions.
- Provide flexible work options like remote work, hybrid model, flexible hours, etc.
   even to those living close to the company.

- Encourage cross-departmental projects to keep employees engaged and broaden their experience.
- Organize introductory sessions between employees and their new manager to foster strong work relationships & team cohesion.
- Often organize recreative activities like sports competitions, cultural events, volunteer work, etc.
- Manage business travel expectations to avoid excessive traveling which may lead to burnout.
- Provide employees benefits like childcare benefits, elderly assistance, etc.
- Regularly review and adjust salary levels to ensure they are competitive with industry standards.
- Implement performance-based incentives and raise rewards for high achievers.

# THANK YOU!