IBM Workforce Insights & Recommendations

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**The Story of Data Visualization**

"Although most employees perform at a high level, there is a gap in promotions and retention that hinders growth. Additionally, geographic distance impacts employee satisfaction and productivity. Addressing these issues with targeted strategies will unlock the full potential of IBM’s workforce."

**Main Business Question:**

How can IBM better leverage its workforce potential by improving promotions, employee retention, and overcoming geographic distribution challenges?

**Supporting Questions:**

1. Why are only 4.9% of employees getting promoted, even though 84.6% have high performance ratings?

2. Why do 42% of employees leave the company after just 3 years?

3. How does the distance between employees and the office affect their productivity and satisfaction?

4. Are there employees who are ready to take on future leadership roles?

# A. Steps Taken

1. Data Cleaning:  
- Replaced numeric codes with readable labels (e.g., Education Level, Job Satisfaction).  
- Imputed missing values (e.g., Work-Life Balance) using median values.  
- Standardized date formats for consistency.  
- Tools Used: Power Query in Excel.  
  
2. Data Transformation:  
- Created calculated columns using DAX, such as:  
 - Experience Category: Junior, Mid-Level, Veteran.  
 - Retrenchment Risk Flag: High Risk / Low Risk.  
- Tool Used: Power BI DAX.  
  
3. Data Modeling:  
- Established relationships between tables (Employees, Departments, Performance Ratings).  
- Created key measures such as Promotion Rate using DAX.

# B. Challenges Faced

1. Data Issues:  
- Missing values in "Training Hours" column, which led to exclusions from training analysis.  
- Mixed date formats required standardization.  
  
2. Visualization Issues:  
- Distance from office: Initial pie chart ineffective. Resolved by using a heatmap.  
- Years of Service: Similar column heights in charts. Resolved using a waterfall chart.  
  
3. Storytelling Challenges:  
- Difficulty explaining why 84.6% high performers had only 4.9% promotion readiness.  
- Added dedicated slide: 'Potential Disconnect Between Performance and Promotion Criteria'.

# C. Key Findings & Insights

1. Demographics:  
- Gender Split: 60% Male, 40% Female (technical roles showed widest gender gap).  
- 64% of employees live far from the office, affecting satisfaction and performance.  
  
2. Performance Insights:  
- 84.6% employees received high ratings but only 4.9% were promotion-ready.  
- High performer attrition at year 3 (42%) indicates poor career path planning.  
  
3. Risk Insights:  
- 8% employees flagged for retrenchment risk – costing approx. $2.3M.  
- Promotion distribution is skewed: Sales had 16 promotions vs. R&D's 3.

# D. Recommendations & Action Points

1. Immediate Actions:

- Align performance ratings with promotion criteria.

- Launch mentorship programs for L3 employees.

- Pilot hybrid work policy for employees far from the office.

2. Long-Term Strategies:

- Build a leadership pipeline by upskilling L3 employees.

- Introduce 3-year retention bonuses to reduce attrition.

3. KPIs to Track:

- Promotion Rate: Increase from 4.9% to 10%.

- 3-Year Retention Rate: Improve from 58% to 75%.

- Promotion Speed: Reduce from 4.2 years to 2.8 years.