HR ANALYTICS DASHBOARD FOR WORKFORCE PRODUCTIVITY AND ATTRITION INSIGHTS

Background and Objective:

A mid-sized IT services firm with over 1,200 employees across four departments struggled to analyze key workforce indicators, especially around training impact, team productivity, and attrition trends. Excel-based HR reports were fragmented and delayed.

Objective:

To create an interactive Tableau dashboard that enables the HR team to monitor real-time productivity metrics, evaluate the effectiveness of training programs, and understand the root causes of attrition across departments.

Methodology:

1. **KPI Framework:**

   o Productivity Index (task completion rate, billable hours)

   o Training Completion and Post-Training Performance Score

   o Monthly and Quarterly Attrition Rate

   o Voluntary vs Involuntary Exit Ratio

   o Tenure-based Retention Curve

2. **Data Preparation:**

   o Merged employee master sheet, attendance, performance evaluations, and exit interviews

   o Cleaned duplicate employee IDs and standardized date formats

   o Created derived fields for training impact (before vs after score delta)

3. **Dashboard Design Plan:**

   o Tabs: Employee Overview, Department-wise KPIs, Attrition Trends, Training ROI

   o Filters: Department, Job Role, Gender, Experience Band, Training Program

   o Visuals:

- Line chart for attrition over time

- Stacked bar for training outcomes by team

- Bubble chart for tenure vs productivity

- Tree map for reasons for exit

Data Sources:

- HRMS exports (CSV) – employee records, leaves, transfers

- Learning Management System (Excel) – training completions and assessments

- Exit interview database (manual entry form logs)

- Payroll metadata – employee type, grade, and compensation bracket

Tools and Technologies:

- **Tableau Desktop** – for dashboard development

- **Tableau Prep** – for data joins and preprocessing

- **Python (optional)** – used for creating a composite productivity index

- **Google Sheets** – to allow live update functionality in future phase

Results and Interpretations:

- **Attrition Spikes Detected:** Most exits occurred in Q4, especially among employees with <1 year tenure, indicating poor onboarding experience.

- **Training ROI Identified:** Employees completing technical upskilling showed a 19% average increase in performance ratings over three months.

- **Departmental Gaps Made Visible:** The support department had a productivity index 22% below average with the highest absenteeism.

- **Predictive Indicators for Exit:** Those with no training in the past 6 months and repeated negative appraisals had a 60% higher exit probability.

Conclusion:

The Tableau dashboard served as a centralized decision-support tool for HR. It enabled leadership to realign training budgets, update onboarding protocols, and identify departments needing targeted retention strategies.

Future Work:

- **Predictive Attrition Model:** Add churn probability scores for each employee using historical HR data.

- **Engagement Score Integration:** Use pulse survey results to correlate engagement with attrition.

- **Cross-Company Benchmarking:** Include comparative HR KPIs from industry databases.

- **Mobile Dashboard:** Create a mobile-optimized version for HR managers on the move.

Suitability:

- **Academic:** Useful for coursework in HR Analytics, organizational behaviour, and data visualization.

- **Corporate:** Directly applicable for HR managers, business analysts, and strategic workforce planners in any medium to large enterprise.