

HUMAN RESOURCE ANALYTICS DASHBOARD FOR ALTERA

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INTRODUCTION

Project Objective: To develop a Simple HR Analytics Dashboard that provides insightful reporting on the workforce of the organization. The dashboard serves as a decision-support tool highlighting key metrics and performance indicators.

Dashboard Scope (key deliverables):

- Total Employees
- Employment Type Breakdown
- Employee Recruitment Channels
- Employee Gender Distribution
- Department Overview
- Employee geographic Location Distribution
- Training Metrics
- Awards and Recognition
- Employee Age Distribution
- Gender-Based Ratings and Experience
- Employee Education Level
- Performance Metrics
- Employee Length of Service

DATA PREPARATION

Data Source: Data was received from Only Quality Data and comprises of the following fields 14 fields:

(EmpID, Department, Education, Gender, Recruitment Channel, FT/PT, Number_of_Trainings, Age, Previous_Year_Rating, Length_of_Service, KPIs_met>80%, Awards_Won, Avg_Training_Score)

Data Cleaning:

- The data was loaded and transformed to Power Query for cleaning.
- The data types of all the fields were checked to ensure that they were all in their correct state.
- The only column which had missing values was the Number_of_Trainings field, the missing values were replaced with the mean values in that column.
- No other cleaning was done as there were no more errors or changes to be made.

Data Preparation:

- A measures table named "AlteraMeasures" was created to help specify the measures created.
- Two measures were created there, the "CurrentDate" measure to keep tabs of the date we are in and the "Total Employees" measure to calculate the total number of employees in the dataset.
- The data category of the Location field was changed from uncategorized to place.
- lastly, in order to specify that the employee location was limited to Ghana, a new column was created where a DAX formula was used to add Ghana to the locations to make them more specific, then once again the data category of the new column named "working_location" was changed to place.

DASHBOARD DESIGN AND FEATURES

Overview:

The dashboard is an HR analytics dashboard for ALTERA. Its purpose is to provide insights and analysis on various HR metrics and data. The main features of the dashboard include employee demographics, employment type breakdown, gender distribution, trainings by department, employee recruitment channels, department overview, awards won by department, employee education level, average KPIs met, average length of service, employee age distribution, and average rating.

Visualizations:

- **Total Employees:** This visualization shows the total number of employees in ALTERA, which is 234,907 as of 8/4/2024.
- **Employment Type Breakdown:** This visualization presents the breakdown of employees based on their employment type. It shows that 64.03% of employees are full-time (FT) and 35.97% are part-time (PT).
- **Gender Distribution:** This visualization displays the gender distribution of employees. It indicates that 70.65% of employees are male and 29.35% are female.
- **Trainings by Department:** This visualization provides information on the number of trainings conducted in each department. It shows the number of trainings for departments such as Sales & Marketing, Operations, Procurement, Technology, Analytics, Finance, HR, Research, and Legal.
- **Employee Recruitment Channel:** This visualization illustrates the different channels through which employees were recruited. It shows that social networking sites and the company's website are the main recruitment channels.
- **Department Overview:** This visualization gives an overview of the different departments in ALTERA. It shows the departments such as Sales & Marketing, Operations, Procurement, Technology, Analytics, Finance, HR, Legal, and Research.

- Awards Won by Department: This visualization presents the number of awards won by each department. It shows the departments such as Sales & Marketing, Operations, Technology, Procurement, Analytics, HR, Finance, Research and Development, and Legal.
- Employee Education Level: This visualization displays the education level of employees. It shows the number of employees with a bachelor's degree, master's degree and above, and below secondary education.
- Average KPIs >80% met: This visualization shows the average percentage of Key Performance Indicators (KPIs) met by employees, with a threshold of 80%.
- Average Length of Service: This visualization presents the average length of service in years for employees in ALTERA, which is 5.81 years.
- Employee Age Distribution: This visualization illustrates the distribution of employees based on their age. It shows the number of employees in different age groups.
- Average Rating: This visualization displays the average rating of employees in ALTERA, which is 3.31.

Note: This document does not provide specific details about the design choices and recommendations for the dashboard. Please reach out if there are suggestions or recommendations for the dashboard design choices and other concerns.

KEY INSIGHTS

Analysis:

1. Employment Type Breakdown: The majority of employees in ALTERA are full-time employees (64.03%), while the remaining employees are part-time (35.97%). This indicates that the organization relies heavily on full-time staff for its operations.

2. Gender Distribution: The gender distribution in ALTERA shows a higher representation of males (70.65%) compared to females (29.35%). This suggests a gender imbalance within the organization, which may have implications for diversity and inclusion efforts.

3. Trainings by Department: The number of trainings conducted in each department provides insights into the focus areas for employee development. The departments with the highest number of trainings are Sales & Marketing, Operations, and Procurement, indicating a strong emphasis on these areas. On the other hand, departments like Legal and Research have relatively fewer trainings, suggesting a potential need for more development opportunities in these areas.

4. Employee Recruitment Channel: The recruitment channels used by ALTERA, such as social networking sites and the company's website, indicate a reliance on digital platforms for attracting talent. This highlights the importance of a strong online presence and effective use of social media in the organization's recruitment strategy.

5. Department Overview: The department overview provides a snapshot of the different departments in ALTERA. It shows that Sales & Marketing, Operations, and Technology are the largest departments, while Legal and Research have relatively smaller teams. This information can be useful for resource allocation and workforce planning.

Trends:

1. Gender Imbalance: The higher representation of males compared to females in ALTERA suggests a persistent gender imbalance within the organization. This trend may have implications for gender diversity, equal opportunities, and the need for targeted initiatives to promote gender equality.

2. Focus on Sales & Marketing and Operations: The higher number of trainings and larger teams in Sales & Marketing and Operations departments indicate a focus on these areas. This trend suggests that ALTERA places significant importance on sales and operational excellence, which may align with the organization's strategic goals.

Implications:

1. Diversity and Inclusion Efforts: The gender imbalance observed in ALTERA's workforce highlights the need for proactive measures to promote gender diversity and create an inclusive work environment. This may involve implementing policies and initiatives to attract and retain more female employees, as well as fostering a culture of equality and inclusion.

2. Training and Development: The analysis of trainings by department reveals areas where there may be a need for additional training and development opportunities. This information can guide the organization in allocating resources and designing targeted programs to enhance the skills and capabilities of employees in departments with fewer trainings.

3. Recruitment Strategy: The reliance on social networking sites and the company's website as recruitment channels suggests the importance of maintaining a strong online presence and leveraging digital platforms for attracting talent. ALTERA may need to continuously evaluate and optimize its recruitment strategy to ensure a diverse pool of candidates and attract top talent.

4. Resource Allocation: The department overview provides insights into the size and composition of different departments. This information can be valuable for resource allocation decisions, such as determining staffing levels, budget allocation, and identifying areas where additional resources may be required.

RECOMMENDATIONS

Strategies:

1. Gender Diversity Initiatives: Implement initiatives to promote gender diversity and inclusion within ALTERA. This can include setting diversity targets, creating mentorship programs, and providing equal opportunities for career advancement.
2. Training and Development Programs: Develop targeted training and development programs for departments with fewer trainings. This will help enhance the skills and capabilities of employees in these areas and ensure a well-rounded workforce.
3. Recruitment Strategy Enhancement: Continuously evaluate and enhance the recruitment strategy by exploring additional channels, such as professional networking platforms and partnerships with educational institutions. This will help attract a diverse pool of candidates and ensure a robust talent pipeline.
4. Resource Allocation Optimization: Utilize the department overview data to optimize resource allocation. This can involve reallocating resources to departments with higher growth potential or strategic importance, and ensuring adequate staffing levels in all departments.

Improvements:

1. Data Collection: Enhance data collection processes to capture more granular information, such as employee demographics by age group. This will provide a more comprehensive view of the workforce and enable deeper analysis.
2. Data Analysis Techniques: Explore advanced data analysis techniques, such as predictive analytics and machine learning, to uncover hidden patterns and insights in the HR data. This can help identify trends, predict future workforce needs, and support data-driven decision-making.

CONCLUSION

In conclusion, the HR analytics dashboard provided valuable insights into various HR metrics and data for ALTERA. The dashboard highlighted key areas such as employment type breakdown, gender distribution, trainings by department, recruitment channels, and department overview. These insights can guide strategic decision-making, resource allocation, and initiatives to promote diversity and employee development within the organization.

Future Work:

1. Employee Engagement Analysis: Conduct further analysis on employee engagement levels and factors influencing employee satisfaction. This can help identify areas for improvement and develop strategies to enhance employee engagement and retention.
 2. Performance Analysis: Explore performance metrics and KPIs in more detail to assess individual and departmental performance. This can provide insights into areas of strength and areas that require improvement, enabling targeted performance management strategies.
 3. Predictive Analytics: Incorporate predictive analytics to forecast future workforce needs, identify potential talent gaps, and support succession planning. This will enable ALTERA to proactively address talent management challenges and ensure a sustainable workforce.
 4. Enhanced Visualization: Continuously enhance the visualization capabilities of the dashboard to provide more interactive and user-friendly visualizations. This will improve the usability and accessibility of the dashboard for HR professionals and stakeholders.
- Overall, the HR analytics dashboard has proven to be a valuable tool for ALTERA, providing insights and analysis to support data-driven HR decision-making. Further analysis and enhancements can unlock additional value and help drive organizational success