**Human Resources Analytics**

**HRMN 1023**

**Comprehensive Assignment**

Gurwinder Singh – 200557497

**Executive Summary**

Canuck Consulting Inc. (CCI), a medium-sized consulting firm based in Toronto, Ontario, has recently seen a positive financial turnaround but is facing significant HR-related challenges. This report focuses on four critical HR issues: retirement impacts, turnover analysis, leaves of absence, and gender distribution. Each section aims to provide insights into these areas, identify potential problems, and offer actionable recommendations to enhance organizational stability and employee satisfaction.

**Define**

**Scope**

The analysis encompasses data from CCI’s payroll and turnover records spanning from 2010 to the present, with a specific focus on the past five years to understand recent trends. The data includes various employee metrics such as retirement patterns, turnover rates, leave of absence frequencies, and gender distribution across different occupations and hierarchical levels.

**Problem**

1. **Retirement Impacts**: Understanding historical and potential future retirements is crucial to managing knowledge loss and ensuring smooth succession planning.
2. **Turnover Analysis**: Identifying patterns and reasons behind employee turnover helps in addressing retention issues and improving workplace satisfaction.
3. **Leaves of Absence**: Analyzing leave patterns helps in understanding absenteeism’s impact on productivity and identifying potential problem areas.
4. **Occupation by Gender Analysis**: Evaluating gender distribution across different occupations and hierarchical levels is essential for addressing gender imbalances and promoting diversity.

**Terminology**

* **Early Retirement**: Retirement before the standard retirement age.
* **Regular Retirement**: Retirement at or near the standard retirement age.
* **Turnover**: The rate at which employees leave the company.
* **Leaves of Absence**: Time employees take off work for reasons such as illness or personal matters.
* **Gender Imbalance**: Unequal representation of different genders in various occupations or hierarchical levels.

**Measurement**

* **Retirement Patterns**: Historical retirement data by occupation, age, and years of service.
* **Turnover Rates**: Employee exit data categorized by occupation and reason for termination.
* **Leave Frequencies**: Data on the types and rates of leaves of absence.
* **Gender Distribution**: Gender representation across different roles and levels within the company.

**Desired Outcome**

The goal is to gain a clear understanding of the impact of retirements, turnover patterns, absenteeism, and gender distribution. The desired outcome includes developing actionable recommendations to address identified issues and improve overall HR management and organizational effectiveness.

**Analyze**

**1. Retirement Impacts by Occupation and Years of Service**

**Analysis**

**Historical Patterns:**

* **Early vs. Regular Retirement:** Historical data indicates that early retirement has been more prevalent among technical staff, while regular retirement is common in senior roles.
* **Fiscal Year Trends:** There has been a steady increase in retirements among employees with over 20 years of service, particularly in engineering and construction roles.

**Current Data:**

* **Potential Future Retirements:** Analysis shows that several key engineering roles, especially in mining and utilities, have a high percentage of employees nearing retirement age. Specifically, 25% of engineers in the mining division and 30% in utilities are over 55 years old.

**Visualizations:**

* **Retirement Trends by Occupation**
* **Projected Future Retirements**:

**Recommendations**

* **Succession Planning:** Implement a robust succession plan focusing on critical roles in engineering and mining.
* **Knowledge Transfer:** Develop mentoring programs to ensure knowledge transfer from retiring employees to younger staff.

**2. Turnover Analysis by Occupation and Termination Reason**

**Analysis**

**Turnover Patterns:**

* **High Turnover Occupations:** Notably high turnover rates are observed in construction and utilities divisions, with resignation as the primary termination reason.
* **Fiscal Year Trends:** Turnover rates peaked during the economic downturn (2011-2013) and have slightly decreased but remain high in recent years.

**Visualizations:**

**Turnover Rates by Year:**



* **Turnover Rates by Occupation**:
* **Termination Reasons Breakdown**:

**Recommendations**

* **Retention Strategies:** Address common reasons for resignation, such as job dissatisfaction and lack of advancement opportunities. Implement targeted retention strategies including career development programs.
* **Exit Interviews:** Conduct thorough exit interviews to understand underlying issues leading to high turnover rates.

**3. Leaves of Absence Analysis**

**Analysis**

**Patterns:**

* **Division-specific Rates:** High rates of sick leave and personal leaves are observed in the construction and civic divisions. These divisions also experience higher rates of long-term disability leaves.
* **Occupational Impact:** Technical roles in remote locations show higher leave rates compared to office-based roles.

**Visualizations:**

* **Leave Rates by Division**:
* **Types of Leave Distribution**:

**Recommendations**

* **Absenteeism Management:** Develop policies to manage high absenteeism, including wellness programs and flexible work arrangements.
* **Support Systems:** Enhance support systems for employees in high-leave occupations to reduce burnout and improve overall job satisfaction.

**4. Occupation by Gender Analysis**

**Analysis**

**Gender Distribution:**

* **Imbalance:** There is a notable gender imbalance with fewer women in senior and technical roles compared to support and administrative positions.
* **Hierarchy Trends:** Women are underrepresented in executive roles, with only 15% of senior leadership positions held by women.

**Visualizations:**

* **Gender Distribution by Occupation**:
* **Gender Representation by Hierarchical Level**:

**Recommendations**

* **Diversity Initiatives:** Promote diversity and inclusion through targeted recruitment, training programs, and support networks for women in technical and leadership roles.
* **Policy Review:** Review and revise policies to ensure equitable opportunities for advancement regardless of gender.

**Close the Loop**

In conclusion, the analysis highlights critical areas of concern for CCI, including retirement impacts, turnover rates, absenteeism patterns, and gender distribution. Addressing these issues with targeted strategies will enhance organizational stability, improve employee satisfaction, and ensure effective succession planning. Implementing the recommended actions will help CCI manage its workforce more effectively and maintain its positive financial trajectory.