Skills Gap Analytics
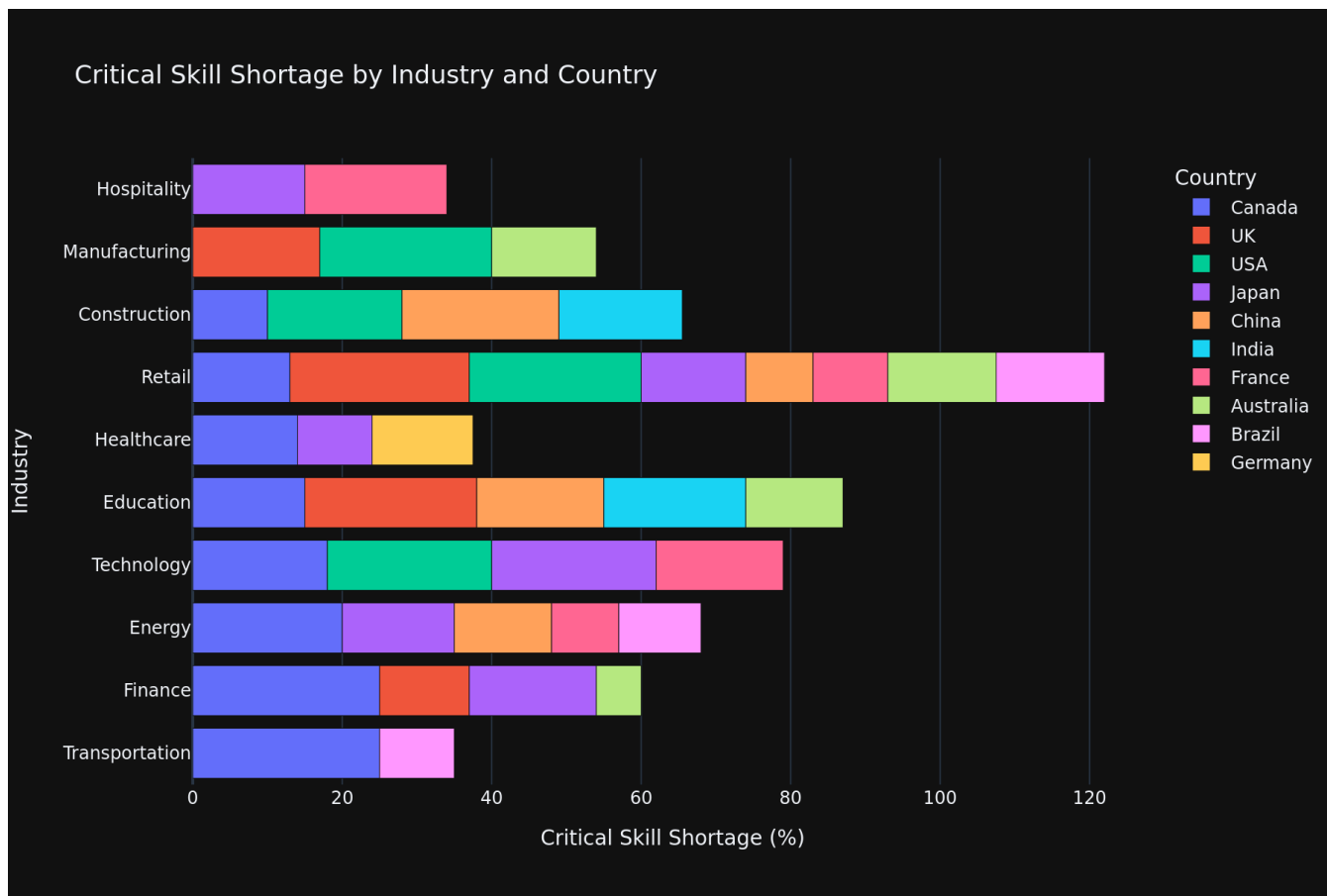
Silvana, 2024-06-09

Executive Summary

• The industries with the highest critical skill shortage percentages are Transportation and Finance in Canada, and Retail in the UK and USA. Therefore, targeted training programs should prioritize these industries and countries to address severe skill shortages.

• The financial impact due to skill shortage is consistently negative, with an average net impact of -784.5 USD million per year. This suggests significant cost implications of skill shortage and necessitates a cost-effective reskilling strategy.

• Future workforce needs indicate a strong demand for Sales and Customer Management, Healthcare Expertise, Data Analysis, and Cloud Computing. Therefore, these areas should guide the creation of future training initiatives.

• The Retail sector requires immediate intervention, with the highest number of employees needing reskilling (3261 thousand). The Finance industry follows, with Energy and Construction also requiring attention.

• On a global scale, Canada, Japan, and the UK are most affected by the workforce skills gap and should be the focal points for international reskilling efforts.

• Evaluating the effectiveness of reskilling, Australia and Canada experienced significant increases in business impact post-training, with Japan exhibiting the highest return on investment (ROI). On the contrary, China and the UK saw a decrease in business impact post-training, indicating negative ROI.

About the data

This dataset examines the workforce skills gap from 2019 to 2023 across various industries in ten countries. It includes data on critical skill shortages, employees needing reskilling, in-demand skills, training costs, and the financial impact of skill gaps. The information is aimed at analyzing trends, identifying skill shortages, and facilitating the planning of training programs to address these gaps effectively.

Analytics

***Workforce Development/Reskilling Strategy:** Identify the industries and countries with the highest critical skill shortage percentage to develop targeted training programs.*

Critical Skill Shortage by Industry and Country

• Based on the data analysis: - The industries with the highest critical skill shortage percentages are **Transportation** and **Finance** in **Canada**, both at 25%. - The **Retail** industry in the **UK** closely follows with a 24% shortage. - In the **USA**, both the **Retail** and **Manufacturing** industries have a 23% critical skill shortage. - The **Technology** industry also shows significant skill shortages, with 22% in both the **USA** and **Japan**.

• These insights suggest that targeted training programs should prioritize these industries and countries to address the most severe skill shortages.

Cost-Benefit Analysis: Determine the financial impact of skill shortage and compare it with the average training cost per employee for a cost-effective reskilling strategy.

Net Financial Impact Over Years
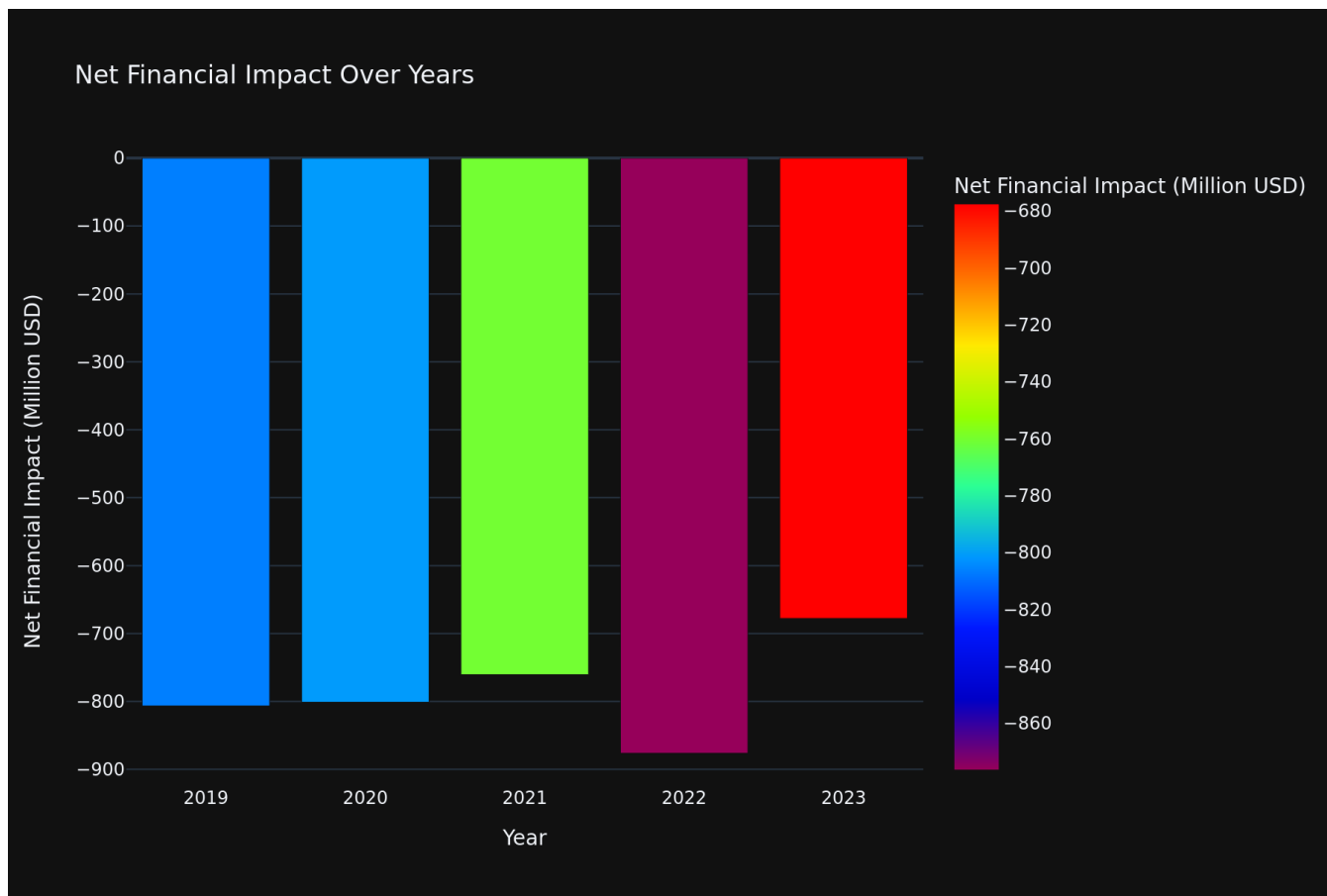
- In 2019, the net financial impact was -806.60175 USD Million.

- In 2020, it slightly decreased to -801.146667 USD Million.

- A further decrease was observed in 2021 with -760.5975 USD Million.

- However, the highest financial impact was seen in 2022 with -876.2715 USD Million.

- In 2023, the impact reduced significantly to -677.707556 USD Million.

Skill Demand Forecast: Analyze the 'Skills Most in Demand' data to predict future workforce needs and guide the creation of future training initiatives.

Skill Demand Forecast
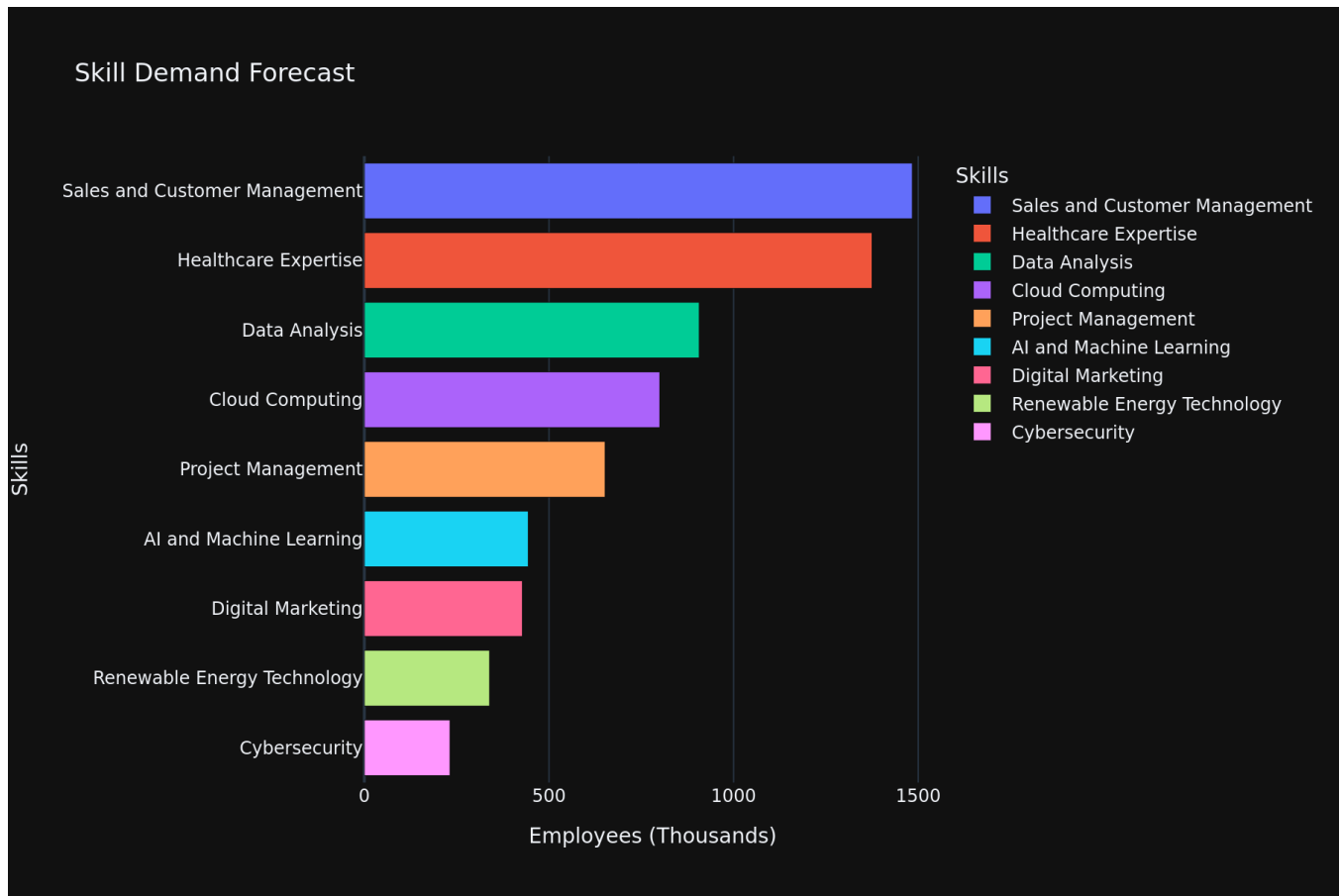
• Sales and Customer Management tops the list with 1484 thousand employees needing reskilling, suggesting a critical need for sales skills and customer handling capabilities.

• Healthcare Expertise is the second most demanded skill with 1375 thousand employees requiring reskilling, indicating a growing need in the healthcare industry.

• Data Analysis and **Cloud Computing** are also in high demand, with 907 and 800 thousand employees needing training, respectively, pointing towards the ongoing digital transformation in businesses.

• Lower on the list but still significant, **AI and Machine Learning**, and **Cybersecurity** indicate emerging tech fields where future workforce needs are likely to increase, with 444 and 232 thousand employees needing reskilling respectively.

***Industry Analysis:** Identify the industry with the most employees needing reskilling to prioritize the sectors that require immediate intervention.*

Industry Analysis: Employees Needing Reskilling
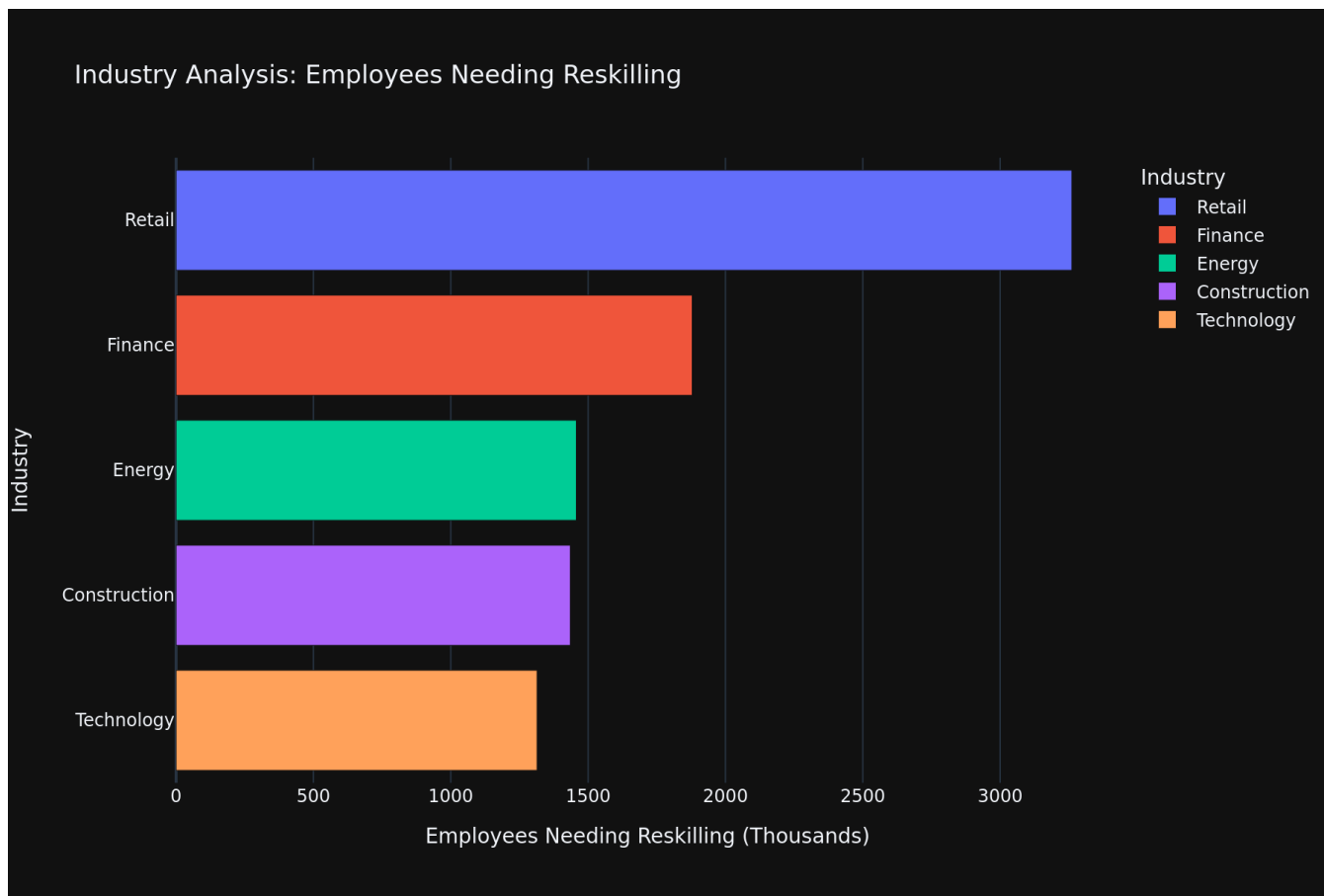
• **Retail** stands as the top priority sector with **3261 thousand** employees needing reskilling.

• The **Finance** industry follows with **1879 thousand** employees.

• **Energy** and **Construction** are closely aligned, requiring reskilling for **1457 thousand** and **1435 thousand** employees respectively.

• The **Technology** industry has the least demand in this context with **1314 thousand** employees.

Country Profiling: Determine which countries are most affected by the workforce skills gap to focus international efforts and strategies.

Country Profiling: Workforce Skills Gap
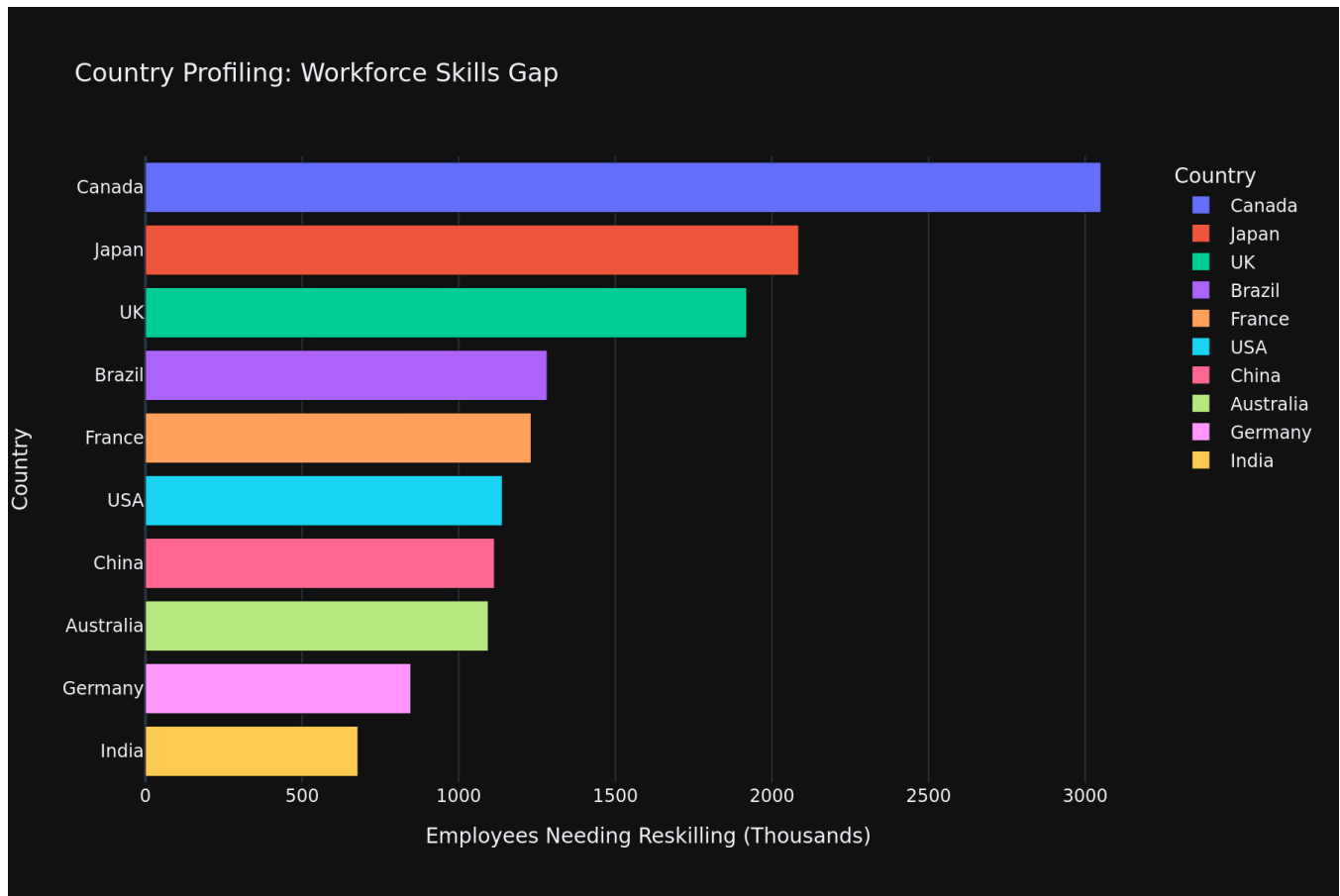
• **Canada** appears most affected, needing reskilling for roughly 3,050 thousand employees.

• **Japan** and the **UK** follow closely with 2,085 and 1,919 thousand respectively.

• On the other hand, **India** and **Germany** show the least demand for reskilling, with only 678 and 847 thousand employees respectively.

• Notably, despite having the largest population, **China**'s reskilling needs are relatively low at 1,114 thousand.

Training Evaluation: Evaluate the effectiveness of reskilling by comparing the business impact of skill shortage before and after training to measure return on investment.

Effectiveness of Reskilling: Business Impact Before & After Training
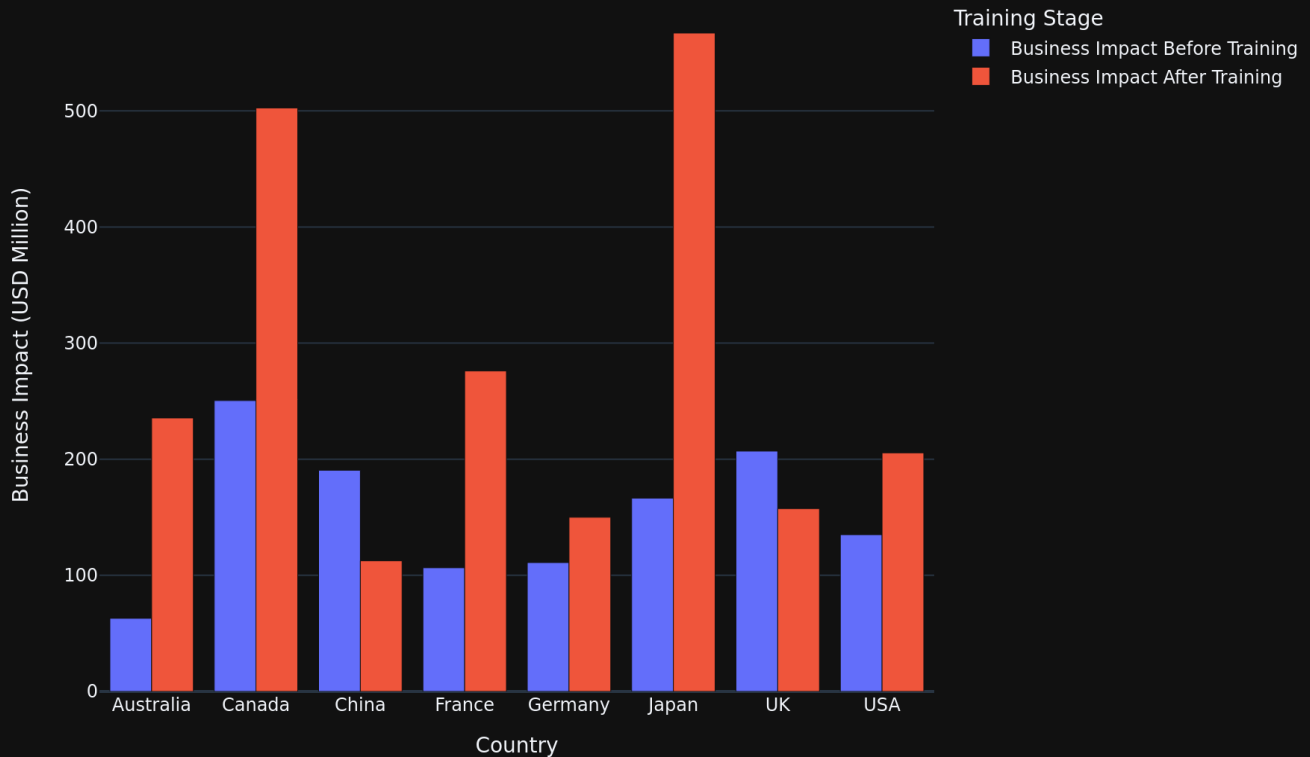
• **Australia** experienced a significant increase in business impact after training, going from 63.0 to 235.5, and a decrease in average training cost, resulting in a ROI of 0.038453.

• A similar pattern is observed in **Canada**, with the business impact more than doubling and a ROI of 0.136585.

• **China** and the **UK** saw a decrease in business impact post-training, while the training cost increased, resulting in a negative ROI.

• **France**, **Germany**, and the **USA** experienced an increase in business impact after training, with France achieving the highest ROI among them at 0.047915.

• **Japan** exhibited the highest ROI of 0.154603, with business impact more than tripling after training.