



The Analytics for Equity Initiative

Mapping Cross-Sector Skills & Pathways for Occupational Safety and Health and Other Technical Science Industries

Lead Researcher: Julie Dunlap

Lead Institution: Fathom Public Benefit Corporation

Research Theme: Theme 5. Equity Considerations for Workplace Safety and Workers

Research Questions: What are the core capabilities and other skills necessary for the technical science industries, including positions in occupational safety and health, particularly as we consider skills for the future and building the pipeline among different demographic groups?

Data: Department of Labor's Occupational Information Network (O*Net) and Bureau of Labor Statistics' Current Population Survey (CPS)

Abstract:

In alignment with the Department of Labor's 2022-2026 priority learning areas and strategic goals toward building opportunity and equity for all and ensuring safe jobs and fair workplaces, this project will identify and analyze cross-sector skills and career pathways toward gainful employment in Occupational Safety and Health and other technical science industries. To accomplish this goal, researchers will conduct an exploratory analysis utilizing the DOL's Occupational Information Network (O*Net) dataset of over 900 occupational profiles in combination with the Bureau of Labor Statistics (BLS) Current Population Survey's (CPS) longitudinal data on American's employment, wages, and career mobility. O*Net and CPS data will be analyzed toward three core objectives: 1) to identify the most critical cross-functional skills for occupational safety and health and other in-demand technical science occupations, 2) to compute the "experience similarity measure" and "skills distance" among identified occupations and career pathways, and 3) to assess and profile the availability of individuals active in the workforce who possess the baseline transferable skills to succeed in these occupations. Additionally, researchers will conduct preliminary interviews with a small sample of employers to explore their perspectives on needed skills for future technical science occupations, skills-based hiring practices, and the relationship between skills and workplace safety. The empirical findings of the exploratory analyses will be disseminated as a memo to DOL stakeholders and will be further utilized to inform the design and development of a larger-scale research plan to explore the empirical relationship between critical skills for occupational safety and health and resulting outcomes for workplace safety.

