

# From Headcount to Capability: Artificial Intelligence and the Transformation of Workforce Planning

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## Abstract

The nature of work is changing due to artificial intelligence and digital technologies, which are upending conventional methods of workforce planning that mostly focus on headcount or Full-Time Equivalent (FTE) predictions. The majority of current research on technological disruption has concentrated on the risk of automation and possible job displacement, providing little guidance on how businesses might modify workforce planning models in reaction to these developments. This study investigates the effects of switching from headcount-based workforce planning to capability-oriented workforce planning and looks at how exposure to artificial intelligence changes the capability architecture of jobs. Utilizing occupational-level data from the O\*NET database and an AI exposure index developed by the International Labour Organization, the study constructs a Capability Architecture Index capturing cognitive, analytical, technological, and coordination skill requirements across occupations. Regression analysis is used to examine the relationship between AI exposure and capability complexity while controlling for occupational preparation levels and occupational family differences. The findings are expected to show that occupations with higher AI exposure exhibit greater capability complexity and increased demand for analytical and digital skills. These findings imply that companies may need to switch from traditional FTE-based workforce planning to capability-based workforce architectures that incorporate improvements in productivity brought by technology. In addition to providing useful insights for businesses and politicians managing technological change, the study adds to the body of knowledge for professionals in human resource management, strategic workforce planning, and the future of work.

**Keywords:** Strategic Workforce Planning, Artificial Intelligence, Capability-Based Workforce Planning, Occupational Skills Architecture . Future of Work