MDOT MARYLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ADMINISTRATION

RESEARCH SUMMARY

Study of Impacts of Technology on the Future Workforce at MDOT SHA

WHAT WAS THE NEED?

Artificial intelligence, robotic process automation, natural language processing and virtual collaboration technologies are transforming the landscape of the office and administrative workforce by automating non-value added, repetitive tasks and processes, as well as supporting remote and flexible work. This has created a shift in two areas. The first being Administrative Assistance for managers. Due to the electronic solutions identified above, there has been a perceived decrease in workload for these Administrative Assistants (AAs). Further, due to the increase of electronic systems, there is a perceived need for business analysts (BAs) in the workforce who can understand the systems and help offices incorporate the systems into their daily work to create efficiencies.

WHAT WAS THE GOAL?

The scope of this study is to provide recommendations on how administrative assistants and business analyst jobs may be redesigned and aligned with technological changes and the job market dynamics and how employees, processes and technology may be managed to better meet MDOT SHA's needs.

APRIL, 2023

REPORT NUMBER:

MD-23-SHA/TU/3-01

START DATE:

July 21, 2022

COMPLETION DATE:

April 30, 2023

PRINCIPAL INVESTIGATOR:

Chaodong Han, Ph.D.
Towson University
chan@towson.edu

WHAT WAS THE OUTCOME?

The study reviews related literature and analyzes job data provided by MDOT SHA and information collected from focus group meetings and one-on-one interviews with MDOT SHA's AAs and their managers. The study conducts job analysis and identifies gaps after assessing MDOT SHA's existing capabilities in terms of office technology infrastructure, AA and BA workforces, and related processes against its mission and strategic plan.

HOW WILL MDOT SHA USE THE RESULTS?

Based on the People, Process and Technology model, the study recommends that MDOT SHA transform into a digital office of the future when managing its AA workforce and adopt a Center of Excellence model managing its BA workforce. Specifically, MDOT SHA may start with some pilot projects to automate repetitive administrative tasks and plan to expand its BA workforces. MDOT SHA may allow teams to adopt a flexible work schedule based on both work and worker requirements.

LEARN MORE

To view the complete report, click here.

For more information on research at MDOT SHA, please visit our website.