

# How can Missouri pilot a new framework by July 1, 2019 to expand technical career paths to improve retention and development?

**PURPOSE** The lack of non-supervisory, technical career paths results in three main challenges:

**Some excellent engineers make average supervisors:** A survey (Appendix A) of Missouri's engineers found that over 90% believe that their coworkers apply for and accept supervisory positions as the only way to increase their salary. Additionally, the state loses resources which would be better utilized in maintaining technical skills rather than supervising personnel.

**Limited promotional opportunities offer little incentive to grow:** Individuals that do not desire to supervise have zero upward mobility. Employees must leave agency to pursue promotions.

**The state suffers loss of institutional knowledge:** Knowledgebase is limited as experts leave agency or become supervisors, freezing technical skills. The lack of mentors for new employees decreases productivity.

**RECOMMENDATIONS** We recommend that the state:

- *Implement DNR's proposed technical career path for environmental engineers, and*
- *Pilot eight technical career positions for engineers in MoDOT's St. Louis District (~100 engineers).*

These programs realign existing FTEs to separate technical and supervisory positions with appropriate salary adjustments. Technical titles are reserved only for individuals who demonstrate their unique knowledge, expertise, and contributions to the professional community. These are not positions which are simply "filled" but attained through dedication and passion for the profession.

**BACKGROUND** Engineers were selected because they are both costly to train and in high-demand. However, the findings of this study can be applied to many positions from frontline Department of Corrections employees to professionally-licensed lawyers or engineers. These two recommendations target high-turnover locations.

This analysis included four Case Studies of technical positions in both public and private agencies.

**Private Industry Case Study:** WSP, an international engineering and architecture firm, has an academic-style technical career path recognizing professional achievements and professional contributions.

**Federal Government Case Study:** The CIA created the Senior Analytic Service eighteen years ago to allow top analysts the freedom to perform in-depth research in their area of expertise.

**State Government Case Studies:** A small department at MoDOT (only 5% of engineers) and a similar program proposed for Environmental Engineers at DNR offer a limited number of competitive positions for technical experts. DNR recently implemented a similar program for Environmental Specialists.

Each of these programs places financial and perceived value on personal investment in a technical area, and all are highly competitive positions. A separate MoDOT study estimated a 2:1 benefit/cost ratio to implementing technical career paths based on turnover costs alone (Appendix B). Savings from resolving the previously mentioned challenges are impossible to quantify.

## **NEXT STEPS**

- Verify DNR proposal prior to implementation.
- Establish technical career path best practices for MoDOT (consider Washington, Iowa, and Maryland).
- Implement technical career paths at both agencies by July 1, 2019.
- After one year, monitor turnover rate trends, resurvey impacted positions, and review practices.

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