

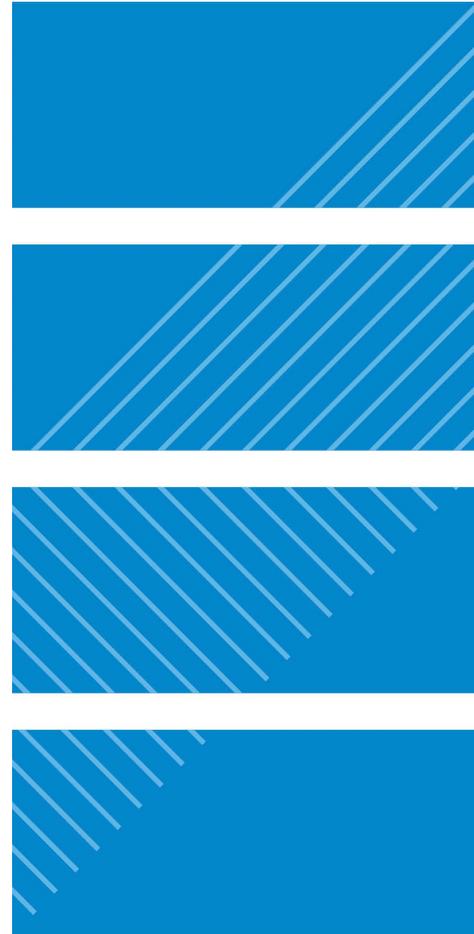
Next generation of tailings professionals

A survey of perspectives on the talent pipeline



Md Fyaz Sadiq, PhD
Katie Zadrozny, PE (MN)
Jason Harvey, PE (MN)

Presented at MINEXCHANGE 2026



Background



Concerns within the industry:

“Succession planning isn’t optional—it’s urgent.”

—David Williams, University of Queensland

“The attrition of senior people will be sudden and catastrophic.”

—Chris Hatton, WSP

“Digging deep on risk, resilience, and the future of tailings dam design,” Jamie Wade, AusIMM, August 1, 2025



LIFE OF MINE WASTE &
MINE TAILINGS
CONFERENCE 2025

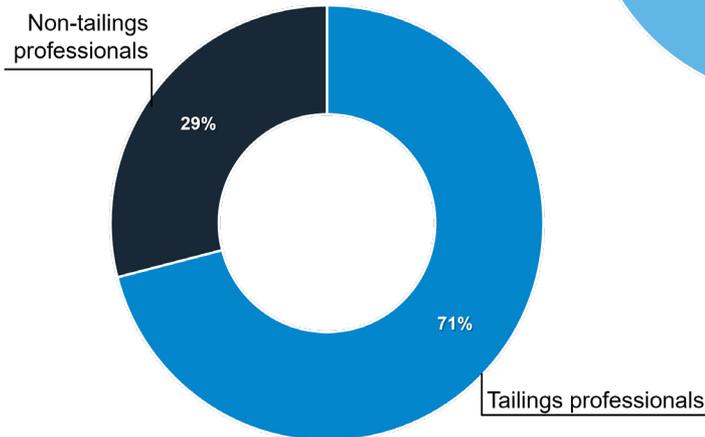
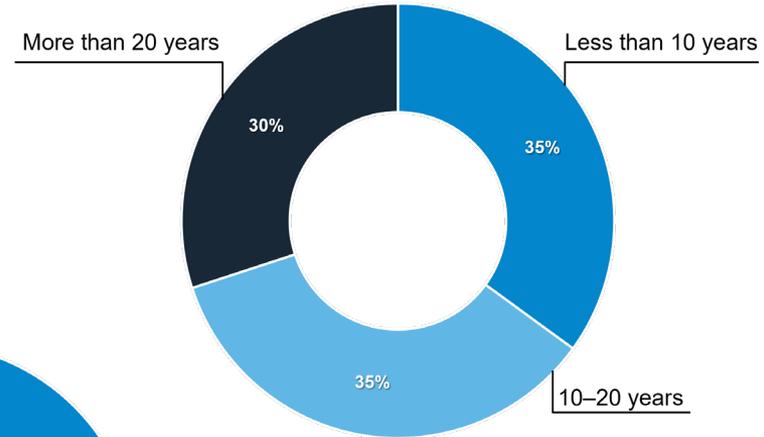
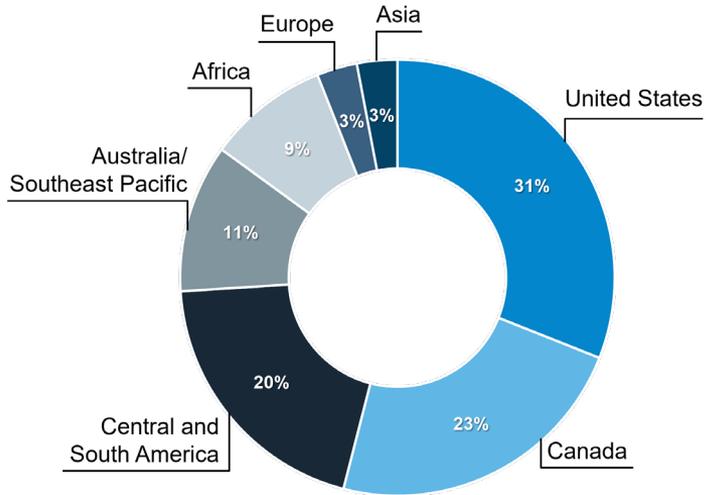
A survey

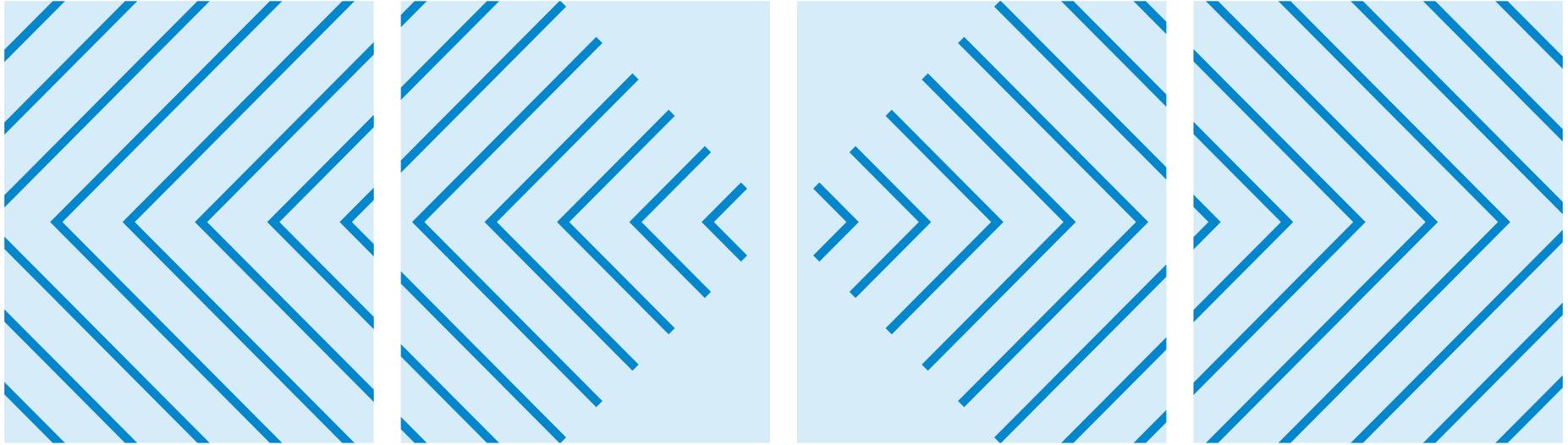
- Evaluate the strength of the talent pipeline
- Compare perceptions across experience levels
- Identify pathways to strengthen succession and professional development

Survey respondents



Total responses = 133

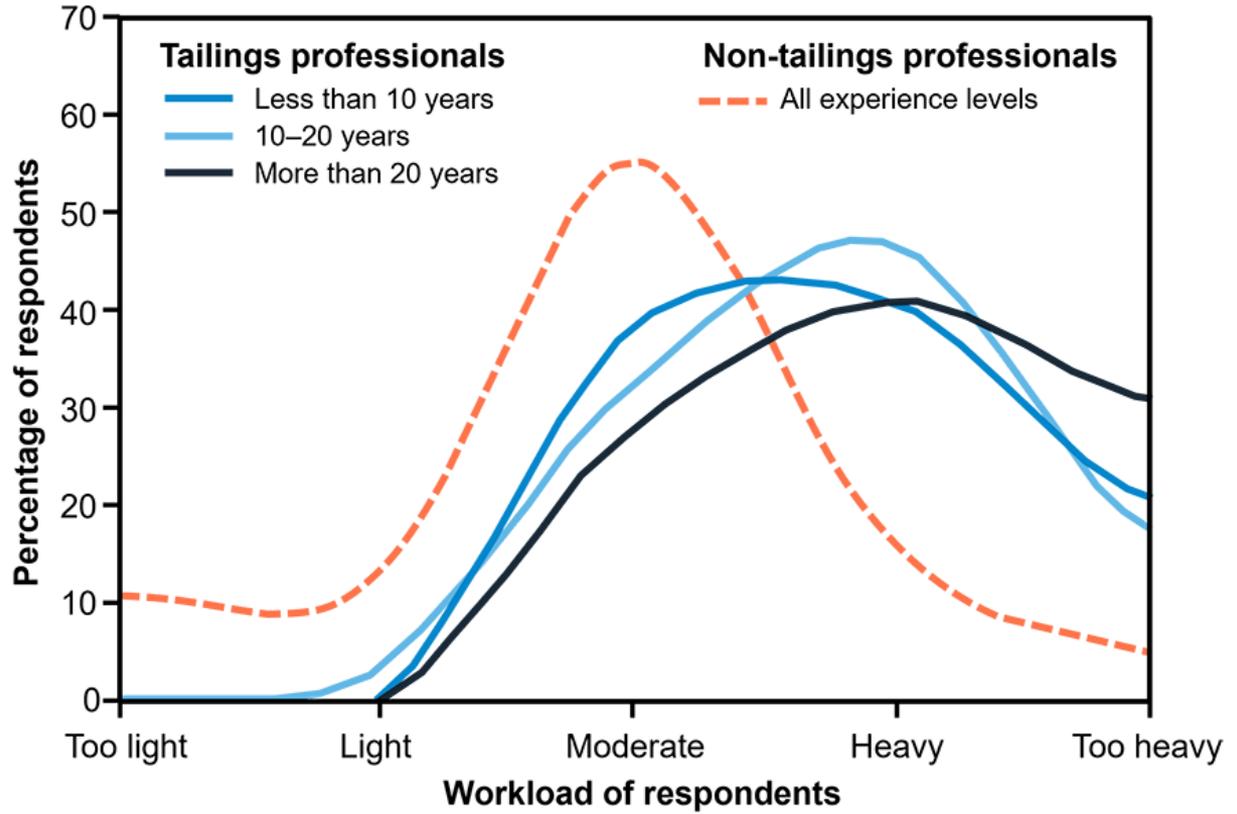




Workload and talent pipeline



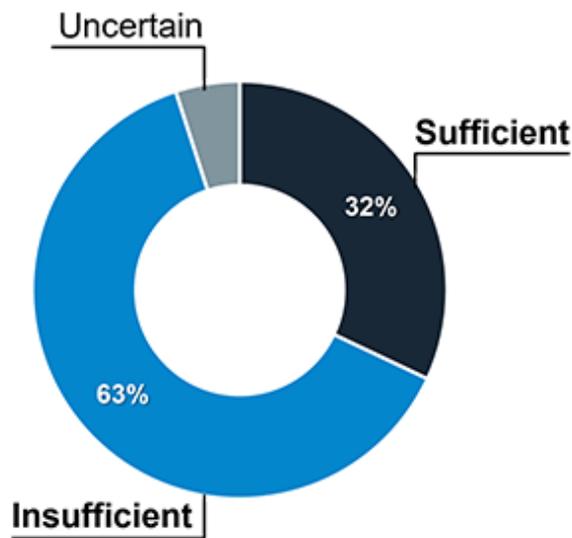
Workload of professionals



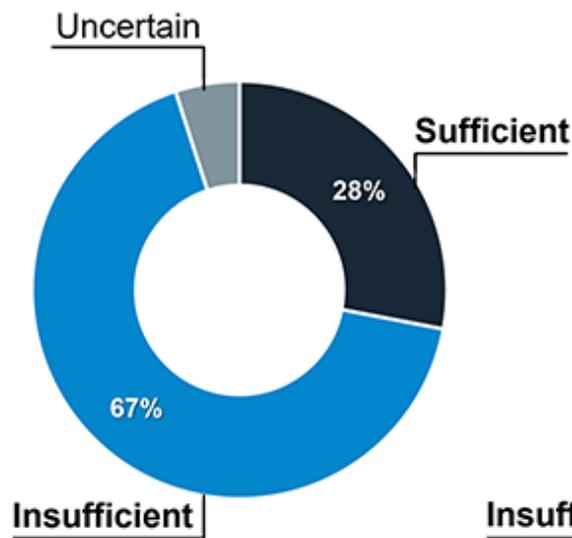
Availability of professionals to staff projects



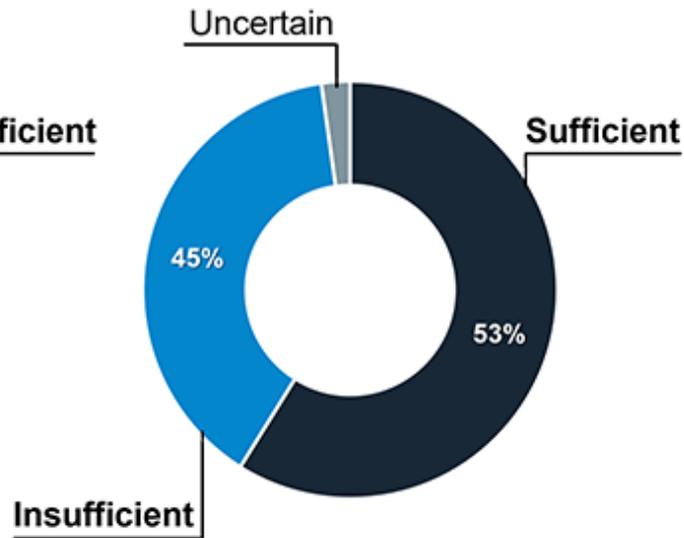
Number of junior professionals available



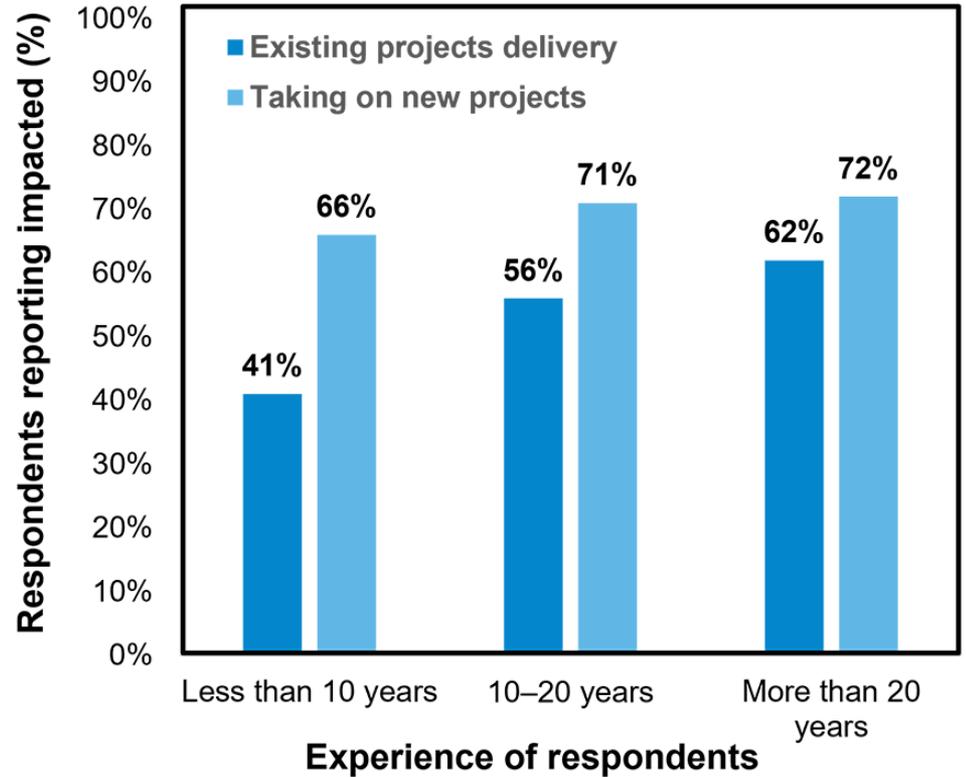
Number of mid-career professionals available



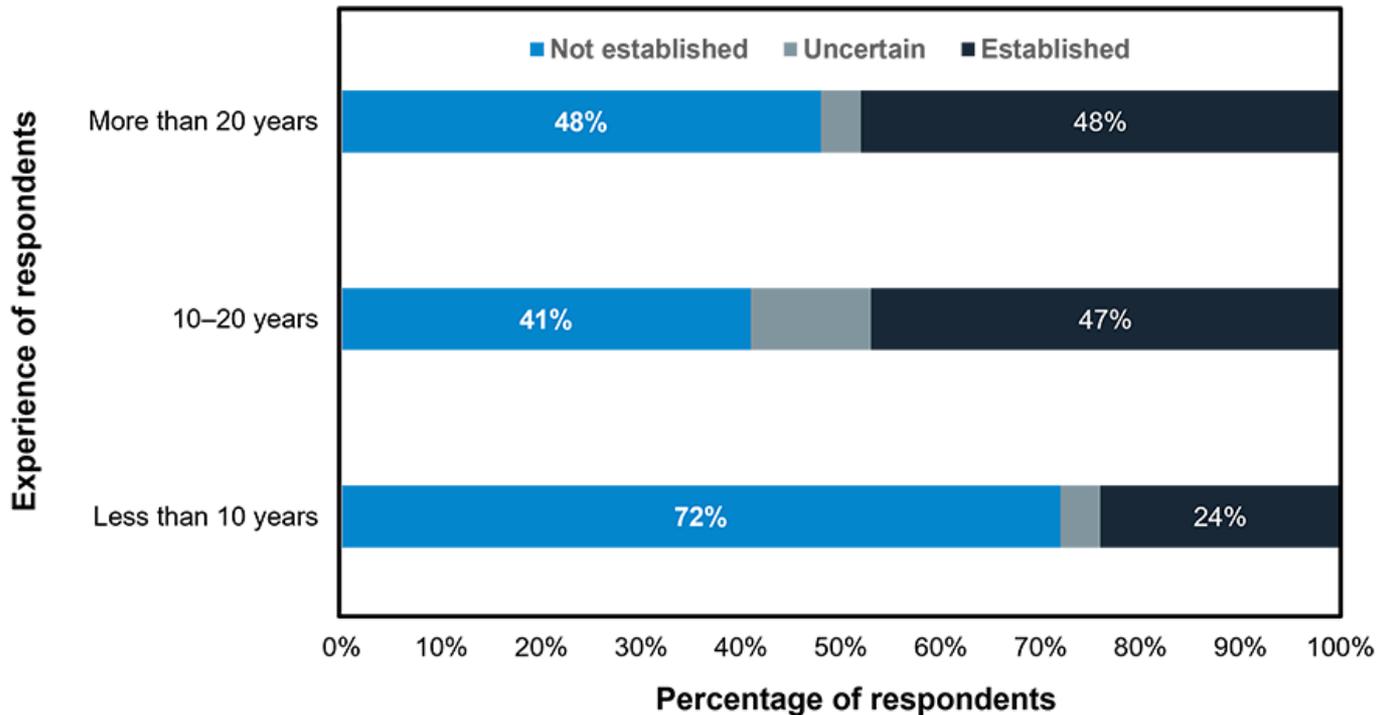
Number of senior professionals available



Impacts of talent gaps on project delivery and growth



Succession planning



Perspective on the talent pipeline ...



SUCCESSION RISK

EORs, PICs, and senior practitioners

“EOR at a tailings basin is a big role and feels a bit scary to many staff. There has not been a great plan communicated to move folks through the pipeline to go from a practitioner to an EOR.”



EXPERIENCE DEVELOPMENT

Field engineers are not integrated technically

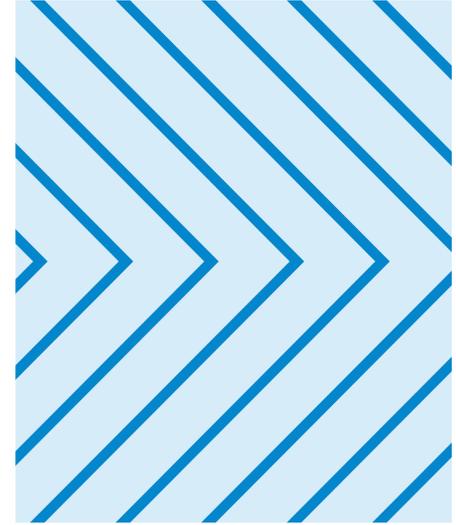
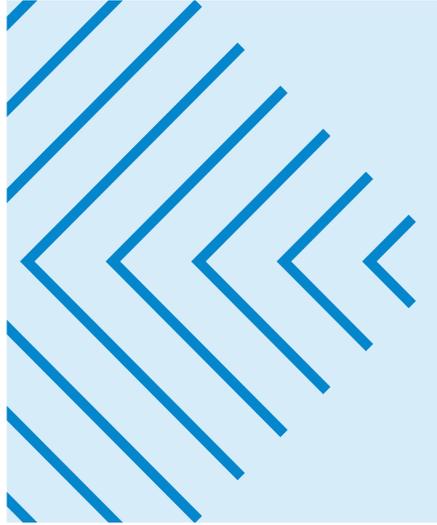
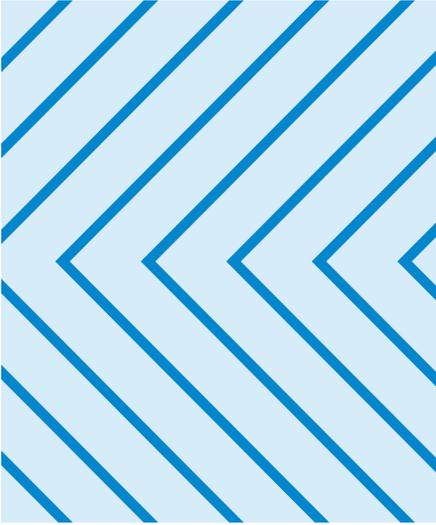
“I perceive a gap in developing entry-level and field staff into well-rounded mid-levels with strong technical skills.”



RETENTION

Burnout in tailings roles

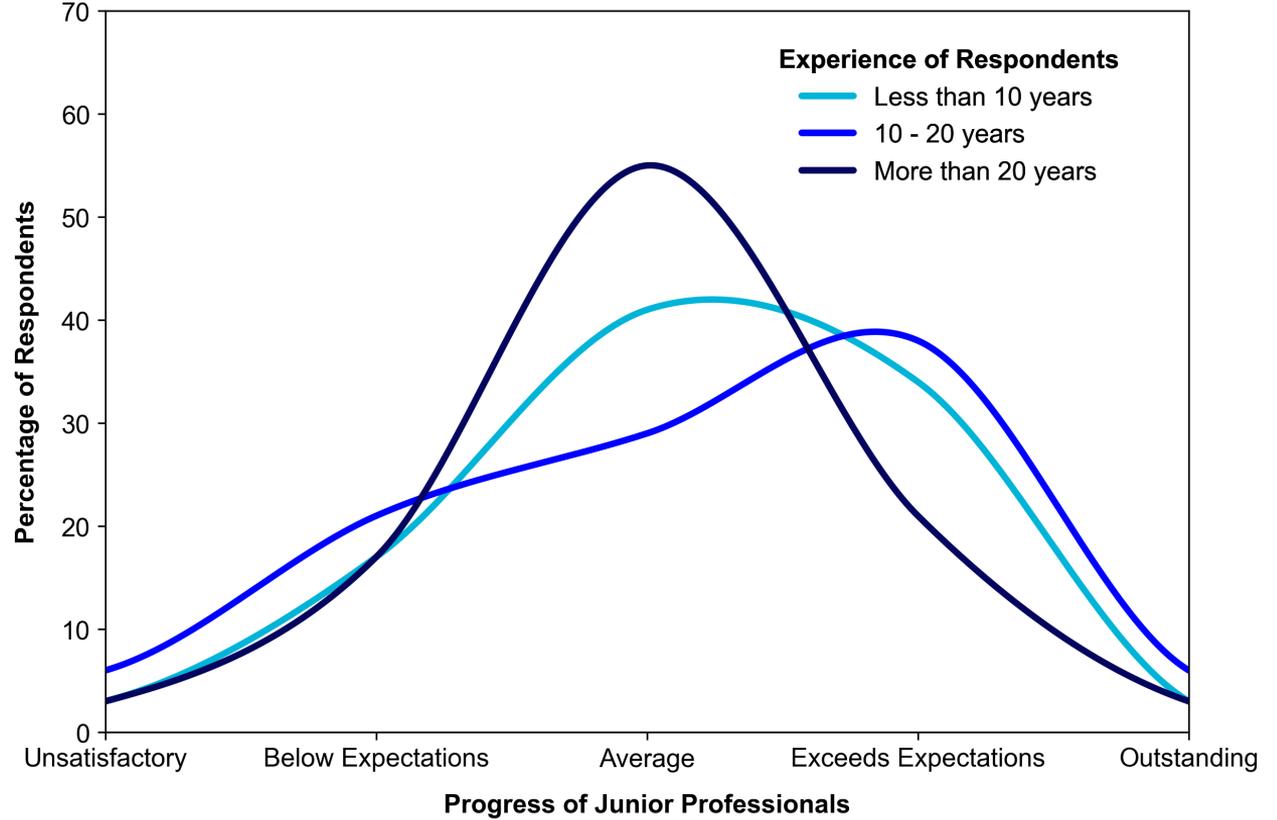
“Too few people entering the field combined with too many leaving, all while the demand continues to increase.”



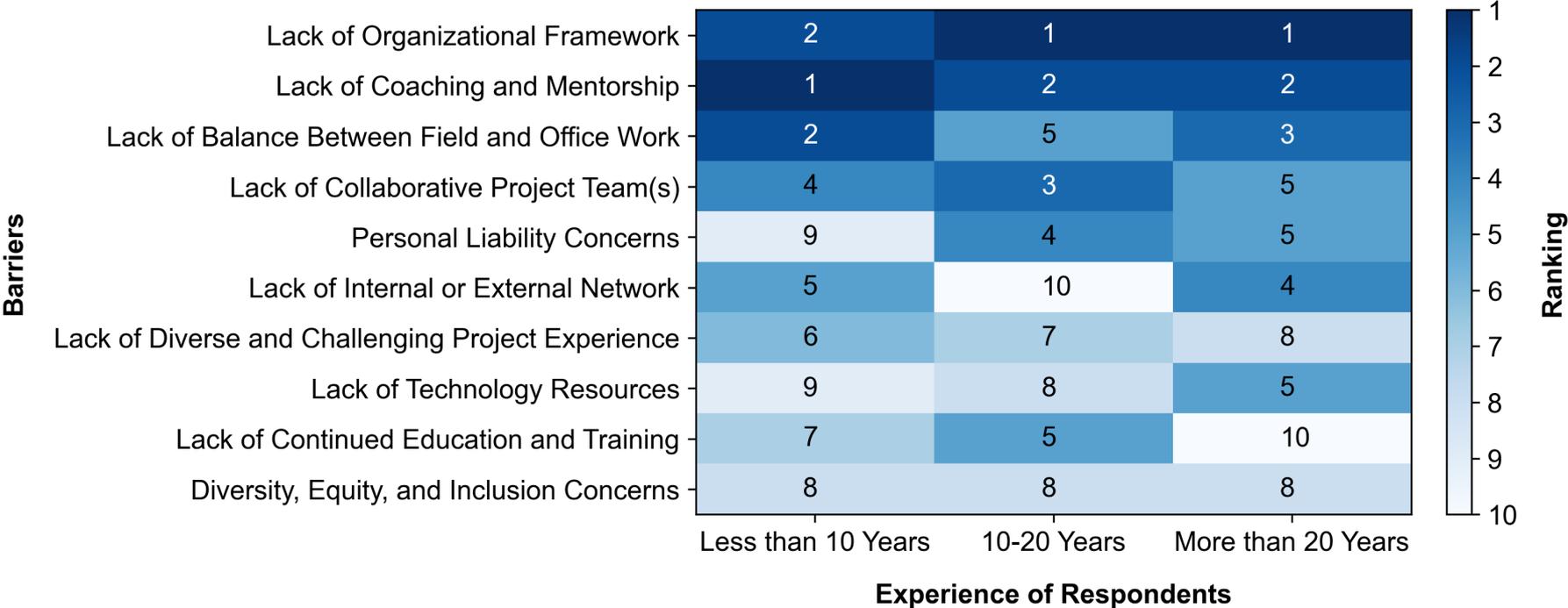
Career growth and knowledge development



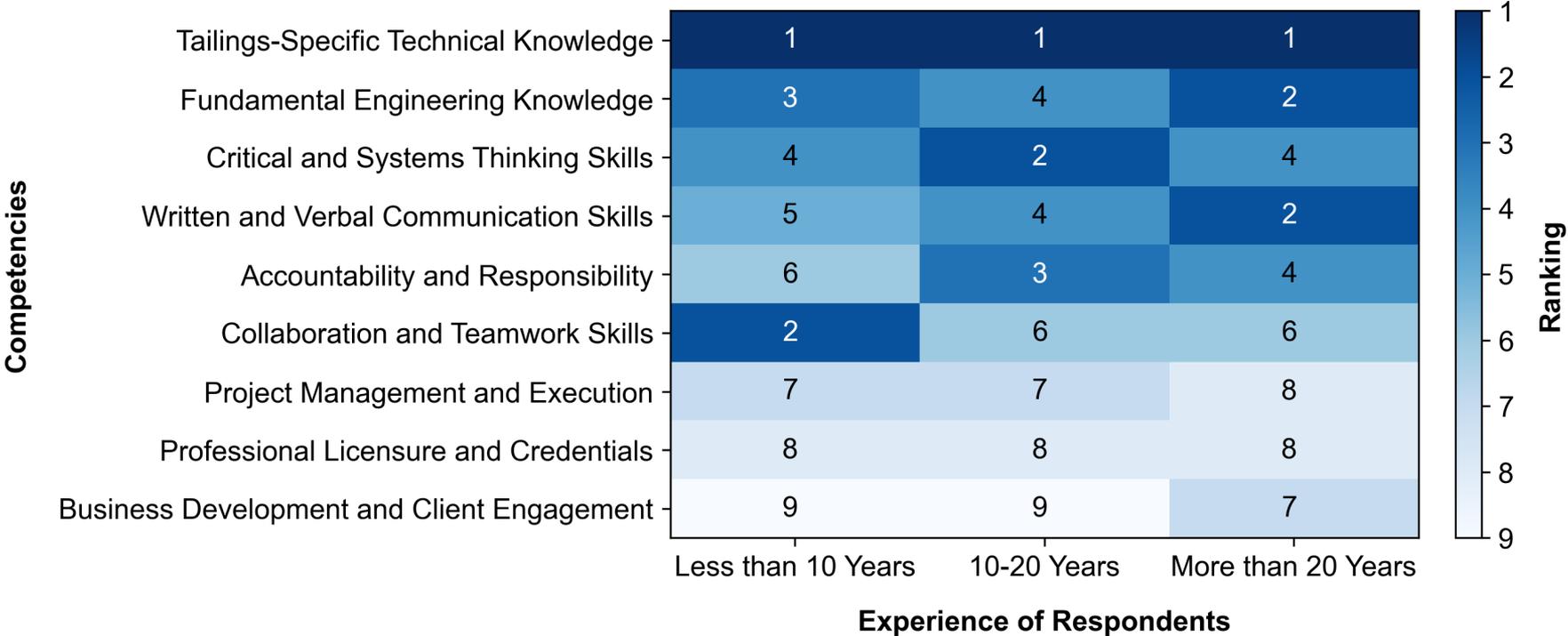
Junior staff career progression



Barriers for professional growth



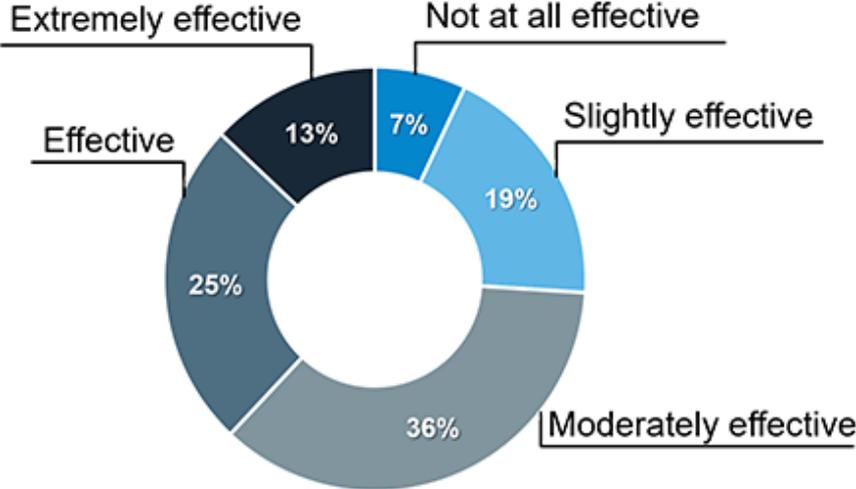
Key competencies for junior career advancement



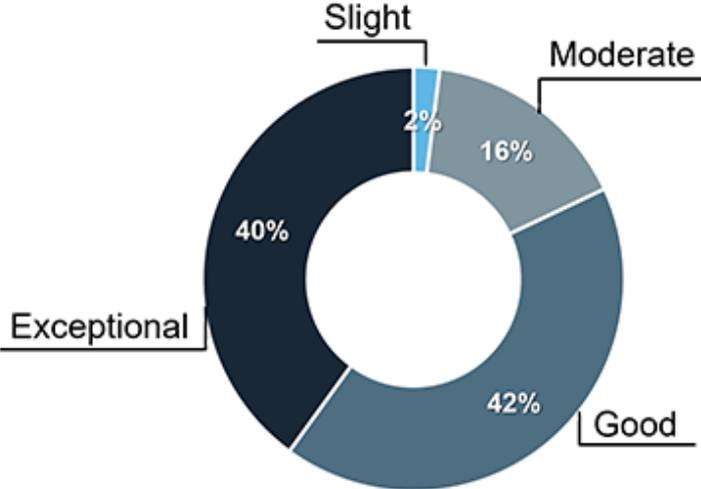
Knowledge development in preparing tailings professionals



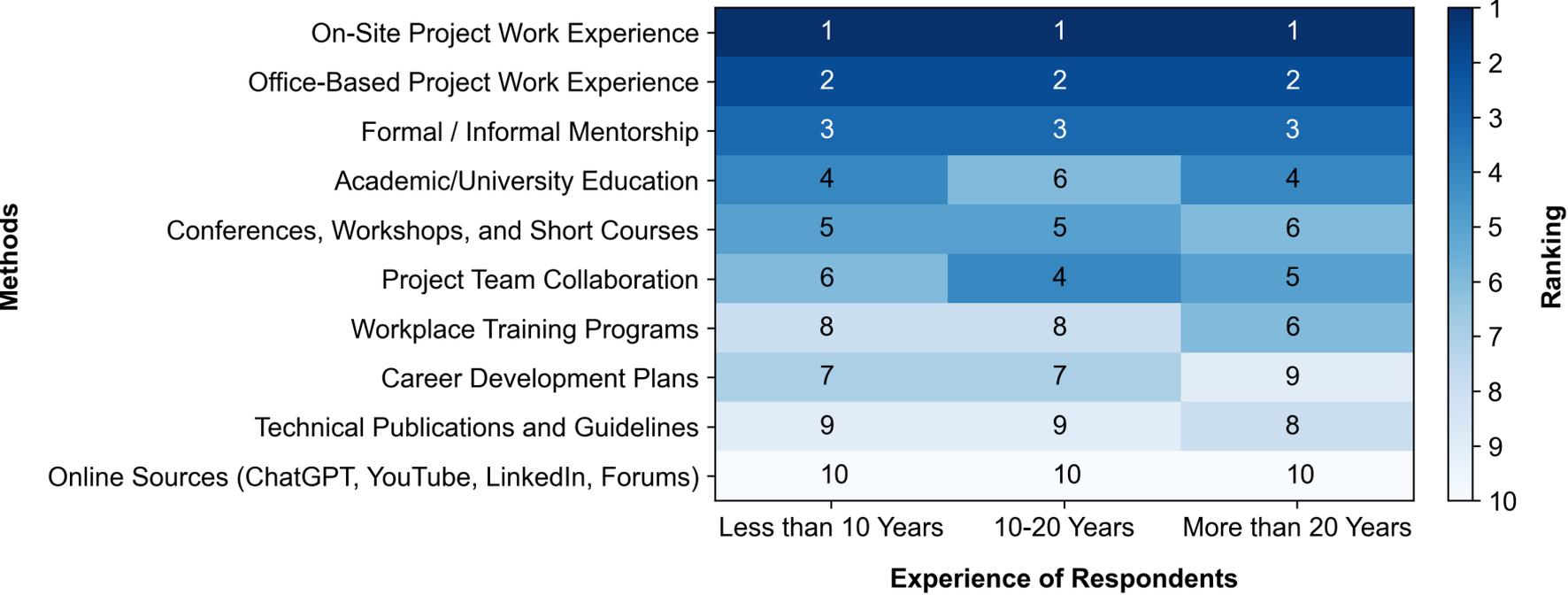
Effectiveness of formal education

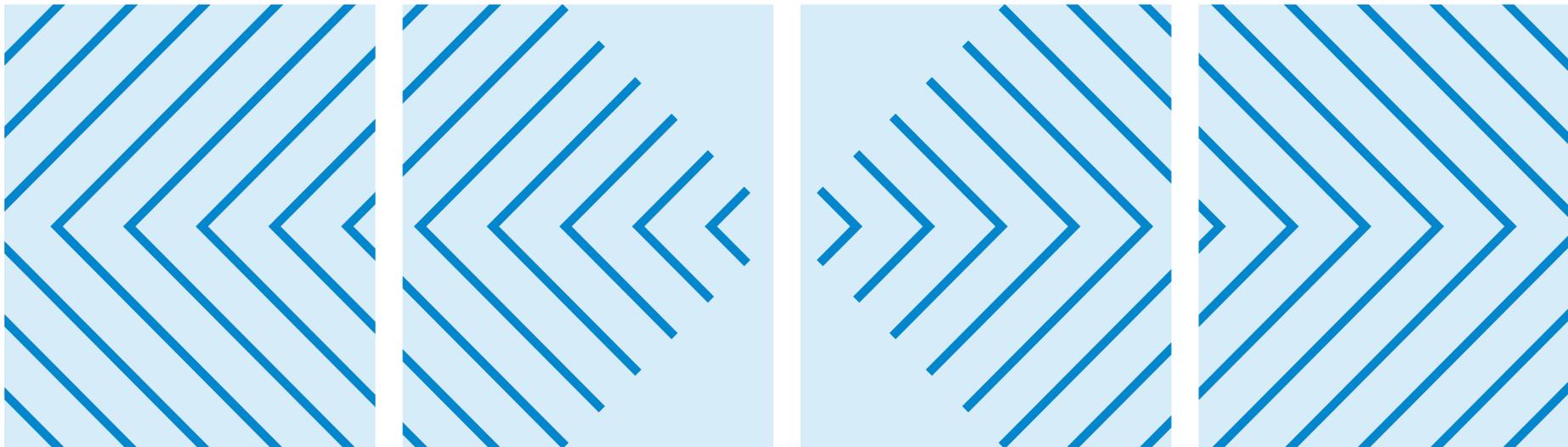


Knowledge growth through practical experience



Effective methods for knowledge development





Likes and dislikes



What we **dislike** about our careers in tailings ...



UNDERVALUED COMPONENT OF MINING

Limited budget for engineering, operations, or new technology



RISK & RESPONSIBILITY

Professional liability, personal stress



THIRD-PARTY SCRUTINY

Communicating concepts to non-technical parties



POOR PERCEPTION OF MINING

Entire industry impacted by few worst operators

“Constant pressure that comes from working with high-consequence risks ... involves navigating limited budgets or competing operational priorities that can delay essential actions ... underappreciated compared to its importance for the operation’s safety and reputation”

“A thankless, high-risk profession—when it goes well, [we will be] blamed for delays and expense, and if it goes poorly, it is very bad”

What we like about our careers in tailings ...



COMPLEX PROBLEMS

Technical skill, intellectually stimulating, innovation

“Technical rigor that demands precision and analysis, along with the broader perspective needed to communicate, coordinate, lead, and make informed decisions”



CONTINUOUS LEARNING

Rapidly evolving, depth of knowledge

“Strong sense of purpose from applying my knowledge and skills to support critical and essential infrastructure, recognizing that its failure could have catastrophic consequences”



MULTIDISCIPLINARY

Teams and approaches to solutions

“Unique intersection of technical challenge, responsibility, and purpose—every project involves complex geotechnical and hydrological systems that require deep critical thinking, multidisciplinary collaboration, and long-term stewardship”



SENSE OF PURPOSE

Protecting people and environment



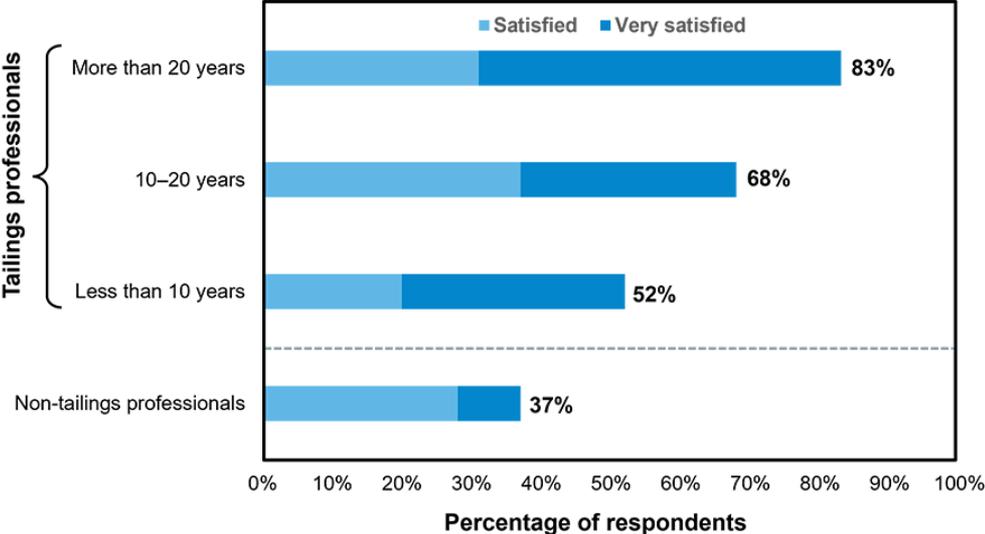
GLOBAL EXPERIENCES

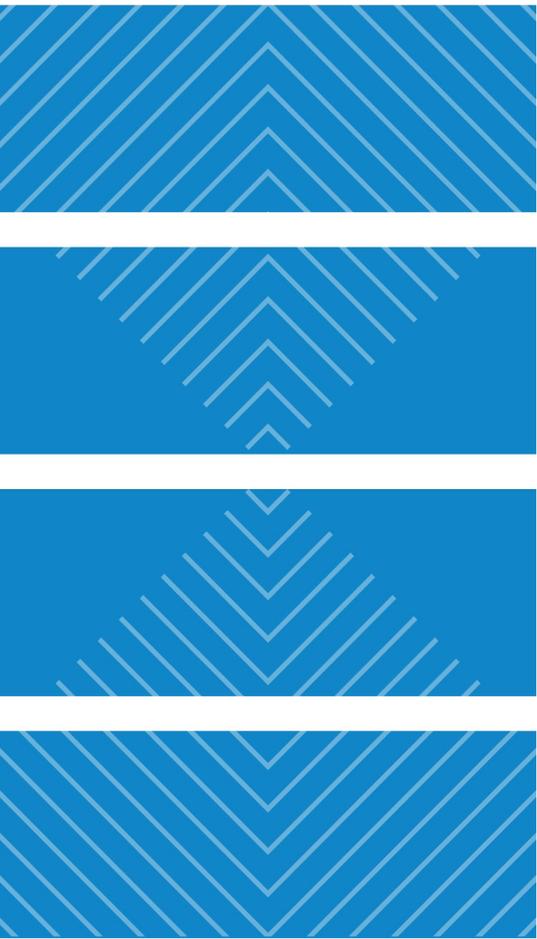
New geographies, geologies, and cultures

Key takeaways



- Talent gaps are impacting projects.
- Clear pathways need to be established:
Junior → Mid → EOR
- Tailings expertise is built primarily on the job and through practice.
- Balanced project exposure drives well-rounded development.
- Satisfaction jumps with experience.





Thank you!



Md Fyaz Sadiq, msadiq@barr.com

Katie Zadrozny, kzadrozny@barr.com

Jason Harvey, JHarvey@barr.com