



# The future of work in mining

What will jobs look like in intelligent mining operations?



## **Team performance scientist**

Maximizes individual and team performance, productivity, and safety by understanding drivers, triggers, and levers of human behavior to drive high performance and safe work execution



# TEAM PERFORMANCE SCIENTIST

## Summary

The team performance scientist plays a strategic role using digital tools and applications to maximize individual and team performance and productivity, compliance, and safety. This role focuses on creating a human experience in daily work life by understanding the drivers, triggers, and levers of human behavior to drive high performance and inform strategy. They leverage technology to generate performance-based and strategic insights on what drives and maintains high levels of productivity and engagement amongst individuals and teams. They are usually up to date on future-of-work trends, and they research relevant themes and design content to input into the various digital tools and applications used for performance management and workforce engagement. The team performance scientist applies human skills such as complex problem-solving, sensitivity, creativity, and judgement to make ethically informed decisions that augment and refine the elements of the tools they use. They codesign advanced safety analytics with the Nerve Center data scientist to ensure behavioral science and people-related information are used in an ethical manner to produce proactive safety analytics. They monitor all people-related analytics use cases, such as production targets, safety incidents, engagement with employee platforms, and compliance with mandatory learning, and are particularly focused on the integration and correlation among these various data points to optimize productivity and safety through applied behavioral science, at the individual and team levels. They facilitate design thinking to capture end-user requirements and use these requirements to inform user interfaces for digital workforce engagement, performance management systems, and other relevant digital collaboration tools.

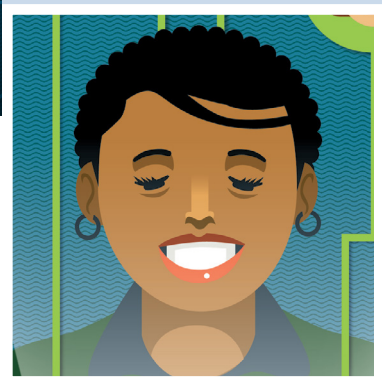
## Responsibilities

- Generate performance-based insights and recommendations on how to maintain high levels of engagement through various digital tools and channels
- Make changes to content on digital workforce engagement tools and applications used for productivity and safety based on insights and outcomes
- Conduct analyses on people performance and levels of productivity
- Use advanced analytics to identify patterns in safety data, leading to a more proactive safety approach

## Time spent on activities

- Data analysis/insights generation
- Researching, self-development
- Human-centered content development
- Reporting to and collaborating with upper management





# JENNA MKHIZE

**TEAM PERFORMANCE SCIENTIST**  
Mining Inc.

Jenna is a dedicated performance specialist who is passionate about understanding human behavior within the context of Industry 4.0. She knows that performance and human behavior are multifaceted and complex, and she strives to understand this through a human lens.

## Experience

### Team performance scientist

Mining Inc. | Feb 2020–present

Applies understanding of human behavior to maximize individual and team performance, productivity, and safety

### Manager business planning and performance

Mine Incorporated | Jul 2019–Jan 2020

Monitored production against targets

### Gig worker

(HR) | Apr 2017–Jun 2019

Worked as a freelance organizational design specialist across a variety of human resource and organization development gig platforms

### Part-time horse trainer and contractor in organizational design

Sep 2015–Mar 2017

## Education

- University of Digital Intelligence**

Graduate certificate in advanced analytics (online)

- OpenLearnOrg**

Website and applications design

- Community College**

Masters, Industrial psychology

## Toolbox

### Nerve Center

A visual display that presents data, live information, and analysis from multiple sources to facilitate informed decision-making

### Gamified Performance Management

Preconfigured performance-enhancing use cases delivering business value by connecting all employees with their KPIs, performance tracking, compliance adherence, and rewards

## Skills and endorsements

### HUMAN

- Behavioral awareness and insight ·216  
 Endorsed by **Tom**, who is highly skilled at this
- Business acumen ·304  
 Endorsed by **Maria**, who is highly skilled at this
- Active listening ·215  
 Endorsed by **Sam** and **Kiara**, who are highly skilled at this
- Decision-making ·372  
 Endorsed by **Melissa** and **Thomas**, who are highly skilled at this
- Critical thinking and problem-solving ·218  
 Endorsed by **Miriam**, who is highly skilled at this
- Communication (empathy, influence, persuasion) ·288  
 Endorsed by **Sonya** and **Karen**, who are highly skilled at this
- Innovation ·342  
 Endorsed by **Ryan**, who is highly skilled at this

### TECH

- Data interpretation ·124  
 Endorsed by **Anna**, who is highly skilled at this
- Statistical analysis ·345  
 Endorsed by **Philip**, who is highly skilled at this
- Tech fluency ·148  
 Endorsed by **Isabel** and **Kim**, who are highly skilled at this
- Data analysis ·456  
 Endorsed by **Laura**, who is highly skilled at this
- Digital communication and content design ·525  
 Endorsed by **Greg** and **Farida**, who are highly skilled at this



# A DAY IN THE LIFE

07:00 AM

Returns from her horse-riding lesson, when her smart watch reminds her about a 9:00 AM online meeting with upper management on performance analysis

09:00 AM

Joins an online call where she discusses performance statistics for the month. She reports to and collaborates with upper management on requests for analytics on the current workforce's performance metrics

09:30 AM

Uses AI-enabled modelling tools to gather data from multiple internal and external sources, and runs analyses of the factors that distinguish the organization's most effective performers and leaders. Insights such as production levels, cost management, compliance, and safety are churned out by the tool, and are put into a table format that provides insights in the form of a dashboard. This, along with specialist inputs from Jenna, enables management to have strategic conversations

11:15 AM

Returns to her desk and notices that two individuals have not been participating on the gamification app. She accesses the dashboard and analyzes the data presented. She notices a trend of declining performance of the two individuals after they dropped in position on the leaderboard. She had earlier predicted, after months of analysis, that some employees may feel embarrassed and disengaged after seeing themselves at the bottom of the leaderboard and may therefore opt out of the "game" completely. She reports this finding to upper management and suggests tweaking the application to only show the top five performers on the leaderboard

01:00 PM

Before heading off to lunch, a prompt appears on her laptop screen dashboard reminding her to schedule a meeting with management. Jenna clicks on the option and immediately receives confirmation that a meeting has been scheduled for the following day at 4:30 PM

02:30 PM

Designs and updates content to be uploaded into the gamification app based on trends she read in the latest research on talent performance and management

04:45 PM

Decides to get a head-start on updating the leaderboard to show the top five high scorers

05:00 PM

Wraps up her work and heads to her favorite restaurant to meet some friends

## About the authors

**ANDREW SWART** is both the global and Canadian leader of the Mining & Metals practice as well as the global leader for the sector. In his global roles, Swart leads a team from around the world and sets the strategic direction and go-to-market strategy for the global practice. With 20 years of industry and consulting experience, he is passionate about client service, having worked across many major mining and metals geographies, including Canada, Chile, Russia, Ukraine, Kazakhstan, Brazil, Germany, India, South Africa, the United Kingdom, and the United States. Swart's areas of expertise include corporate and competitive strategy engagements, digital and innovation systems, and large organizational transformation programs.

**JANINE NEL** is Deloitte's global Future of Work leader for Energy, Resources & Industrials, and Deloitte's global co-lead for the People & Diversity pillar of the mining and metals group. Leading delivery and thought leadership in the area of digital and its impact on work, Nel focuses on the workforce and the workplace in the future of work. She helps clients unpack the elements of work that are truly human, what can be done by machines, and what this means for people. She is also part of an effort that pioneers the people impacts of the mine of the future.

**JULIE HARRISON** is Deloitte's global co-lead for the People & Diversity pillar of the mining and metals group, and Deloitte Australia's Human Capital lead for Energy, Resources & Industrials. Harrison has worked extensively in consulting for the past 25 years and within the ER&I sector for nearly 15 years where she has led many transformation programs with a strong focus on people-centered transformation. Her areas of expertise include global transformations, organization redesign, workforce optimization, HR transformation, leadership and culture, and global talent programs. Passionate about the future of work, Harrison is a regular speaker at local and international conferences.

**TALITHA MULLER** is the Future of Work program manager for Deloitte Africa and a member of the Global Future of Work Regional Leadership forum. Muller plays an integral part in leading the Future of Work movement within South Africa by providing strategic guidance to business leaders on navigating the complexity of digital disruptions pertaining to changes in work, workforce, and workplace, and how to create exponential professionals.

**JENNA WING** is an industrial psychologist with two years of experience within the Energy and Resources industry. Wing has worked with the Future of Work team on developing the digital Nerve Center solutions for the intelligent mine. She focuses on the future of the workforce, the change in skills and capabilities, how roles will be deconstructed, and the business case for reskilling/repurposing people. Through creative ways of working and learning, Wing wants to continue to be a part of, and build, high-performing teams by challenging everything we do from a personal, work, and mindset perspective.

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Deloitte Consulting's Mining & Metals practice has helped clients transform to integrated operations through the adoption of digital technologies, artificial intelligence, and analytics solutions. Our future of work assets examine what future mining jobs will look like and enable the fundamental redesign of work, workforce, and workplace. Our work in intelligent mining includes the realization of operational efficiency improvements, enhanced decision-making and productivity, improved safety performance, remote management of resources and optimization of workforce allocation. Contact the authors for more information or read more about the future of work and intelligent mining in our mining and metals services on [Deloitte.com](https://www.deloitte.com).

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