



The future of work in mining

What will jobs look like in intelligent mining operations?

Safety experience architect

Architects and drives the human-centered safety experience involving the design and deployment of engaging, behavior-driven processes, practices, and workplace environments

SAFETY EXPERIENCE ARCHITECT

Summary

The safety experience architect is responsible for architecting and driving the human-centered safety experience. This involves the design and deployment of engaging and behavior-driven processes, practices, workplace environment, and safety program solutions that are fit-for-purpose and based on business and employee needs. As part of their role, the safety experience architect owns and maintains the employee safety value proposition aligned to the employee life cycle to deliver a consistent workforce experience that drives safe behavior and performance.

The safety experience architect will orchestrate collaborative efforts across the mining operations to drive productivity, engagement, and employee experiences that foster and nudge safe behaviors and habits on the mine.

The safety experience architect must work closely with the team performance scientist who looks closely at human behavior triggers to maximize productivity, in order to ensure alignment between productivity and sustainable safe behaviors.

Responsibilities

- Architect behavior-led workforce safety experiences and programs by developing, maintaining, and managing safety solutions based on working realities, fundamentals of psychology, and experiences across the mine
- Identify, understand, and prioritize safety behaviors that contribute to a differentiated, yet sustainable, safety experience
- Together with team performance scientist, extract insights from safety data and develop integrated safety solutions such as training programs and initiatives delivered through physical, augmented, and digital
- Receive and interpret safety data from the Nerve Center and team performance scientist to gain a holistic view of the safety reality, including root cause analyses in order to improve the safety experience of employees and proactively prevent safety incidents
- Conduct safety scenario testing and develop persona prototypes to improve the safety experience and ensure effectiveness of the safety solution

Time spent on activities

- Problem identification, understanding, and prioritization
- Initiative development and prototyping
- Initiative implementation and adoption
- Networking and influencing
- Problem-solving





THANDI NDLOVU

SAFETY EXPERIENCE ARCHITECT

Mining Inc.

Thandi is a collaborative and value-driven individual. She understands the mining value chain and the behaviors needed to drive a compelling safety experience at her mine. She is exceptional at influencing and creating compelling stories and collaborating with leaders across the mine to adjust incentives and leverage relationships and stories/tools to craft a truly unique safety experience for each employee at the mine.

Experience

Health, safety, and environment manager

Mining Inc. | Dec 2019–present

Maintains safety standards, management systems, data, investigations, and development

Employee benefits/experience manager

Mining Metals | Sep 2017–Nov 2019

Researched, designed, and implemented employee wellness and reward initiatives

HR business partner

Mining | Jul 2014–Aug 2017

Managed employee services, labor availability, talent and performance, and employee relations, and monitored and reported on disciplinary actions

HR administrator (generalist)

Mining | Jun 2012–Jun 2014

Coordinated contracts, payroll, and day-to-day support for employees

Education

- BA, Human resources management/ industrial psychology
- Behavioral sciences certificate

Toolbox

Behavior First Framework

Behavioral insights-based change framework to nudge new ways of working

Transformative Safety Framework

Experience-based safety design framework focusing on risk-based safety as opposed to compliance safety

Skills and endorsements

HUMAN

- Innovative thinker · 442
 Endorsed by **Gary** and **Simone**, who are highly skilled at this
- Influencer · 370
 Endorsed by **Cassandra**, who is highly skilled at this
- Behavioral analysis · 503
 Endorsed by **PJ** and **Ian**, who are highly skilled at this
- Employee-centric · 412
 Endorsed by **Mohammad**, who is highly skilled at this
- Storytelling · 415
 Endorsed by **Tania** and **Ange**, who are highly skilled at this

TECH

- Digital fluency, analysis, and interpretation · 406
 Endorsed by **Spiros** and **Oscar**, who are highly skilled at this
- Design thinking · 400
 Endorsed by **Xavier** and **Hugh**, who are highly skilled at this
- Agile · 504
 Endorsed by **Marilize** and **Hein**, who are highly skilled at this

A DAY IN THE LIFE

07:00 AM

Drops her kids at school and then prepares to join a virtual meeting with the team performance scientist who had detected a slight increase in mobile machinery incidents in one of the shafts based on real-time and historical data from the Nerve Center

09:00 AM

Does a run-through of the latest safety trends with the team performance scientist. A few weeks prior, the data revealed an increase in mobile machinery incidents showing that people were taking more shortcuts while working, resulting in an increase in incidents, more disciplinary actions, and a dip in employee engagement. This highlighted a link between employee engagement and safety

09:30 AM

Starts to understand, based on the data insights, the barriers and drivers to the employee behaviors. It seems employees are struggling to understand the new way of working with the digital and optimized machinery and hence are taking shortcuts when operating it. Thandi suggests that supervisors and leaders role-model the right behaviors that drive accountability at every level to ensure employees reduce taking unsafe shortcuts while performing work. To support the role-modeling, Thandi leverages her relationship with the virtual reality (VR) solution provider to develop an immersive digital learning experience to upskill employees on working with the new digital and optimized machinery. Thandi starts to build on the relevant safety initiative/solutions using design thinking and the Behavior First framework as she maps out the right behaviors needed to prevent safety incidents

10:30 AM

Joins a virtual meeting to present the proposed changes to safety practices and potential solutions, and receives positive feedback from top leadership on her practical and relevant recommendations. They are flagged as a top priority. Minor changes to the safety content and initiatives are requested by the end of the week for sign off, after which implementation can commence

11:15 AM

Spends the rest of the morning updating and finalizing the solution and validating the thinking against the safety framework. She contacts the safety leaders and HR business partners to discuss the safety behaviors and initiatives to be implemented and how they will partner with her to drive safety initiatives across the mine

01:00 PM

Attends a meeting with content developers on the new VR safety solution for the mine, targeted at ensuring employees reduce taking unsafe shortcuts in the workplace. She wants to introduce more proactive experiential training experience to understand the right behaviors and associated rewards

03:45 PM

Driving home after the meeting with the content developers, Thandi ponders over the safety scenarios she saw built in the VR and starts thinking about the best way forward for employees to undergo the new way of training.

About the authors

ANDREW SWART 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 Janine Nel is Deloitte's global Future of Work leader for Energy, Resources & Industrials, and Deloitte's global colead 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.

TALITHA MULLER 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 As an industrial psychologist with two years' experience within the energy and resources industry, Jenna 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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Contacts

Andrew Swart

Global and Canadian Mining & Metals leader
Partner
Deloitte Touche Tohmatsu Limited
+1 416 813 2335
aswart@deloitte.ca

Janine Nel

Partner, Consulting,
Deloitte Canada
+1 403 390 6510
jnel@deloitte.ca

Andrew Lane

Energy, Resources & Industrials leader
Partner
Deloitte Africa
+2 783 326 2849
alane@deloitte.co.za

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