El Futuro del Trabajo en Minería

Las personas frente a un nuevo modelo de trabajo para una organización DIGITAL

Gaston Carrion, Managing Director, Accenture
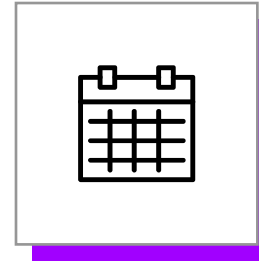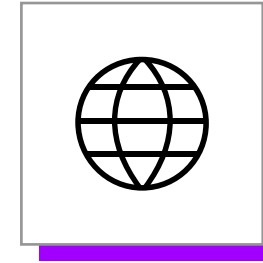Líder Global de Talento y Organización de Recursos Naturales
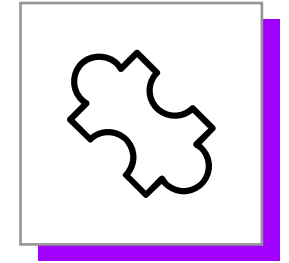
March 2022

Investigación global de innovación de talento

In partnership with The Word Economic Forum (WEF), we performed three key phases that employ a human-centered design approach to understand the future talent agenda for the mining industry in line with Global and Industry changes.
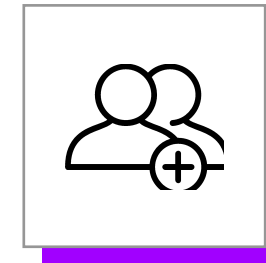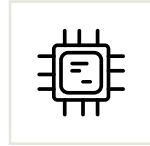
13
Weeks

4
Geo Regions

2
Innovation Hubs

+30
Industry Representatives

Fuerzas globales que dan forma al futuro de la industria minera y la fuerza laboral
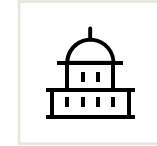
Industry Forces

Technological

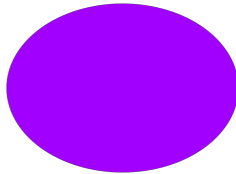Advances in digitalization and automation.

Sustainability

Understanding the evolving nature of the issues in order to care about the planet and attract investors and talent.

Government

The relationships between mining companies and Governments and the decision making on the future of the industry.

Workforce Forces [1]

Get Digital

The companies surveyed focus on adopting three key technologies in the next four years, nonhumanoid robotics, internet of things (IoT) and connected devices, and big data analytics.
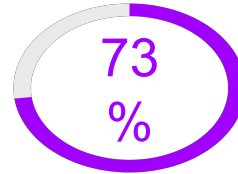
73% Skill Gaps in Market

73% of companies identified skills gaps in the local labor market as the biggest barrier to adopting such new technology.
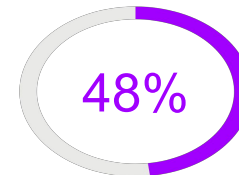
48% Need of Upskilling

Companies identified that an average of 48% of existing employees would require reskilling/upskilling in the next four years to meet the evolving skills necessary for the tasks they would have to perform.
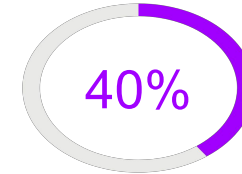
40% New Skillset

In the next four years, the average employee's skillset will change by 40%, and most companies expect existing employees to pick up skills on the job and have this as their primary strategy to address the shifting skills demand.

¿Cuáles son los escenarios emergentes, los perfiles y las habilidades del futuro talento en la industria minera?

Re imagine el futuro de la industria a través de escenarios para ayudar a explorar roles futuros

What

High-Tech Leader	ESG Leader	Geopolitical Adept
In this scenario, company (X) has invested heavily in digital transformation, and subsequently, their value chain is heavily automated with few remaining traditional roles.	In this scenario, company (X) has taken actions to become a leader in environmental, social, and corporate governance to attract potential investors and future talent.	In this scenario, company (X) is subject to constraints as the government makes decisions across the industry. As a result, government relations become more central to operations.

Who [2]

Laura: Artificial Intelligence
AI Developer

Miranda: Social Economic Development
Project Officer

Alvin: Government Relations
Government Relations Specialist

John: Digital Transformation
Digital Project Manager

Melissa: Circular Economy/Sustainability
Environmental Consultant

Diana: Safety/
Disaster Risk Management
Disaster Risk Reduction Officer

Janet: Data Scientist/Analysis
Data Scientist

Steve: Climate Change Science
Climate Change Consultant

Teresa: Strategic Policy
Policy Analyst

Emily: Geoscientist
Geoscientist

Mike: Machine Operator
Machine Operator

Trayectorias profesionales ágiles y puntos de participación tempranos están dando forma a un nuevo marco para los journeys de futuros talentos

The emergence of the Gig Economy and talent constantly looking for the next best opportunity means the industry must alter its traditional conceptions regarding career pathways and engage with potential talent as early as possible.

Moreover, the industry needs to ensure a broad Employee Value Proposition to attract future talent that highlights the purpose and ability to make a difference and provides opportunities for growth at each stage of an employee's career.

Journey Stages	Opportunities for Mining companies to attract/ retain
Informal / Formal Learning	• Strategic Partnerships • Internships • I&D initiatives
Role Application / Recruitment	• Online Advertising • Robust EVP (Total Rewards) • Established Talent Pipeline Strategy
Onboarding	• Graduate / Trainee Program/s • Buddy Program/s • Networking Opportunities
Early Role	• Role / Pathway Transparency • Mentorship Program/s • Peer-to-Peer Learning Culture
Promotion / New Role	• Retention Strategies (especially for diverse talent) • Total Rewards • Ethical AI / Transparent Promotion Structures
Company Exit	• 'Gig' Economy Opportunities • Retention Strategies (especially for diverse talent) • Alumni Re-Employment Programs

¿Cuál es la convergencia entre lo que necesitan las compañías mineras y lo que los futuros talentos quieren?

Basado en las secciones de carrera online de las principales empresas mineras, estas son algunas de las palabras clave que se utilizan actualmente para atraer futuros talentos[5-6]

INDIGENOUS DEVELOPMENT

PENSION

COMPETITIVE SALARY

INCLUSION

SCHOLARSHIPS   CHALLENGING

LEADERSHIP PROGRAM

CULTURAL TRANSFORMATION

INNOVATION   PERMANENT

DIVERSITY

EXCITING

LGBT+   SAFETY

INTERNATIONAL OPPORTUNITIES

EDUCATION

PASSION

SUSTAINABILITY   AI

LIFE NEAR SITE

GRADUATE   LEAVE PROGRAM

HEALTH BENEFITS

DRONES   WORK-LIFE BALANCE   FUTURE   TOTAL REWARDS

LOCAL COMMUNITIES

WOMEN IN MINING

ENTREPRENURIAL   MENTORSHIP   TOTAL REWARDS

FUTURE TECHNOLOGY   PART TIME OPPORTUNITIES

EXPERIENCED HIRE   PARENTAL LEAVE

MATERNITY LEAVE

Según encuestas recientes, los jóvenes de hoy tienen percepciones mixtas acerca de la industria minera.

What is influencing future talent in their career pathways?
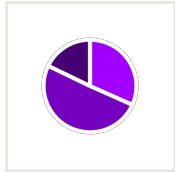
32%

of [Victorian] respondents indicated their Teacher / Lecturer had "A lot" of influence on their future career when engaged with those participants (44% had engaged with them) [7]

42%

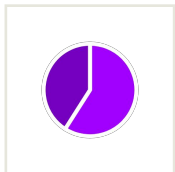of [Victorian] respondents indicated that out-of-town work experience programs had "A lot" of influence on their career choices (42% was also reported for "A lot" of influence in local work experience) [7]

59%

of [Victorian] respondents indicated "…they are "maybe" or "definitely" interested in attending a mine site work experience program" [7]

59%
"…of [Australian] students say that they know nothing at all about mining careers" [8]

37%
…of [Australian] students believe that "Mining is an equal opportunity employer offering roles for women and men" [7]

44%
"…of [Australian] students are very interested in automation aspects of a mining career such as: [robots & self-driving vehicles]" [8]

40%
"…of [Australian] students believe jobs in mining are declining" [8]

63%
…of [Australian] students believe that "Mining is an environmentally destructive industry" [7]

42%
of [Brazilian] students believe mining has a high degree of importance to their lives [9]

11%
of [Australian] students are interested in working within the Mining industry [7]

62%
…of [Australian] students believe that "a career in mining and METS requires working in a remote area" [7]
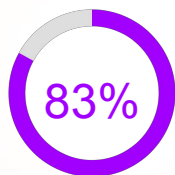
52%
"…of all young [Australians] see the importance of mining to Australia's Future" [8]

Si bien los beneficios tradicionales siguen siendo importantes para atraer futuros talentos, la Generación Z otorga importancia y participa activamente en cuestiones de cultura y propósito.

83%
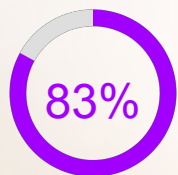
of "…Gen Zers see a **company's purpose as a core consideration** in where to work" [10]

83%

"of Gen Z candidates said that a company's commitment to **diversity and inclusion** is important when choosing an employer" [11]

88%
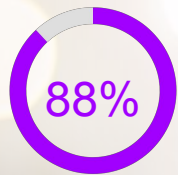
"…say they **care about social and environmental issues**. They see these problems as urgent and think companies have a powerful role to play in addressing their concerns" [10]

74%
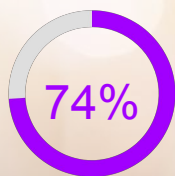
"…rank **purpose ahead of a paycheck** (vs. 70% of millennials, 66% of Gen X and 67% of Boomer respondents)" [12]

Gen Z

Employer brand

"Top channels Gen Z reports using for learning about or participating in social or environmental issues" [10]<

64% 50% | 63% 51% | 61% 66% | 47% 43% | 38% 35% | 21% 14% | 15% 7% | 9% N/A

YouTube | Instagram | Facebook | Snapchat | Twitter | Pinterest | Reddit | LinkedIn
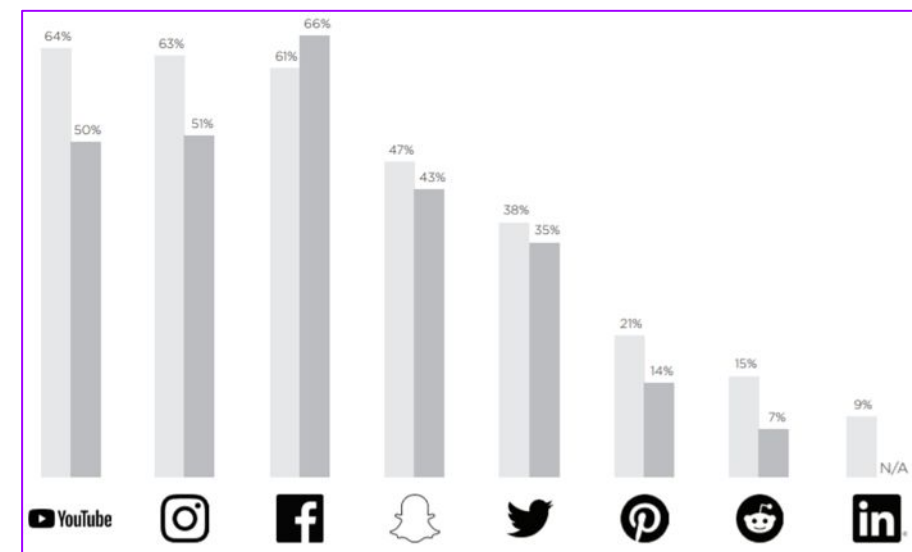
☐ 2019 Responses   ☐ 2017 Responses

El marco "Net Better Off" nos ayuda a transmitir lo que es importante y a estructurar la propuesta de valor del empleado

"What do employees want?

They are increasingly looking to their employer to help meet their individual "me" needs (physical, financial, employable, emotional/mental), their "me and you" needs (relational), and their collective "we" needs (purposeful).

Our research found that 64 percent of a person's potential—defined by their ability to use their skills and strengths at work—is influenced by whether or not they feel better off across these six dimensions.

Conversely, less than 9 percent of unlocking potential can be explained by factors such as education, tenure, level, industry, geography, and company size." [13]

Net Better Off Framework

Purposeful
Feeling that one makes a positive difference to the world and that life has meaning and a greater sense of purpose beyond oneself.

Physical
Being in good physical health and equipped to take on normal daily stresses.

Financial
Being financially secure without undue economic stress or worry and having equitable opportunity for future stability and advancement.

Emotional & Mental
Feeling positive emotions and maintaining mental wellness.

Net Better Off

Relational
Feeling a strong sense of belonging and inclusion; having strong interpersonal relationships.

Employable
Having marketable, in-demand capabilities and skills to obtain good jobs and advance in career.
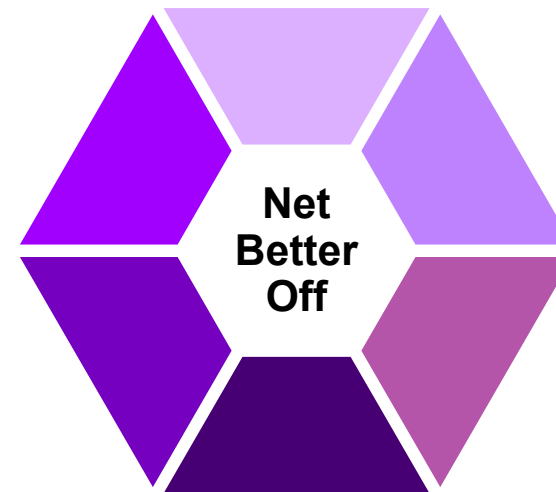
Atraer a los mejores talentos requerirá que las empresas mineras diversifiquen sus mensajes clave y amplíen su huella en las redes sociales para cambiar las percepciones negativas de la industria.

Desk-based research indicates that the perceptions of the mining industry from Generation Z in certain locations (e.g., Australia) are relatively negative due to preconceived notions of a traditional, destructive industry with uncertain job security. Desk-based research also indicates that social and environmental issues are at the forefront of Generation Z's value set. In terms of interacting with these issues online, one study reported that Instagram and YouTube were the "top channels Gen Z reports using for learning about or participating in social and environmental issues" in 2019 [14]

However, for the mining organizations in the core working group, the channels above had the lowest following compared to other channels (e.g., LinkedIn) [5]. This indicates that the industry needs to not only diversify their messaging to attract and retain future talent but also broaden their social media footprint to ensure messaging reaches target audiences and that ESG progress in the industry is better understood.

To help alter the perceptions of the industry to future talent, we worked with the core working group to define components of an Employee Value Proposition (EVP) using Accenture's "Net Better Off." This framework will appeal to future talent by illustrating both traditional and emerging aspects of a career. [15]

Key Messaging for each Dimension

Purposeful
• Motivations
• Responsibilities
• Purpose
• Organizational Goals
• Innovation

Physical
• Wellbeing
• Safety

Financial
• Total Rewards
• Evaluation
• Fairness
• Job Stability

Emotional & Mental
• Work-Life Balance
• Autonomy

Net Better Off

Relational
• Collaboration
• Social Responsibility
• Inclusion & Diversity

Employable
•Learning
•Career

¿Cuáles son las **opciones estratégicas** sobre cómo la Minería **atraerá, desarrollará y retendrá** futuros talentos?
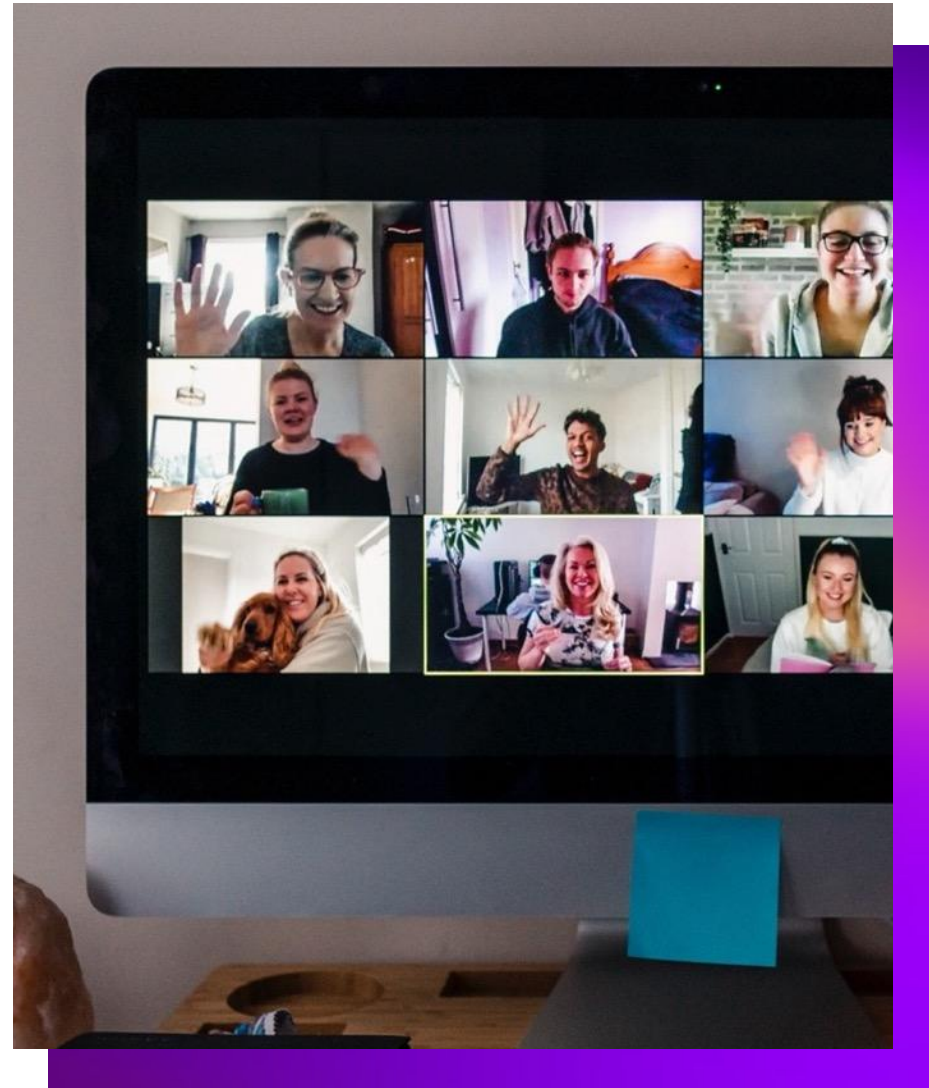
Como resultado de la escasez de habilidades en el mercado laboral dentro y fuera de la industria, hemos identificado cinco estrategias. Las 5B: build, buy, borrow, bot y boomerang

¿Cuándo debe una organización minera considerar cada una de las 5 estrategias?

Build	Buy	Borrow	Bot	Boomerang
Workforce Skills & Experience Upskill, Reskill	**Hire, Acquire**	**Adaptive Workforce**	**Robotics, AI**	**Leave & Return**

Build
- When hiring for roles common in organizations now that may increase into the future.
- If the minimum level of skill proximity of target role is met (e.g., ~40% skill match.)
- When there is a good understanding of future jobs; established learning capability (LMS, tools.)
- When there is a positive workplace culture (e.g., willingness to learn.)
- When entry pathways are in place (i.e., building talent from the bottom-up.)

Buy
- When hiring new candidates (e.g., graduates, full-time employees.)
- When there is sufficient supply of a role (if a role is in demand, a good EVP is necessary.)
- When acquiring other companies with differing expertise.
- When developing Strategic Partnerships to fill roles with differing expertise.

Borrow
- When filling contractor roles (e.g., consultants, temporary blue-collar roles.)
- When finance structures make it challenging to move headcount.
- If there is demand for temporary niche skills.
- When there is a likelihood that demand will fluctuate (i.e., these roles don't come with the same costs when they must be let go if they are borrowed). This means the organization will not bear the burden of high fluctuating demand (e.g., if there is an annual climate data audit, that role may require fewer individuals upon completion of the audit.)

Bot
- When considering to automate specific roles (e.g., Machine Operator.)
- If the roles are highly repetitive (automatable)
- If the role can be partially automated (i.e., Intersection of people/machine), consider augmentation.
- White-collar roles that can be augmented with AI analytics (e.g., a Policy Advisor could use an analytics tool that does market/sentiment analysis of a particular issue.

Boomerang
- When there is decreased demand in the short term but an anticipated long-term demand.
- If an organization is looking to build a culture around the Gig Economy (role design for alumni will need to be considered; alumni will want to return on different terms.)
- If there's an opportunity to implement a sharing economy (i.e., line up mine downtime across organizations; people no longer required in one can move to another)
- If there's an opportunity to partner with other companies to learn skills uncommon in your organization and vice versa.
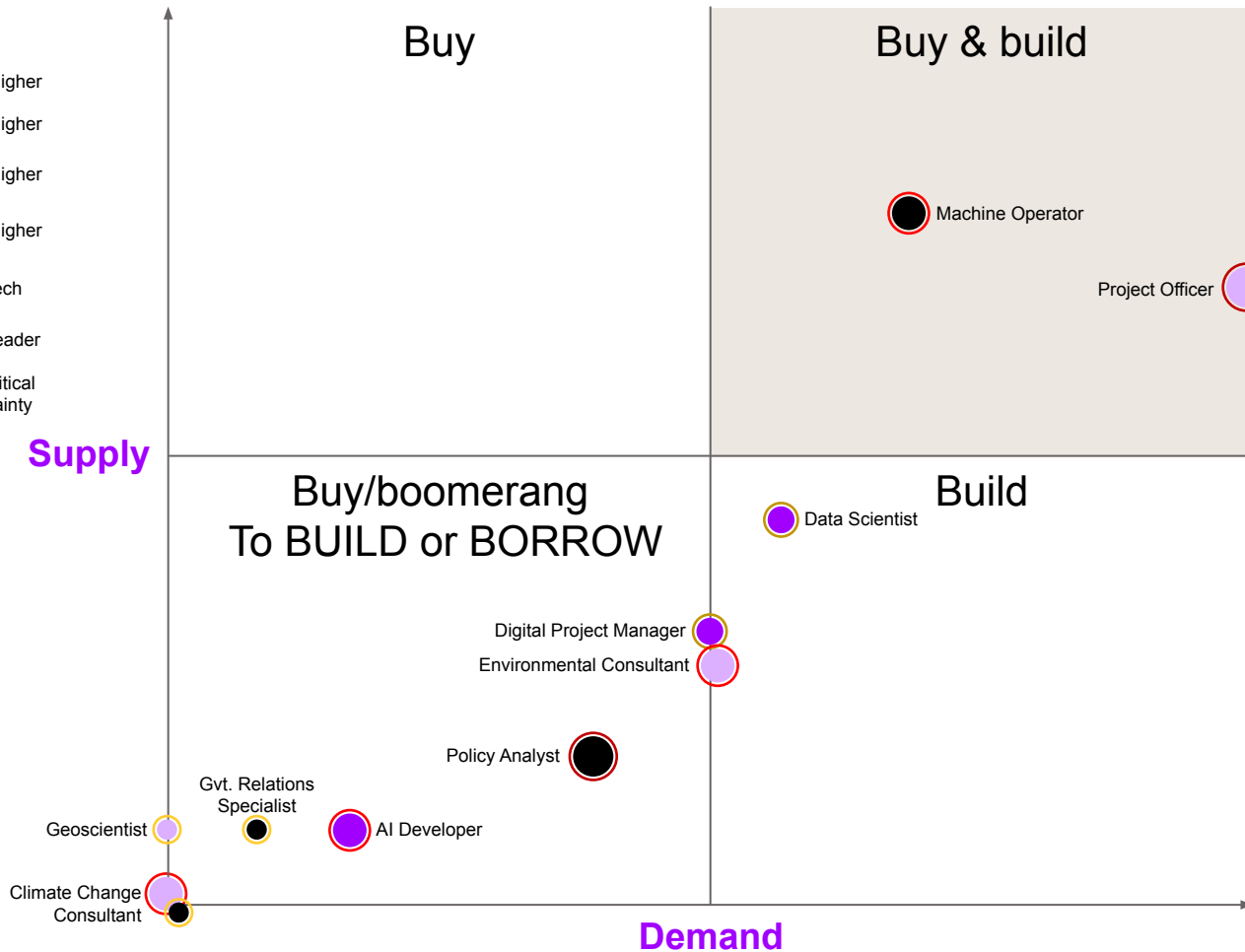
Las 5 opciones estratégicas deben implementarse en función de la oferta/demanda del perfil laboral futuro deseado*

Key
Absolute Job Openings Relative to Job Seekers

- ○ ~X10 Higher
- ○ ~X20 Higher
- ○ ~X30 Higher
- ○ ~X40 Higher
- ● High-Tech Leader
- ● ESG Leader
- ● Geopolitical Uncertainty

Supply

Demand

- Buy
- Buy & build
- Buy/boomerang To BUILD or BORROW
- Build

Machine Operator
Project Officer
Data Scientist
Digital Project Manager
Environmental Consultant
Policy Analyst
Gvt. Relations Specialist
Geoscientist
AI Developer
Climate Change Consultant

Top Left Quadrant:
These are roles that are high in supply but low in demand relative to the other listed roles. Given their relative surplus, it is recommended these roles should be bought if they have a high skill match to support building future desired roles. Alternatively, organizations should investigate whether roles in this quadrant can be a bot.

Top Right Quadrant:
These are roles that are in high supply & demand relative to other listed roles. While these roles currently have a relatively large supply, a sudden shift in that supply will cause issues indicating the importance and consequent recommendation of building these roles into organizations.

Bottom Left Quadrant:
These are roles that are in low supply & demand relative to other listed roles. These roles are typically emerging and/or niche roles and may increase over time as the demand for specialized roles relevant to technology/ESG also increases. Given their current scarcity, organizations ought to build these roles to ensure a future pipeline or temporarily borrow where the role is required. Similarly, organizations could look to reacquire previous employees (Boomerang) to fulfill temporary requirements.
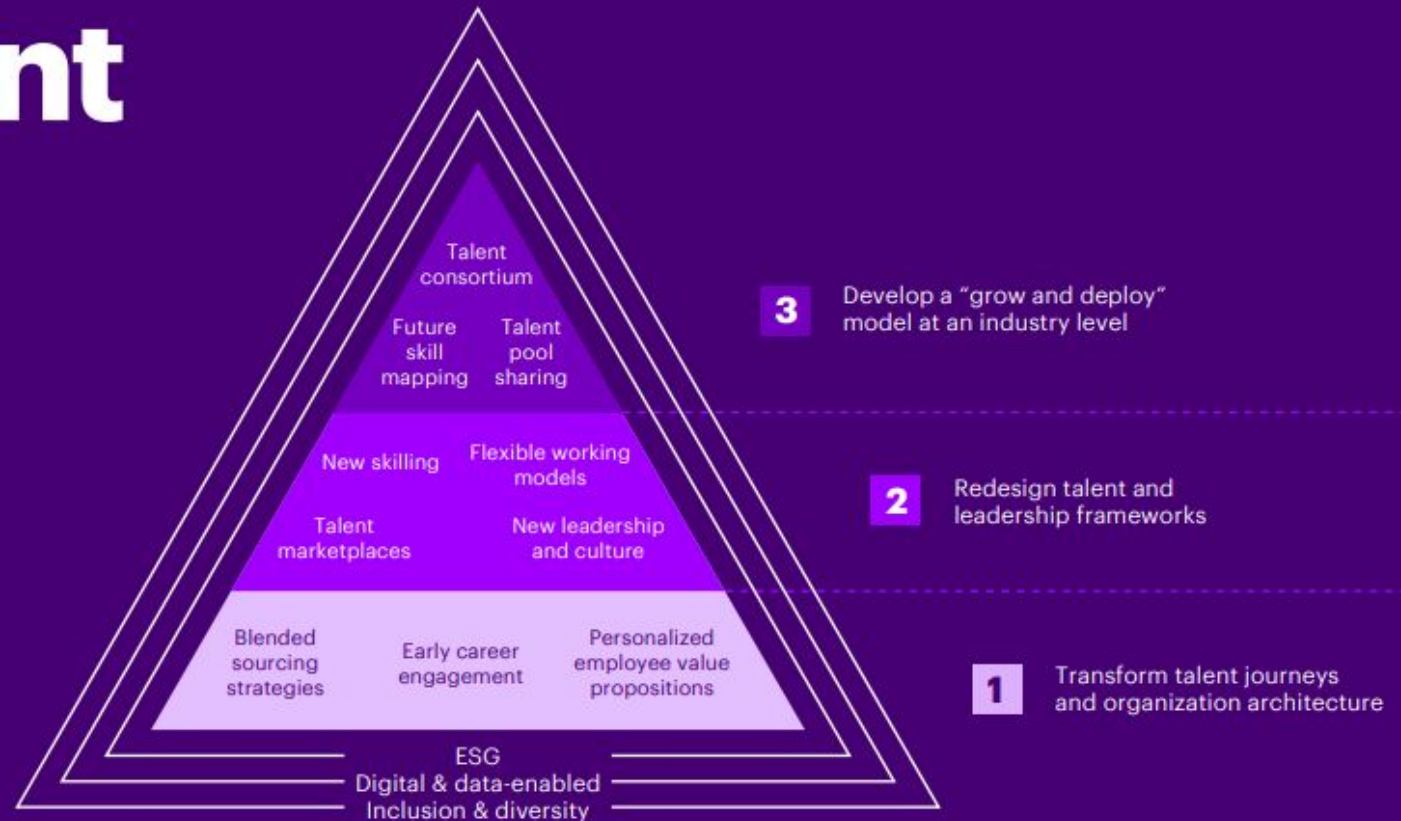
Bottom Right Quadrant:
These are roles that are in low supply & high in demand relative to other listed roles. Given these roles' scarcity, organizations must build these roles to decrease the effect of demand fluctuations. Where possible, Mining companies could look to borrow these roles from adjacent industries to upskill current talent.

High-Tech Leader
AI Developer

High-Tech Leader
Digital Project Manager

High-Tech Leader
Data Scientist

ESG Leader
Project Officer

ESG Leader
Environmental Consultant

ESG Leader
Climate Change Consultant

ESG Leader
Geoscientist

Geopolitical Uncertainty
Gvt. Relations Specialist

Geopolitical Uncertainty
Disaster Risk Reduction Off.

Geopolitical Uncertainty
Policy Analyst

Geopolitical Uncertainty
Machine Operator

10 Shifts to transform future talent

Different future operating models in the mining and metals industries will introduce a range of emerging roles requiring new skillsets. In this environment, supply and demand modelling makes it clear that traditional workforce practices are no longer relevant. To reach, acquire and retain the talent of the future, mining and metals companies must map emerging roles, develop EVPs for a broader and more diverse workforce and adopt a multipronged sourcing approach.

Talent consortium

Future skill mapping | Talent pool sharing

New skilling | Flexible working models

Talent marketplaces | New leadership and culture

Blended sourcing strategies | Early career engagement | Personalized employee value propositions

ESG
Digital & data-enabled
Inclusion & diversity

3 Develop a "grow and deploy" model at an industry level

2 Redesign talent and leadership frameworks

1 Transform talent journeys and organization architecture

¿Quieres saber más?

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Transforming future talent in mining and metals

https://www.accenture.com/us-en/insights/natural-resources/mining-metals-future-talent