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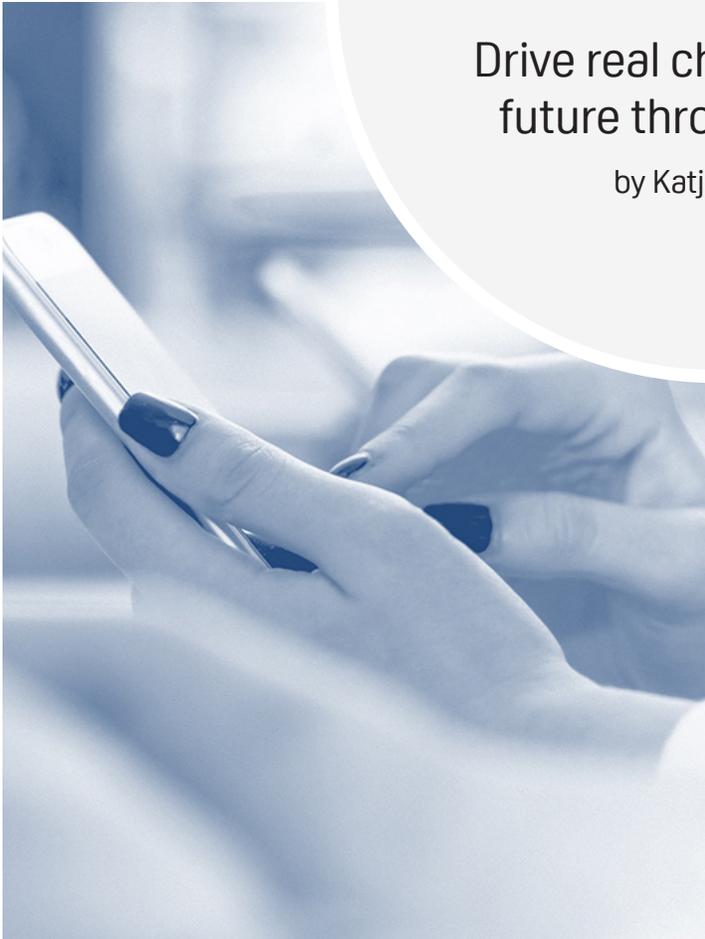


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OPEN LETTER TO MILLENNIALS

Drive real change for the
future through mining

by Katja Freitag



Dear Millennials,

If you were born after 1982 and are studying or working, you are Generation Y or a Millennial, the largest cohort since the Baby Boomers.

“Millennial” sounds so confident compared to the “lost” Generation X, which I was born into. But with the confident name come many misconceptions. You are often described as unfocussed, perhaps lazy, and entitled, making you difficult to manage or lead. You have a reputation for job-hopping. You don’t stick with companies no matter how many snacks, couches, and foosball tables are used to attract you to the office.

Thank goodness for research, which separates perception from fact. You are a generation of extremely hard-working young adults who expect a healthy work-life balance, and you want a job with a purpose. You feel obligated to do your part to make the world a better place and believe you can make a difference. You value learning and developing new skills. You question why things work the way they do. You explore ways to optimize and innovate if given the chance.

Perceptions

Unfocussed, spending a lot of time at work on phones and social websites

Lazy, entitled, and think they know everything

No loyalty and like to job-hop

VS.

Facts

Core belief that business has the potential to be a force for positive change

Concerned with a large range of global issues

Flexibility is important to enable a healthy work-life balance, and is linked to improved organizational performance, personal benefit, and loyalty

Natural affinity for technology and the digital world

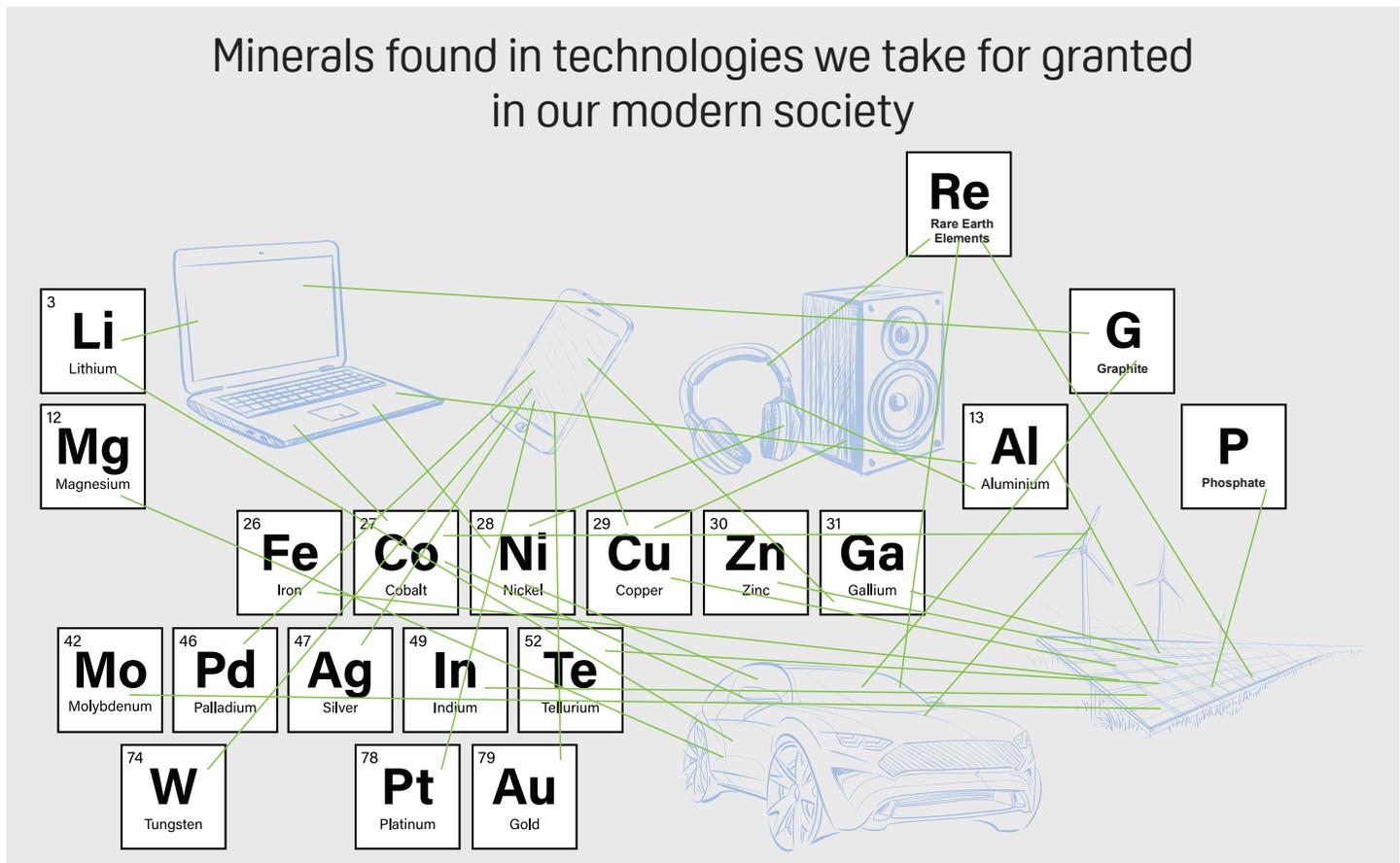
Source: Deloitte Millennial Survey, PwC’s 2011 Millennials at work Reshaping the workplace report; press search

And unlike any generation before, you grew up with and embrace technology. In fact, you probably can't imagine a life where you waste time watching a test pattern before a television show starts or physically redialling a number on a rotary phone because your finger slipped. You probably also can't imagine a career in an industry that has operations in remote locations of the world in extreme environments. Mining is marked by job uncertainty and conservatism, which is fine. You have many alternatives to choose from, such as technol-

ogy and software, healthcare and pharmaceutical, and financial services and insurance.

But please continue reading, because I'd like to present some facts to show why you should care about this seemingly unattractive industry and consider an exciting career in mining instead that not only provides the materials other industries rely on but is finding ways to do this in a responsible way.

Did you know that mining doesn't only give us the option of technology but also enables us to tap into renewable energies?



Source: British Geological Survey's Rare Earth Elements Profile; Minerals Education Coalition Fact Sheets; SETIS's Materials for Energy; European Federation for Transport & Environment Electric vehicle life cycle analysis and raw material availability 2017 report; press search

To sustain and advance modern society, there is no way around it: we need minerals. So it's a chicken and egg situation. Our future depends on minerals, but to access and extract these, we need mining.

Here's a thought: why not focus your career on driving real change and make mining more sustainable through technology?

The industry is transforming at breakneck

speed. You have the chance to become part of a forward-thinking, high-tech industry in the making that most seasoned miners can't imagine. In the last two years, I really get a sense that mining is shifting from lip service to action, making technology a priority and innovating to minimize negative impacts on people and the environment.

Top 10 risks for the mining industry over 10 years

	2017-2018	2008 (peak of the super cycle)
1	Digital effectiveness	Skills shortage
2	Competitive shareholder returns	Industry consolidation
3	Cyber	Infrastructure access
4	New world commodities	Social license to operate
5	Regulatory risk	Climate change
6	Cash optimization	Rising costs
7	Social license to operate	Pipeline shrinkage
8	Resource replacement	Resource nationalism (regulatory risk)
9	Access to and optimization of energy	Access to energy
10	Managing joint ventures	Increased regulation (regulatory risk)

Source: EY report - Top 10 business risks facing mining and metals 2017-2018

Examples of job titles

	Mine Automation and Technology Engineer		...will assist underground mine operations with the implementation of automated equipment, process control systems, wireless network, and other technological improvements...
Production Development Specialist Mechatronic			
			...developing and/or solution crafting innovative technical, production, and engineering solutions (hardware and software) automation to improve productivity, reduce cycle-time...
	Geology Data Administrator		
			...ensure effectiveness of the geology digital mapping system, establish procedures and monitor system performance...

Mining companies are actively looking for tech-savvy professionals to transition the industry to an automated and digital world. They are proactively looking for talent outside of mining to innovate and are training their workforce to be digitally ready.

It will take more than beefing up the team with tech-savvy people and change agents. With the rapid shift to AI, automation and digitization, experience may become less critical. Knowledge however remains crucial. Understanding mining and its processes must be paired with quintessentially human traits: intuition; the ability to contextualize, interpret, and question data; as well as empathy and communication. These will be the keys to enable machines to crunch and digest data into meaningful outputs and make business decisions.

These will also be the keys to allow people to develop innovative solutions to improve effi-

ciencies and reduce the environmental impact in a highly complex system with numerous variables and constraints.

“Collaboration has always been at the heart of the partnership between Barrick and Cisco, and working together with Great Basin College to bring this program to our employees and the wider community underscores the importance we put on training our workforce and helping promote further education in the local community. This is a critical step in our digital transformation and innovation strategy, to ensure we are building a sustainable, skilled workforce to support our business in the future.”

Michael Brown, President of Barrick USA
Barrick press release, 20 April 2017

I’ll be the first to admit that my fascination with humans using big pieces of equipment to move enormous volumes of rock, along with a love for aesthetic-looking ore, has tied me to this conservative and often less-than-friendly-to-women industry. But without this unexplainable passion, I would have turned a blind eye to the relationship between my lifestyle expectations of driving

a car, having a mobile phone, and accessing information 24-7, while having a hand in how mining impacts the environment and the communities it operates in. Don’t turn a blind eye. Mining is facing exciting challenges—you are the right generation to help the industry re-invent itself, embrace technology, and propel it to the next level.

Sincerely,

Katja Freitag
Vice President Education Solutions

Edumine

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Careermine

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