

2020 IGF-PDAC-WEF SUSTAINABILITY FORUM:

THE FUTURE *of* WORK in the MINERALS INDUSTRY

THE YEAR IS 2045,
and the world is a very different place...

Coordinated global action enabled the achievement of the Sustainable Development Goals (SDGs). Inequality has been reduced; renewable energy powers the globe; gender equality is widespread; and worldwide terrestrial and water ecosystems are thriving as the global economy has become more circular.



“THE MINING INDUSTRY HAS
CHANGED DRAMATICALLY!”

We made this happen—but how?

What key collaborations, decisions, and actions were taken in the last 25 years to enable this age of peace, prosperity, and progress?

On February 29, 2020,

150+ leaders in the minerals industry—from governments, civil society, and the private sector—came together to answer these questions at the annual Sustainability Forum. The event, which focused on The Future of Work in the Minerals Industry, was co-hosted by the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF), the World Economic Forum (WEF), and the Prospectors and Developers Association of Canada (PDAC), and facilitated by Watershed Partners. The forum was held on the sidelines of the 2020 PDAC Convention in Toronto, Canada.

In collaboration,

participants explored what changes would mean for the future of work in the minerals industry. To ensure that the future of work in the minerals industry continues to support the sustainable development of communities and countries in a rapidly changing context, they addressed a host of challenges and opportunities:

- + environmental health and safety
- + relationships among companies, communities and governments;
- + technological advancements and automation;
- + the social license to operate.

The session began with introductions...



Director of
the IGF

Welcome! Thanks to WEF and PDAC for your continued partnership! Today we will focus on *The Future of Work in the Minerals Industry*. This year we want to enable new types of conversation and participation to explore what transformation will look like for those in the industry.

Thanks for your commitment to sustainability! Don't forget about PDAC's entire sustainability program!



Executive Director of PDAC



Platform Curator
for the WEF

Thanks to PDAC and IGF for your continued collaboration! Many of us know what the biggest challenges in mining are today—our focus will be on overcoming them!

John Hibble

Transformation Lead for Watershed Partners
and lead facilitator for the day

Officially opened the session and outlined the agenda for the rest of the day. He highlighted the Forum's objective: to discuss and co-create how the nature of work in the minerals industry, from exploration through production and beyond, will change over the next 25 years.



Participants were engaged in a backcasting scenario:

Asked to imagine they were in the year 2045, participants reflected on the past 25 years to tell the story of how these positive changes were achieved, and what they have meant for those working in the minerals industry.

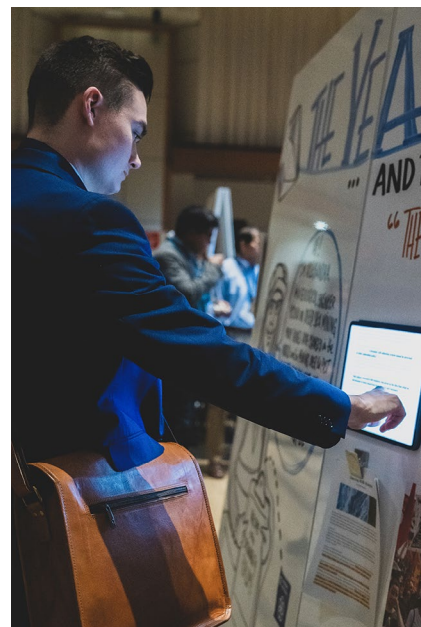


The backcast journey:

The year is 2045. Concerted and coordinated global action—from governments, civil society, and the private sector—led to the achievement of the SDGs.

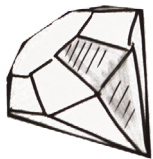


Gender equality has been achieved, inequalities within and between countries have decreased significantly, and the global economy has become more circular. Consumption and production patterns have become sustainable and responsible.





Democratic governance has expanded globally and strengthened. There has been an explosion in demand and supply for renewable energy technologies, and drastic reductions in the use of coal and other fossil fuels for energy, agriculture, and transport.



Change has not always come easily to the minerals industry, but broader economic, geopolitical, technological, social, and environmental changes facilitated a transformation in the sector.



Mines have become safer working environments. The adoption of rapidly advancing technologies, including automation, machine learning, and digitization, has supported this shift.





Companies, governments, and communities have worked together to strengthen the social license to operate in mining operations worldwide.



Companies have increased their energy efficiency and use of renewable energy technologies, cutting their use of fossil fuels and consequent greenhouse gas emissions. They have also integrated climate change adaptation into their mine design and management.



The proportion of women at all levels of the mining workforce is now at parity. The widespread formalization of artisanal and small-scale mining improved the livelihood security of millions globally and eliminated the environmentally damaging use of mercury and cyanide.



International agreements on the governance of seabed mining have prevented negative environmental and social impacts that might have accompanied its growth.



Companies have invested in developing the skills of their employees. There has been a broadening both upstream and downstream in the value chain of many mining companies; in addition to mining, many have also become land management companies, renewable energy providers, and water companies. The world has also seen a continued rise in urban mining and mineral recycling.



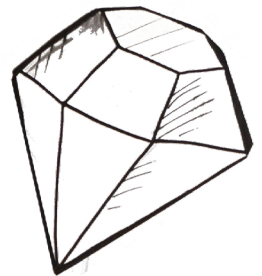
Participants were asked to use the following questions to guide their reflection:

KEY CHANGES?

What specific changes in the world of mining are you seeing in 2045? How have these affected those working in the industry?

CHALLENGES?

What were the most challenging factors to change and how did we overcome these?



DRIVERS IN LABOUR?

What have been the biggest drivers of change in the mining labour market?

INFLUENTIAL THINGS YOU DID

What have been the most influential things you have done since 2020 that have shaped the work in mining in 2045?



KEY ACTIONS ON SDGs

What were some key actions or changes related to achieving the SDGs in the mining industry?



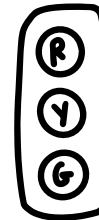
MISTAKES

What mistakes did we make along the way?



PARADIGM SHIFTS?

What factors have strongly contributed to the new paradigm in 2045 mining? What changes in mindsets and values were necessary?



What have we stopped, started or continued that has contributed to the work in mining in 2045?

PIVOTAL moments?

What were the pivotal moments that led us to where we are in 2045?

WHO WAS INVOLVED & IMPACTED?

Who were the key groups involved or impacted by these changes?



The Findings

Participants then came together in groups of 6-8 to share their individual stories and synthesize their most compelling ideas around the future of work in the minerals industry and how we can get to that ideal future. Key themes from this synthesis were then shared with the broader group.



Transformation will be difficult, given the many systemic forces in place that preserve the status quo. For example, regulatory barriers or gaps in governance may pose a challenge to systemic transformation. Historical and ongoing inequality will be a barrier. Climate change and resource scarcity may exacerbate existing grievances and tensions. There is substantial distrust between many of the key stakeholders instrumental to this transition, including industry, governments, and communities. These challenges will have to be overcome.

KEY CHANGES?

A sustainable transformation will require a fundamental shift in mindsets, in which industry leaders collaborate increasingly with workers, local governments, communities, and financial institutions.

Active community engagement, in particular, must be a priority at every stage of the mining cycle, from exploration to extraction and mine closure. Local communities should be seen as key partners, rather than obstacles, with whom companies and governments should consult and collaborate. Their voices need to be elevated and prioritized in the mining process to enable the mining industry to be a catalyst for socioeconomic development.



New technologies are being used across the sector to digitize data collection, automate parts of the mining process, track big data, and generate sustainable energy for mines. The labour implications of these technologies are vast and varied; job categories will evolve and skill requirements will change. This will create new and better opportunities for high-skilled labour but challenge those whose jobs will be replaced by machines. Training and skills-development programs will require enhancement and expansion in order to embrace technological shifts. Opportunities will emerge to create environmentally sustainable and equitable jobs.

KEY ACTIONS ON SDGs

Mining is at the forefront of many of the SDGs: it is integral to the production of renewable energy technologies while also being a significant source of global emissions. Mining can impact local biodiversity but can also be a key partner in the protection of species and ecosystems. While often seen as male-dominated, opportunities for women are growing rapidly. The mining sector therefore has a crucial role to play in the achievement of the SDGs. Participants highlighted the need for increased company investment in and alignment with the SDGs, active community involvement in planning decisions, and knowledge-sharing and collaboration between stakeholders.



INFLUENTIAL THINGS YOU DID

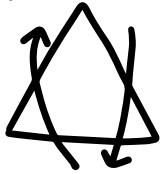
Influential actions included encouraging stakeholders to integrate sustainability considerations into regulatory frameworks, policies, and business decisions. Participants pointed to recent progress relating to investors who have integrated environmental, social, and governance considerations into their investment process, highlighting due diligence and responsible sourcing best practices. Future work should involve building off of these successes in regulatory and business frameworks. This may include setting standards, metrics, and indicators to measure and assess progress on sustainability. Participants also highlighted the importance of open and transparent communication and information-sharing among stakeholders across the entire supply chain.

MISTAKE MISTAKES

Participants acknowledged that, on the way to 2045, mistakes will be made. The essential takeaway will be to make these mistakes early, to learn from them, and to adapt. Common mistakes might include working in silos, failing to bring all relevant voices to the table, adhering to old biases and ways of working, or waiting too long to take action. These mistakes should be identified and quantified, in order to learn from them and adapt processes moving forward.



PARADIGM

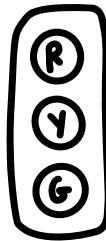


SHIFTS &

A major paradigm shift in the mining industry will need to occur to get us to the ideal 2045. This will involve mining companies not acting as just “extractors” of key resources, but also as generators and catalysts of inclusive growth, sustainability, and regional development. Re-supply chains will need to be focused on sustainability first and extraction second, which can only be accomplished through collaboration, open communication, and behavioural change among companies, communities, and systems.

PIVOTAL? moments?

It may be the case that things get worse before they get better. Major global crises—including war, pandemics, and climate or economic disasters—may act as a trigger for more drastic action and transformation. In response to compounding crises, the industry should break away from the mine-centric mindset toward one that is sustainability- and development-centric. This will involve active collaboration in the industry, with greater coordination among relevant stakeholders.

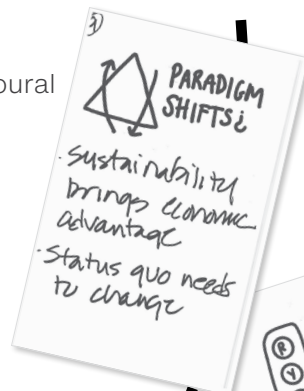


Participants highlighted the following actions to be taken by relevant stakeholders:

STOP environmentally destructive mining projects, social unrest, mass consumerism, and business-as-usual practices.

START collaborating more across sectors, building inclusive relationships with stakeholders and setting regulatory standards within the government.

CONTINUE responsible mining practices while also acting as a global leader in innovation and change.



WHO WAS INVOLVED & IMPACTED?

Transformational change in the minerals industry cannot be tackled by the sector on its own; it will require action from multiple stakeholders working together across silos and levels of governance. Decision-makers in the minerals industry will need to forge relationships with communities and leaders in the health, education, planning, finance, and environmental sectors, among others, to promote a meaningful shift toward sustainability at large. Everyone will need to be involved, and relevant stakeholders previously excluded will need to be brought to the table, including Indigenous Peoples, women, and youth.



This event was co-organized by:



PROSPECTORS & DEVELOPERS ASSOCIATION OF CANADA

ASSOCIATION CANADIENNE DES PROSPECTEURS ET ENTREPRENEURS



IGF Secretariat hosted by



Closing Remarks

Tyl van Toorn, CEO of Watershed Partners,

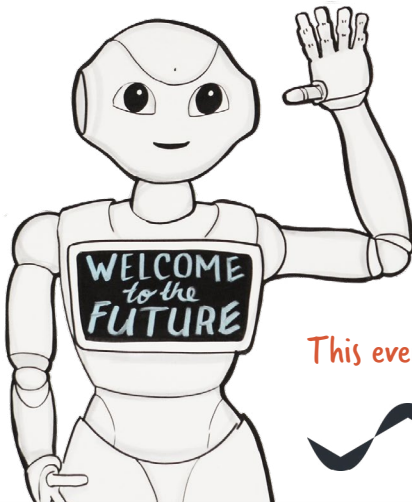
closed the session by reiterating that there is a place for re-imagination and transformation in the mining sector. Tyl believes it will involve stepping into the future, standing in it, and looking around to identify what success looks like and what relationships need to be cultivated. Tyl mentioned that we live in an era of complexity, where we are seeing the emergence of concurrent crises. To thrive, it will be essential to optimize our approach to problem solving in order to reach our ideal 2045.

Jörgen Sandström, Head of Mining and Metals Industry at the WEF,

thanked the IGF, PDAC, and Watershed Partners for their continued partnership. He highlighted the importance of collaboration, leadership, and innovation in the minerals industry.

Greg Radford, Director of the IGF,

thanked Watershed Partners for their facilitation, PDAC and WEF for their partnership, and participants for their active engagement in the session. He underscored that it is sessions like these that really highlight the importance of open dialogue, participatory processes, and innovation.



This event was facilitated by

