

Perspectives and initiatives for the future of mining

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ABSTRACT

As the mining industry faces times of change, new challenges arise to ensure raw material supply for the younger and future generations. Different scenarios are currently shaping the way we mine and teach mining engineering. Led by an increasing demand for raw materials, net zero requirements for improving long-term operation performance, technological advancements such as automation and digitalisation, safety improvements, environmental considerations and a need for social acceptance, mining is pursuing to change and adapt to these requirements at a faster pace.

Such changing times arise new concerns, one of the most relevant is the lower number of students interested or enrolling in mining engineering and related fields leaving mining as one of the most unpopular careers between the younger generations. Nonetheless, the academia is keen to supply the industry with mining engineers suited to take mining to the next level. The global academia is currently undergoing several initiatives to overcome these such as curricula updates and adaptation, upskilling, improving teaching practices and techniques, including e-learning techniques, enhancing industry-academia and inter-university collaboration, and much more.

Therefore, this paper provides as start, a qualitative analysis and overview on the technical and interpersonal skills mining engineers will have to develop and will be necessary to succeed and lead in the mining industry, especially when enhancing all aspects of sustainability. It introduces and describes the perspectives from eight universities around the globe involving seven different countries in five continents America, Europe, Asia, Africa and Oceania and put them in a context with the working points of the Society of Mining Professors (SOMP). Finally, a selection of initiatives by the involved universities are showcased and country specific demands and challenging scenarios are described.