

Digitalization in mining conference

14 July – 30 July 2020

Tuesday 14 July 2020

Session 1: Academic Session Chair: G. Lane, Vuuma, South Africa

10:00–10:30 How to transform into data driven mine operation: lessons learned from large operations?
M. Kahraman, Gumushane University, Turkey

10:40–11:10 Is VR, AR and immersive technologies working in the mining sector? How does it fit your digital transformation agenda? How to make it work for you? C. Middel, Dondoo Studios, South Africa

11:20–11:50 Development of tailor-made in field data collection and reporting tools for multidisciplinary inspections on mines R. Sutcliffe and E. Dupper, SRK Consulting, South Africa

Event Report

Thursday 16 July 2020

Session 2: Industry Session Chair: G. Mishra, Hatch, South Africa

10:00–10:30 Digitalization of technical value chains unlocking industrialisation through adoption of value chain standards G. Strachan and M. Smeiman, SABS, Msanda, South Africa

10:40–11:10 Remote monitoring and diagnostics to improve process performance at Anglo American Platinum L. Auret¹ and D. Groenewald², 1Stone Three Digital, 2Anglo American Platinum, South Africa

Tuesday 21 July 2020

Session 3: Industry Session Chair: M. Woodhall, MineRP, South Africa

10:00–10:30 How mining companies are leveraging targeted digital tools to unlock value in operations and capital projects G. Nel and J. van der Bijl, McKinsey & Company, South Africa

10:40–11:10 The application of advanced data analytic techniques to improve productivity in underground coal mines L. Mathieson, Schauenburg Systems (Pty) Ltd, South Africa

11:20–11:50 Re-imagining mining by delivering connectivity, sensor and digital e-signature technology solutions at Anglo American Platinum's Amandelbult Complex E. Brummer, Anglo American Platinum, South Africa

Thursday 23 July 2020

Session 4: Strategic Session Chair: S. Strydom, Anglo Platinum, South Africa

10:00–10:30 Mobilaris Mining Intelligence – True digitalization for underground mines *T. Mwayi, Epiroc*

10:40–11:10 Enterprise data integration paradigms *E. Strydom and M. Woodhall, MineRP, South Africa*

11:20–11:50 Value First...Today, Tomorrow and into the future *M. Evans, Partners in Performance, South Africa*

12:00–12:30 Mining Tech Trends 2020: Key technology trends and how they are shaping the industry *G. Mishra, Hatch, South Africa*

Tuesday 28 July 2020

Session 5: Strategic Session Chair: J.J. Verhaeghe, Mandela Mining Precinct

10:00–10:30 Why digital transformation is not the silver bullet that many are expecting. How to make it work for you? *C. Middel, Middel & Partners, South Africa*

10:40–11:10 Digitalization and optimization in mining *H. Shah and N. Blignaut, Yokogawa, UAE and South Africa*

11:20–11:50 Fewzion - Integrated planning and short interval control for rapid improvements in safe production *J. Aucamp, Commit Works, South Africa*

Thursday 30 July 2020 Session 6:

People and digitalization Session Chair: S Ramparsad, Mandela Mining Precinct, South Africa

10:00–10:30 Digitalization change management – Insights into operational behavior *G. Skinner, Sandvik Mining and Rock Technology*

10:40–11:10 Preparing for mines of the future through digital readiness engineering *C. Bleazard, Hatch South Africa*

11:20–11:50 Future of workforce in the mining: Mining in the age of 4IR *G. Mishra, Hatch, South Africa*

12:00–12:30 Investigating the leadership capabilities that will drive modernization of the coal mining sector through the fourth Industrial revolution *D. Venter, University of Johannesburg, South Africa*

12:40–13:10 Humanizing digitalization *A. Mello, G. Lane, and H. Sinko, Vuuma, South Africa*

10:40–11:10 is VR, AR and immersive technologies working in the mining sector? How does it fit your digital transformation agenda? How to make it work for you? C. Middel, Dondoo Studios, South Africa

11:20–11:50 Development of tailor-made in field data collection and reporting tools for multidisciplinary inspections on mines R. Sutcliffe

The Southern African Institute of Mining and Metallurgy (SAIMM) hosted the Digitalization in Mining Conference online from the 14th to the 28th of July 2020. The focus of the conference was on all aspects of digitalization with speakers coming from academic institutions, mining consultancy firms and mining technology suppliers.

A key highlight of the conference was a presentation made by Mr Lewis Mathieson from Schauenburg Systems on the topic “The Application of Advanced Data Analytic Techniques to improve Productivity in Underground Coal Mines- Turning mining data into mining intelligence”. The presentation highlighted Schauenburg’s SmartMine Productivity Optimisation (SMPO) offering for advanced analytics for mining operations.

SMPO is an application of the SmartMine IoT platform that performs short interval control using advanced data analytic techniques on accurate data obtained from vehicle interactions in underground coal mines. The application is vehicle and OEM independent. SMPO’s digitalization focus areas are “productivity optimization, legal compliance management, asset lifecycle management and centralised data management”. These applications are made possible by the ABCD of digitalization (Applications, Back-end, Communication, Devices)

Other topics covered in conference were Virtual Reality, Augmented Reality and immersive technologies in the mining sector, field data collection and reporting tools, People and digitalization (humanizing digitalization) as well as other topics.

The key conclusions from the conference were that mining is going digital and the industry has to adopt digital technologies to ensure its competitiveness globally. The key question is no longer what digitalization is, but how to digitalise? Each operation is unique and its digital transformation roadmap has to reflect its uniqueness and address fundamental productivity, health and safety as well community needs.