The digital transformation of mining will unlock $190 bn in value. This is forcing mining companies to focus their operational investments on digital to maximise yield recoveries and improve operational efficiencies.

Mining companies will be investing close to $50 bn to unlock this value. Mines and Technology is, therefore, the perfect platform to source solutions to future-proof mining companies and drive performance across the industry.

Set to take place in London, 27-29 November 2018, Mines and Technology will have dedicated exhibition showcases and features across 9 critical areas of the digital transformation.

**Confirmed Speakers – Digital Transformation**

Phil Baker, CEO, Hecla Mining  
Dr Ali Soofastaei, Research Developer, Advanced Analytics Center, Vale  
Ivar Fossum, CEO, Nordic Mining  
Fredrik Kauma, Project Manager, Boliden  
Néstor Alemán Esteban, Regional Project Manager - West Africa at Kinross Gold Corporation, Kinross Gold Corporation  
Murat Tiryaki, Engineering and Innovation Manager, Yilmaden Holdings  
Thomas Wallmach, Geology, Mining and Mineralogy Expert, Eramet Group  
Kalev Ruberg, VP Teck Digital Systems and CIO, Teck  
Stephen Stewart, CEO, Orefinders  
Phil Hearse, Chairman, International Graphite  
Robert Mueller, Senior Technologist, Exploration Research and Technology Programs, NASA  
Thomas Gaisecker, Senior Manager International Sales and Manager Mining & Monitoring Business Division, RIEGL  
Dr Peter Harrop, Chairman of the Board, IDTechEx  
Philippa Malmgren, Author, Economist, Leading Policy Analyst and Founder, H Robotics  
Otto van der Ende, Mining Specialist, MineLens, McKinsey & Company  
Karen Hanghøj, CEO, EIT Raw Materials  
Dr. Joseph Quinn, Senior Engineering Geologist, Klohn Crippen Berger  
Anthony Downs, Principal Consultant, Digital Solutions Group, Hatch  
Dr Mohsen Yahyaei, Group Leader, Advanced Process Prediction and Control (APPCo), Sustainable Minerals Institute  
Nick Wilshay, Director, CEEC (Coalition for Energy Efficient Comminution)  
James Rogers, President and Director of Global UAV Technologies, Global UAV Technologies  
Dr Nicolas Jeannée, Natural Resources Solutions Director, Dassault Systemes  
Alan R Butcher, Research Professor, Geological Survey of Finland  
Joe Cucuzza, Managing Director, Amira International  
Chris Calam, Sales Manager, ThermoFisher Scientific  
Dr Dave Lawie, Chief Geoscientist, IMDEX  
Robert Hough, Science Director and Deputy Director, Mineral Resources, CSIRO

**Confirmed Moderators**

Robert Bacon, Member of the Board, IOM3 Mining Technology Division (MTD)  
Professor Patrick Foster, Director of Education, Camborne School of Mines  
Alan R Butcher, Research Professor, Geological Survey of Finland  
Daniel Gleeson, Editor, International Mining
27th November 2018 – Digital Exploration
Session hosted by Alan R Butcher, Research Professor, Geological Survey of Finland

09:00 Gaining an edge from the next generation of data analytics - How to leverage existing data, knowledge of geologic formations and advanced analytics to improve exploration success

Stephen Stewart, CEO, Orefinders

09:30 How to increase safety, productivity and decision-making through artificial intelligence

Dr Ali Soofastaei, Research Developer, Advanced Analytics Center, Vale

10:00 Taking geoscience to the point of drilling - A step change in sensor design and data collection to facilitate exploration decision making through to optimised blasting outcomes

Dr Dave Lawie, Chief Geoscientist, IMDEX

10:20 Exhibition Break

11:00 How to maximise deep earth imaging technology to improve image-precision of subsurface rock properties

Joe Cucuzza, Managing Director, Amira International

11:30 How to leverage your portable XRF for exploration and grade controls

Chris Calam, Sales Manager, ThermoFisher Scientific

11:50 How to implement rapid mineral characterisation to deliver cost-effective exploration and discovery as well as optimising resource management.

Alan R Butcher, Research Professor, Geological Survey of Finland

12:20 Session Reserved for Global UAV Technologies

James Rogers, President and Director, Global UAV Technologies

12:50 How to improve mineral exploration with new data science driven technologies

Robert Hough, Science Director and Deputy Director, Mineral Resources, CSIRO

13:10 Networking Lunch

14:20 Demo Zone
Check out the latest products the exhibitors have brought along in this demonstration slot and let the judging panel quiz them on its capabilities!

14:30 Reflex
14:40 Riegl
14:50 Total
15:00 Hatch
15:10 VRify

15:20 Exhibition Break

15:50 Innovation Groups – The Challenge
   1. **Big Data** Innovation Group hosted by RIEGL
      The Challenge: On-demand digital terrain data to optimise mine planning and daily operations
   2. **Mineral Processing** Innovation Group hosted by CEEC
      The Challenge: Optimising energy usage and water management at your mine
   3. **Smart Sustainability** Innovation Group hosted by Klohn Crippen Berger
      The Challenge: Sustainable Tailings Management and Associated Design

17:00 Wines and Technology on the exhibition floor
18:00 Young Mining Professionals Drinks at The Chapel Bar
20:00 Champions League Football Party at the Fox on the Green pub
28th November 2018 - Digital Transformation
Session hosted by Daniel Gleeson, Editor, International Mining

09:00 IOT Keynote: How to enable maximum performance of fleets, equipment and people with IOT
Phil Baker, CEO, Hecla Mining

09:30 Artificial Intelligence Keynote: Practical magic in the mine - artificial realities: Machine learning in haul maintenance, mine route planning and the user experience
Kalev Ruberg, VP Teck Digital Systems and CIO, Teck Resources

10:00 Artificial Intelligence Keynote: AI, geopolitics and mining – what does the digital future look like?
Philippa Malmgren, Author, Economist, Leading Policy Analyst and Founder, H Robotics

10:30 Next-Generation Networks Keynote: Examining the tests of 5G networks in mines and the potential benefits for Boliden’s operation
Fredrik Kauma, Project Manager, Boliden

11:00 Exhibition Break
Session hosted by Robert Bacon, Member of the Board, IOM3 Mining Technology Division (MTD)

Spotlight 15’s with 5 minutes for Q&A!

11:30 Simulation: How to leverage simulation technology to improve long-term operational decision making
Otto van der Ende, Mining Specialist, MineLens, McKinsey & Company

11:50 Mineral Processing: The secret life of ilmenite in heavy mineral sands – A personal review of analytical techniques revealing the comprehensive value of a resource
Thomas Wallmach, Geology, Mining and Mineralogy Expert, Eramet Group

12:10 Big Data: RIEGL 3D Long Range LiDAR Technology - highly accurate, on demand terrain data for autonomous mine planning and operations
Thomas Gaisecker, Senior Manager International Sales and Manager Mining & Monitoring Business Division, RIEGL

12:30 IOT: Profound innovation: Fuelled by collaboration
Stephen de Jong, CEO, VRify Technology

12:50 IOT: The mine of the future
Anthony Downs, Principal Consultant, Digital Solutions Group, Hatch

13:10 IOT: Total optimizer – helping you reduce your energy costs by consolidating all of your existing site data into a single digital dashboard

Dirk de Bruyn, Vice President – Global Industry & Mining, Total

13:30 Exhibition Break

14:30 Market Outlook Keynote: Autonomous vehicles in mining - technologies, challenges, benefits, markets, forecasts, key players and opportunities

Dr Peter Harrop, Chairman of the Board, IDTechEx

15:00 Mineral Processing: Success through understanding Graphite Secondary Processing Technology

Phil Hearse, Chairman, International Graphite

15:10 Virtual Simulation: Beyond Industry 4.0: The mining industry renaissance

Dr Nicolas Jeannee, Natural Resources Solutions Director, Dassault Systemes

15:30 Exhibition Break

16:00 Innovation Groups – The Feedback

17:00 Women in Mining Drinks on the exhibition floor
19:00 Mines and Money/Mines and Technology Awards Ceremony and Gala Dinner (a separate ticket is required for entry)
29th November 2018 – Digital Transformation
Session hosted by Professor Patrick Foster, Director of Education, Camborne School of Mines

09:00 Next-Generation Networks: How to ensure your mine sites have reliable, durable and capable communications infrastructure for remote operations

Néstor Alemán Esteban, Regional Project Manager - West Africa at Kinross Gold Corporation, Kinross Gold Corporation

09:30 Mineral Processing Keynote: Yilmaden’s engineering and innovation ecosystem – leveraging technology for chromite tail magnetic beneficiation as an output of the ecosystem

Murat Tiryaki, Engineering and Innovation Manager, Yilmaden Holdings

10:00 Out of Industry Keynote: Space Exploration – The role of technology which makes this more commercially viable and achievable

Robert Mueller, Senior Technologist, Exploration Research and Technology Programs, NASA

10:30 Smart Sustainability Keynote: How Scandinavian topography offers an innovative approach to mining and tailings disposal

Ivar Fossum, CEO, Nordic Mining

11:00 Exhibition Break

Spotlight 15’s

11:30 Innovation: Innovation and collaboration for a strong European raw materials sector

Karen Hanghøj, CEO, EIT Raw Materials

11:50 Smart Sustainability: Sustainable practices in tailings dam design: management of liquefaction risk throughout operations and closure

Dr. Joseph Quinn, Senior Engineering Geologist, Klohn Crippen Berger

12:10 Big Data: How to leverage real-time monitoring and industrial water processing at your mine site

Jaakko Seppälä, Chairman of the Board, EHP Environment
Felix Fondem, Director and Member of the Board, Global Ecoprocess Services

12:30 Advanced Process Controls: Identifying future mineral processing challenges and how to overcome them through innovation and technology

Dr Mohsen Yahyaei, Group Leader, Advanced Process Prediction and Control (APPCo), Sustainable Minerals Institute
12:50 Mineral Processing: The Future is now - driving energy down and productivity up through CEEC

Nick Wilshaw, Director, CEEC (Coalition for Energy Efficient Comminution)

13:10 Exhibition Break

14:30 Pub Quiz

Hosted by Ellis Martin, Host, The Ellis Martin Report

16:30 Mines and Technology closing drinks on the exhibition floor