

Challenges and opportunities of the European raw materials sector

Presentation room #205B | PDAC 2019, Toronto

3 March 2019 | 2pm-6pm

Session 1: Exploration and mining sector in Europe – views on present and future

- 2:00 pm – 2:10 pm Welcome – ‘Developing Raw Materials into a Major Strength for Europe’
EIT RawMaterials
Karen Hanghøj, CEO, Managing Director
- 2:10 pm – 2:30 pm Minerals: Europe IS the Future
Irish Centre for Research in Applied Geosciences (iCRAG), Ireland
Murray Hitzman, Director
- 2:30 pm – 2:50 pm Rethinking Minerals Exploration in Europe
Tallinn University of Technology (TalTech), Estonia
Michael Hitch, Professor of Mining
- 2:50 pm – 3:05 pm Future of mineral exploration in Europe
Helmholtz Institute for Resources Freiberg, Germany
Jens Gutzmer, Director
- 3:05 pm – 3:25 pm Haulage, the 75B tpa bottleneck. How European innovation can change Mining
ETF Mining, Rotterdam, the Netherlands
Geoffrey Ejzenberg, Chief Client Officer
- 3:25 pm – 3:40 pm Scandinavian topography offers new solutions in mining
Nordic Mining, Oslo, Norway
Ivar Fossum, CEO
- 3:40 pm – 4:00 pm European Bank of Reconstruction & Developments – New mining strategy 2018-2022
European Bank of Reconstruction & Developments (EBRD), UK
Eric Rasmussen, Director of Natural Resources

4:00 pm – 4:20 pm Coffee break

Session 2: Innovation projects in Exploration and Mining in Europe – supported by EIT RawMaterials

4:20 pm – 4:35 pm Multi-sensor integration boosting innovative non-invasive mineral exploration -
Mulsedro and inSPECTor
Helmholtz-Zentrum Dresden Rossendorf (HZDR), Germany
Moritz Kirsch, Research Associate

4:35 pm – 4:50 pm Examples of geosurveys contribution to EIT RawMaterials project portfolio
Geological Survey of Finland (GTK), Finland
Saku Vuori, Director, Science and Innovations

Session 3: European start-ups landscape for global Exploration and Mining in industries

4:50 pm – 4:55 pm EIT RawMaterials supporting European start-ups
EIT RawMaterials
Krzysztof Kubacki, Innovation Hub Director

4:55 pm – 5:05 pm Radai Oy, Finland
Ari Saartenoja, CEO

5:05pm – 5:15 pm Hovering Solutions, Spain
Fran Espada, Founder

5:15 pm – 5:25 pm Spectral Industries, the Netherlands
Ad Maas, CEO

5:25 pm – 5:35 pm eMaintenance365, Sweden
Jesper Westerberg, Solution Developer

5:35 pm – 5:45 pm CyanoGuard, Switzerland
Benedick Kirchgaessler, CEO

5:45 pm – 5:55 pm talpasolutions, Germany
Sebastian Kowitz, Executive Director

5:55 pm – 6:00 pm Summary and concluding remarks
EIT RawMaterials
Karen Hanghoj, CEO, Managing Director

Professor Michael Hitch, PhD, P.Eng., P.Geo. comes to TalTech after both an impressive industrial career and an academic one. Michael has spent 23 years in the raw materials sector in various capacities ranging from and including a field geologist to that of being a senior executive with some of the world's largest and most successful mining companies. During this time, he developed a keen awareness of the role of raw materials in society, but more importantly how the importance of societal values throughout the raw materials value chain contribute to sustainable and prosperous communities. His work has taken him to over 190 countries worldwide and has been involved with the development of six mining operations. In every case, his priority has been to ensure an equitable distribution of benefits to all stakeholders, mindful environmental stewardship and effective governance.

Professor Hitch's academic career began at the University of British Columbia in Canada in 2007, and has included positions at the University of New South Wales in Sydney Australia (Director of the Australian Centre for Sustainable Mining Practices) and now Professor of Mining at TalTech.

Ivar S. Fossum, CEO, Nordic Mining ASA

Ivar Fossum holds a Master of Science in Mechanical Engineering from the University of Science and Technology (NTNU) in Trondheim, Norway. He has previously held various managerial and commercial positions in the Norsk Hydro Group, within the oil and gas industry and the fertilizer industry, and in FMC Technologies. Fossum has also been general manager of Norsk Hydro East Africa Ltd in Nairobi, Kenya. Mr. Fossum has served as CEO for Nordic Mining ASA since 2006.

Eric Rasmussen, Director Natural Resources European Bank for Reconstruction and Development

Mr. Rasmussen joined the EBRD in 1995 at the EBRD London HQ and dealt with energy efficiency in district heating and industrial companies in the former Soviet Union (FSU). He was based in Russia from 1997 to 2013. He was appointed Deputy Country Director for Russia in 2003 and promoted in 2006 to Director of Industry, Commerce and Agribusiness in Russia in with responsibility for the industrial sector (including among other oil field service and energy equipment manufacturing, chemicals, metallurgy, mining, forestry, automotive, retail, agribusiness, telecom and equity funds). Eric Rasmussen was appointed Director Natural Resources 15 April 2013 and is now based at the EBRD HQ in London. Mr. Rasmussen received his Master of Business Degrees from Aarhus Business School, Denmark, with major in banking, finance and a private law degree.

MURRAY W. HITZMAN has B.A. degrees in geology and anthropology from Dartmouth College (1976), an M.S. in geology from University of Washington (1978), and a Ph.D. in geology from Stanford University (1983). He worked in the petroleum and minerals industries from 1976 to 1993 primarily doing mineral exploration worldwide and was largely responsible for Chevron Corporation's Lisheen Zn-Pb-Ag deposit discovery in Ireland (1990). Dr. Hitzman served in Washington, D.C. as a policy analyst in both the U.S. Senate for Senator Joseph Lieberman (1993-94) and the White House Office of Science and Technology Policy (1994-96). In 1996 he was named the Fogarty Professor in Economic Geology at the Colorado School of Mines (CSM) and served as head of the Department of Geology and Geological Engineering from 2002-07. His research in economic geology at CSM was focused on the Central African Copperbelt. In 2016 he joined the U.S. Geological Survey as the Associate Director for Energy and Minerals and served until late December 2017. In early 2018 he was named Science Foundation Ireland Professor in the School of Earth Sciences at University College Dublin, Ireland and was also named Director of the Irish Centre for Research on Applied Geoscience (iCRAG). He served as the President of the Society of Economic Geologists in 2006. He has previously served on the boards of a number of junior mineral exploration and mining companies and currently serves as technical advisor for the private company KoBold, focused on cobalt exploration. He was awarded the SEG Silver Medal in 1999, the Daniel C. Jackling Award by Society of Mining, Metallurgy, and Exploration and the Des Pretorius Award by the Geological Society of South Africa in 2015, and the Haddon Forrester King Medal by the Australian Academy of Sciences in 2016.

Jens Gutzmer was appointed as the founding director of the Helmholtz Institute Freiberg for Resource Technology in 2011. Previous appointments at TU Bergakademie Freiberg, Germany and the University of Johannesburg, South Africa. Founding CEO of the EIT Raw Materials GmbH and co-founder of the Paleoproterozoic Mineralization Research Group at Rand Afrikaans University (now the University of Johannesburg). Jens regards himself foremost as an academically minded economic geologist with relevant experience in a multitude of commodities and mineral deposit types. Most of his recent research has focused on geometallurgy and mineral systems analysis. The ultimate goals both of these research fields are very distinct. Yet, both require a very thorough and multi-scale understanding of geological, mineralogical and geochemical characteristics of orebodies and ore-forming systems.