

## **Stakeholder workshop addressed to high-level policy makers, organized actors and interest groups at the European level**

**Monday 13 September 2021, 14:00 – 16:30 pm CET**

The event brings the opportunity to share new knowledge and showcase the new exploration technologies that have been developed by the Horizon 2020, New Exploration Technologies (NEXT) project.

A first session will bring pitch-style presentations on new insights in how mineral deposits are formed, advances in mineral predictive mapping as well as a new generation of drones equipped with a novel electromagnetic survey system, which was picked up by the European Commission's Innovation Radar. Furthermore, a new on-line mapping tool will be presented, which is intended to efficiently explore potential synergies, optimize your clustering and strategy thinking, as the tool has been implemented directly on the Cordis repository which provides information on all EU-supported R&D activities, including H2020, FP7 and earlier programmes, individual projects, results and publications.

A second session will then focus on the Social License to Explore (SLE) in which the outcomes will be shared of surveys and interviews conducted in case studies in both Finland and Sweden with a view to better understand the factors affecting local attitudes to SLE. The Social License to Operate (SLO) Guidelines for Europe and its accompanying Toolbox produced by the Horizon 2020 Mining and metallurgy regions of EU (MIREU) project will also be presented. These insights are at the basis of the development of the NEXT Toolkit which has been designed to complement the MIREU SLO Toolbox and includes a wide range of material which are particularly useful to exploration companies.

**Save the date!** The event will be organized as an online event between 14:00 and 16:30 pm (CET) on September 13, 2021.

**Who should attend?** In addition to exploration companies, the event should be of major interest to policy makers, organized actors and interest groups on the European level.

**To register** your participation, please follow [this link](#).

## Agenda

<b>14:00</b> - <b>15:00</b>	<p><b>Pitch style presentations on new tools and knowledge brought by Horizon2020 NEXT project</b></p> <p><b>A holistic view on how mineral deposits form</b> Tobias Bauer, Luleå University of Technology, Sweden</p> <p><b>Advances in mineral prospectivity mapping</b> Andreas Brosig, BEAK Consultants GmbH, Germany</p> <p><b>A novel electromagnetic (EM) survey system on UAV for mineral exploration,</b> Ari Saartenoja, Radai Oy, Finland</p> <p><b>Exploring synergies, optimizing your clustering and strategy thinking with a new mapping tool implemented on CORDIS</b> Anne-Sylvie André-Mayer, University of Lorraine, France</p> <p><b>The MIREU SLO Guidelines for Europe and its accompanying toolbox (invited presentation)</b> Pamela Lesser, University of Lapland, Finland</p>
<b>15:00</b> - <b>16:10</b>	<p><b>Presentations on Social Licence to Explore</b></p> <p><b>Factors affecting local attitudes to mineral exploration (and mining)</b> Karin Beland Lindahl, Luleå University of Technology, Sweden</p> <p><b>Social aspects of business risks in mineral exploration</b> Leena Suopajarvi, University of Lapland, Finland</p> <p><b>New mineral exploration technologies in the Finnish context</b> Toni Eerola, Geological Survey of Finland</p> <p><b>The NEXT Toolkit addressed to mineral exploration companies</b> Dirk De Ketelaere and Anna Spiteri, Integrated Resources Management Co Ltd, IRMCo, Malta</p>
<b>16:10</b> - <b>16:30</b>	<p><b>Wrap up and conclusions</b></p>

## About the presenters

“Growing up at the foot of the Alps, I could almost every day see a wall of rock from my window. It was just natural that I started to climb in the mountains. And the more rocks and mountains I saw, the more I was wondering how all of this formed. How can it be possible that ancient seafloor ends up at 3000 meters above sea level? So I decided already during school to become a geologist. My current studies deal with mountain-forming processes, both present but also ancient, 2 billion years old processes. By that, I can reconstruct how the rocks and minerals under our feet formed during geological times.”

**Tobias Bauer** is an Associate Professor in Ore Geology at Luleå University of Technology (LTU) in Sweden



“As a child I was deeply into mineral and fossil collecting. During school holidays, I would badger my parents for short trips to the Alps or the Franconian Alb to hunt for fossils. Over time, I began to wonder how much harder it must be to discover minerals in the deep underground, compared to collecting samples from the surface. Later I learned that it is indeed a complicated, but also a very captivating topic as it involves many natural processes interacting over incredibly long time scales. Examining the remaining traces of these processes brings the opportunity to improve our understanding of what happened in the deep past. With this new approach to mineral predictive mapping, it is possible to find new mineral deposits even in areas where mining activities in past centuries are thought to have exhausted the hitherto known deposits.”

**Andreas Brosig** is 3D Modelling Team Leader at BEAK Consultants GmbH in Germany



“My interest in flying machines and technology goes back to my teenage years. Together with a friend, I started to innovate and find applications for drones back in 2012. Both of us were keen to develop something new. We meticulously went through the scarce information we were able to find and started building our first drones and sensors in my garage. It proved an intense period of my life, characterized by initial failures and starting all over again. Then, at some stage, the outcome of our passionate efforts proved to work surprisingly well. Looking back, our ambition to put into practice some of our innovations, which were quite many at this initial stage, came quite naturally I would say. We kept pushing our development work forward and little by little our first prototype of a drone-based survey system was completed. Our teenage obsession that things can always be improved is part of our small company’s culture today: striving all the time to do better, never being happy with mediocre results. Through the European Commission’s financial assistance provided to the NEXT project, we came up with a breakthrough solution for the mineral exploration industry, but things can be done better in so many other domains... and drone technology opens up to so many new possibilities... so hopefully, in the future, we will add our bit in improving the outcome of other industries. At Radai, we much look forward to keeping ‘playing’ with flying machines and technology as I did in my teenage years, and in the process, our team definitely will maintain its focus on innovating!”

***Ari Saartenoja*** is CEO & Founder of the Finnish company Radai Ltd





“I grew up in Lorraine, a region marked by its mining history. I was born in the mid-1970s in a city located in the northern iron ore basin. Just at that time, the iron ore market became international, leading to the end of the iron ore of Lorraine “La minette”, its 30-35 % grade no longer being economically viable. Coincidence or not, I’m now focusing my research on the understanding of the relation between metal endowment (Au, U, Rare metals, ...) and the formation and reworking of the continental crust in Proterozoic times, being involved in international research and educative projects (WAXI, SAXI, NEXT, Eurocore), which deal with mineral exploration and its related challenges.”

***Anne-Sylvie André-Mayer** is a Professor in Economic Geology and Head of the GeoResources Laboratory at Université de Lorraine in Nancy, France*

“Growing up in Los Angeles, California convinced me early on that I did not want to spend my life in a place that looked, and to a large extent was, rather superficial. I have always been interested in people and places that seem grounded in history, in tradition. Understanding where we have come from is equally important as trying to figure out where we are going to. Originally trained as a land use/urban planner in California, I found out I could combine both. Once my family moved to Europe, a whole new world opened up. Wanting to explore the beauty and complexity of Europe led me to become a social scientist. My interest in the ‘social licence to operate’ (SLO) concept is not tied to mining but rather to people and wanting to really hear what people say. Trying to take the next step and operationalise SLO is challenging but also very rewarding.”

***Pamela Lesser** is a Researcher at the Arctic Centre, University of Lapland in Finland*





“Drawn by a love for forests and a strong interest in environmental issues, I graduated from with a bachelor’s degree in biology. But after some years of drawing up lichen, fungi and wetland inventories, I started to ask myself what really matters for the environment. Are we faced with a lack of knowledge about the forest living species, or do we need to look for a better social system governing the natural resources? So, I shifted to political science and started a graduate project which looked at local peoples’ relations to forests and forest conflicts in Sweden. Today my research continues to focus on the politics of natural resource management and conflicts, particularly related to forests, minerals and energy. Understanding how local people are affected, and actively consulting and involving them in all aspects related to natural resource management are key for the legitimacy of resource-based businesses and the State governing the resources.”

***Karin Beland Lindahl*** is an Associate Professor in Political Science at Luleå University of Technology in Sweden

“As a little child born in Lapland, I always got very worried whenever adults discussed about hydro-power generating projects. How was I going to get back home if the water would cover the entire road to our village? Hardly coincidence I guess that I went on to study disputes about hydro-power construction in Lapland from master theses to doctoral theses. All along, I increasingly started asking myself what is the role of local people in natural resource governance? And for sure it cannot be coincidence either that I have been delving into the social and environmental impacts caused by mining projects ever since Lapland witnessed a mining boom at the start of the present millennium.”

***Leena Suopajarvi*** lectures on Environmental Sociology at the University of Lapland in Finland (Photo credit: Marko Junttila)



“My work as a geologist in Finland and abroad made me observe and learn the importance of stakeholder engagement and communication with local communities and other stakeholders since I was student and trainee in the field. I have been practicing and developing stakeholder engagement and related toolkits and standards not only through the Horizon 2020 NEXT and MIREU projects, but also directly with mineral exploration companies, and through collaboration with the Finnish Network for Sustainable Mining and the Finnish Mineral Exploration Network of the FinMin.”



**Toni Eerola** is a Senior Specialist at the Geological Survey of Finland (GTK)



“Whilst a majority of our company’s research projects over the past 25 years have dealt with various aspects of water resources management, my involvement in the Horizon 2020 NEXT project and in the FP7 ProMine project reinforces my viewpoint that there is a clear need to directly involve local communities in all matters that pertain to their land and water resources. Regulatory frameworks set by national authorities or self-declared corporate responsibilities set by companies are simply not sufficient to ensure and safeguard the social well-being of society. As a hydrologist, I do not see access to water as a source of conflict but rather a means to build lasting bridges among competing users. To think of it, access to land should be viewed in the same way.”

**Dirk De Ketelaere** is a Senior Researcher at Integrated Resources Management Company Ltd., IRMCo, an environmental research company based in Malta



“Our planet is a truly wondrous place and I was always fascinated with so many disciplines that it was only natural that ‘geography’ ‘chose’ me at London University. My curiosity to learn how landscapes form and how they are represented on maps led me to go for earth observation studies at the International Institute for Geo-Information Science and Earth Observation (ITC) in Enschede, the Netherlands. Back then, this subject was still very much in its infancy but it was taught at ITC in a grand way, complete with simulation cockpits and exotic fieldtrips! This was at a time when the phrase remote sensing evoked images of water divining... a potentially valuable skill nowadays that is still on my list of things to learn. Having the privilege to work in a multitude of international research projects ranging from precision farming and coastal zone management to knowledge management of mineral extraction, and always in several exciting countries still makes my understanding of geography come alive. Its interconnectedness with a range of other disciplines enables me to visualize holistic scenarios. In turn, this has led to a deeper understanding of what is at stake and many times enabling knowledge bridges to cross over to different themed projects. Most importantly, this brings the recognition that people’s aspiration for a better life are basically the same everywhere, together with the realization that writing reports and papers are of no consequence if the voices of the local community are not recorded. Moreover, it has allowed me to keenly observe that people’s relationship with the land changes in proportion to the distance of where they live... and evidently people living in rural areas are more in tune with the cycles of nature than those living in cities. All of these notions became manifest foremost when our company started adopting Public Participatory GIS, known as PPGIS. As I learned to adopt and adapt this approach, it enabled us to capture wide-ranging viewpoints. By and large, this crowdsourcing approach encourages participants to think spatially and to draw a vision of the land they live on. It empowers local communities, resurrects hidden and local tacit knowledge and their views of the world. Moreover, it fosters a new type of land and water governance through stewardship. In all of our work I always try to keep in front of me that we have the responsibility to be accountable to the seventh generation.”

**Anna Spiteri** is Managing Director at Integrated Resources Management Company Ltd., IRMCo, an environmental research company based in Malta



## The NEXT partnership looks forward to your participation in a Stakeholder Workshop on September 13, 2021



**Group photo of the NEXT Consortium in the tin / tungsten underground mine of Zinnkammern Pöhla, Germany, October 2018**

More about NEXT: [www.new-exploration.tech](http://www.new-exploration.tech)

