

Blockchain et Supply Chain : 2 annonces majeures d'IBM

VANCOUVER, B.C. et ARMONK, N.Y. - 16 janv. 2019: Les équipes d'IBM dévoilent deux projets dans la supply Chain : le premier, résultant d'un consortium avec Ford Motor Company, Huayou Cobalt, LG Chem et RCS Global vise à répondre aux préoccupations des chaînes d'approvisionnement stratégiques en minéraux. Dans le second, en collaboration avec MineHub, IBM annonce le recours à la blockchain pour introduire une solution de chaîne d'approvisionnement mondiale pour les mines et les métaux :

Ford Motor Company, Huayou Cobalt, IBM, LG Chem et RCS Global

Lancement d'un projet pilote de la supply Chain pour répondre aux préoccupations des chaînes d'approvisionnement stratégiques en minéraux

L'objectif est de créer un réseau ouvert à l'échelle de l'industrie pour tracer et valider les minéraux et autres matériaux destinés à l'industrie automobile et à l'électronique grand public. Les premiers travaux seront axés sur l'approvisionnement responsable en cobalt extrait industriellement.

Armonk, N.Y - 16 janvier 2019 : Engagés à soutenir les droits de l'homme et la protection de l'environnement tout en aidant à insuffler plus de transparence dans les chaînes mondiales d'approvisionnement en minéraux, Ford Motor Company, Huayou Cobalt, IBM, LG Chem et RCS Global ont annoncé leur intention d'utiliser la technologie blockchain pour tracer et certifier les minéraux issus d'un approvisionnement éthique.

MineHub Technologies collabore avec IBM pour introduire une solution de chaîne d'approvisionnement mondiale pour les mines et les métaux à l'aide de la technologie Blockchain

Goldcorp, ING Bank, Kutcho Copper, Ocean Partners et Wheaton Precious Metals collaborent avec MineHub dans le cadre d'une approche à l'échelle de l'industrie pour améliorer l'efficacité dans le secteur minier

VANCOUVER, B.C. et ARMONK, N.Y. - 16 janvier 2019 : MineHub Technologies, Inc. (" MineHub ") et IBM (NYSE : IBM) annoncent aujourd'hui une collaboration visant à utiliser la technologie blockchain pour améliorer

l'efficacité opérationnelle, la logistique et le financement et réduire les coûts dans la chaîne d'approvisionnement des concentrés minéraux à haute valeur ajoutée, de la mine à l'acheteur final.

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The group, which includes participants at each major stage of the supply chain from mine to end-user, will begin with a pilot focused on cobalt and explore the creation of an open, industrywide blockchain platform that could ultimately be used to trace and validate a range of minerals used in consumer products.

Cobalt is in high demand for its use in lithium-ion batteries, which power a wide range of products such as laptops, mobile devices and electric vehicles. According to a report from Morgan Stanley, by 2026, demand is expected to multiply eightfold, especially for its use in electric vehicles and consumer devices*. The typical electric car battery requires up to 20 pounds of cobalt and a standard laptop requires around one ounce of the mineral.

The blockchain pilot is already underway and seeks to demonstrate how materials in the supply chain are

responsibly produced, traded and processed. For this pilot based on a simulated sourcing scenario, Cobalt produced at Huayou's industrial mine site in the Democratic Republic of Congo (DRC) will be traced through the supply chain as it travels from mine and smelter to LG Chem's cathode plant and battery plant in South Korea, and finally into a Ford plant in the United States. An immutable audit trail will be created on the blockchain, which will include corresponding data to provide evidence of the cobalt production from mine to end manufacturer.

Participants in the network will be validated against responsible sourcing standards developed by the Organization for Economic Cooperation and Development (OECD).

Traditionally, miners, smelters and consumer brands rely on third-party audits to establish compliance with generally accepted industry standards. Coupled with these assessments, blockchain technology offers a network of validated participants and immutable data that can be seen by all permissioned network participants in real time. Blockchain can also be used to help network participants address their compliance requirements.

While the initial focus is on large-scale miners (LSMs), an important objective of the group is to help increase transparency in artisanal and small-scale mining (ASMs) and enable these operators to sell their raw materials in the global market, while they meet their internationally ratified responsibility requirements. The network can help enable ASM operators to partner with due diligence data providers and, ultimately, join a blockchain-based network of validated participants. The pilot will also explore the use of incentives or financial benefits for ASMs and their local communities impacted by mining.

Built on the IBM Blockchain Platform and powered by the Linux Foundation's Hyperledger Fabric, the platform is designed to be adopted across industry. The solution is built to allow interested parties of all sizes and roles in the supply chain easy access, including original equipment manufacturers (OEMs) across the automotive, electronics, aerospace and defense industries and their supply chain partners such as mining companies and battery manufacturers. Supply chain networks will be encouraged to join this open, industrywide network to trace and validate minerals upon successful completion of the pilot.

Work is expected to be extended beyond cobalt into other battery metals and raw materials, including minerals such as tantalum, tin, tungsten and gold, which are sometimes called conflict minerals, as well as rare earths. Focus industries for the solution include automotive, aerospace and defense, and consumer electronics. There are plans for a governance board representing members across these industries, to help further ensure the platform's growth, functionality and commitment to democratic principles.

The pilot is expected to be completed mid-year 2019.

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*Morgan Stanley Research. "One billion BEVs by 2050?" (May 5, 2017).

QUOTE SHEET

"We remain committed to transparency across our global supply chain," said Lisa Drake, vice president, global purchasing and powertrain operations, Ford Motor Company. "By collaborating with other leading industries in this network, our intent is to use state-of-the-art technology to ensure materials produced for our vehicles will help meet our commitment to protecting human rights and the environment."

"As a leading global battery material provider, we are proud to have an OECD Due Diligence Program and active community support initiatives in place linked to our operations in the DRC. This is central to our proactive approach to delivering ethical cobalt. We also want to have strong, reliable information channels to prove and demonstrate this action to our customers. This blockchain pilot is an interesting and potentially important next step in these efforts. We believe in transparency and a collaborative approach to improving production conditions in the DRC cobalt sector, leveraging the project to this end has huge potential," said Chen Hongliang, CEO of Huayou Cobalt.

"With the growing demand for cobalt, this group has come together with clear objectives to illustrate how blockchain can be used for greater assurance around social responsibility in the mining supply chain," said Manish Chawla, GM, Global Industrial Products Industry, IBM. "The initial work by these organizations will be used as a precedent for the rest of the industry to be further extended to help ensure transparency around the minerals going into our consumer goods."

"As a leading global battery supplier, LG Chem will be participating in this pilot to support our sustainable growth systems and corporate social responsibility efforts to enhance not only our product quality and performance, but also to improve processes for the procurement of raw material," said Jong-Hyun Kim, LG Chem Energy Solution President.

“As the validator of the network, we will bring our vast experience working on responsible sourcing at all stages of the supply chain at all times. Our collective effort allows participating companies to progress from human-led risk management to technology-led impact generation in a highly efficient and cost-effective manner. Augmenting crucial human expertise and experience, this is a demonstration of technology for good, empowering vulnerable communities and protecting the environment. We are proud to be a member of the network,” said Dr. Nicholas Garret, Group CEO at RCS Global

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Goldcorp Inc. (TSX: G), ING Bank (NASD: ING), Kutcho Copper Corp. (TSXV: KC), Ocean Partners USA Inc. and Wheaton Precious Metals Corp. (TSX: WPM) are working with mining technology company MineHub to build the new mining supply chain solution on top of the IBM Blockchain Platform.

The \$1.8 trillion* global mining and metals market has traditionally suffered from inefficiencies due to manual, paper-based processes and a lack of transparency between supply chain participants. Blockchain technology helps address this by providing a shared ledger to create a single, real time view of transactions and data across the supply chain that can be seen by all permissioned participants. Each of the participating companies represent key areas of the supply chain from mining, streaming, trade and finance.

“We are delighted to be working with some of the most forward thinking and innovative companies from each area of the mining and metals industry. By digitizing the supply chain, we can increase the level of automation, reduce reliance on intermediaries and increase the speed at which goods are transferred from miners to end buyers. This creates the opportunity for transformative efficiencies and cost reductions throughout all aspects of operations,” said Vince Sorace, Founder and CEO of MineHub. “This is a significant advancement for an industry looking to integrate and use data in ways not previously possible”.

The first use case will be built on the MineHub platform and will manage concentrate from Goldcorp's Penasquito Mine in Mexico throughout its path to market. When ore is mined, the mining company will upload data, including sustainability and ethical practices, allowing independent verification from regulators to end users as required. When materials are loaded for transport, the MineHub platform can record each transaction and allow permissioned parties to view and reconcile information throughout its journey. Smart contracts for supply chain processes such as trade finance, streaming and royalty contracts will be used by companies such as Wheaton Precious Metals and other institutions who provide credit facilities such as ING bank.

Arnout van Heukelem, Global Head of Metals and Mining at ING said, "As a global leader in banking in the metals and mining sector, we feel many of the operational challenges that our clients face. Blockchain has the potential to reduce or even overcome these, as shown by our pioneering work in energy with VAKT, in trade finance with Komgo and Voltron, and in the soft commodity sector. I am excited to be working together with MineHub and help our clients in metals and mining lower costs, increase transparency and contribute to sustainable production and trading."

The MineHub supply chain platform is built on the cloud-based IBM Blockchain Platform, powered by the Linux Foundation's Hyperledger Fabric. MineHub plans to expand the collaboration to additional members across the mining industry to encourage innovation and new applications using the technology.

"Blockchain technology can serve as the foundation for transforming entire business processes in the mining industry while creating greater transparency across the supply chain," said Manish Chawla, general manager, Global Industrial Products, IBM. "By bringing together stakeholders at different points across the mining and minerals supply chain, MineHub is building a platform that has the potential to bring new levels of efficiency and trust to the mining industry."

MineHub and IBM plan to work together to collaborate on new ways to scale and expand the platform, identify new use cases, and incorporate innovative technologies into the platform in the future.

About MineHub

MineHub (www.MineHub.com) is an innovative technology company developing a new generation of cost saving applications for the mining and metals industry. MineHub has established a consortium of leading industry partners including Goldcorp Inc., Kutcho Copper Corp., ING Bank, Ocean Partners USA Inc. and Wheaton Precious Metals Corp to build the MineHub platform which manages high value assets from mine to end buyer across the mining and metals supply chain. Built using Hyperledger Fabric in collaboration with IBM, the MineHub platform will bring automation, cost savings, enable greater security, transparency, auditability and efficiency among participants.

About IBM Blockchain

IBM is recognized as the [leading enterprise blockchain provider](#). The company's research, technical and business experts have broken barriers in transaction processing speeds, developed the most advanced cryptography to secure transactions, and are contributing millions of lines of open source code to advance blockchain for businesses. IBM is the leader in open-source blockchain solutions built for the enterprise. Since 2016, IBM has worked with hundreds of clients across financial services, supply chain, government, retail, digital rights management and healthcare to implement blockchain applications, and operates a number of networks running live and in production. The cloud-based IBM Blockchain Platform delivers the end-to-end capabilities that clients need to quickly activate and successfully develop, operate, govern and secure their own business networks. IBM is an early member of Hyperledger, an open source collaborative effort created to advance cross-industry blockchain technologies. For more information about IBM Blockchain, visit <https://www.ibm.com/blockchain/> or follow us on Twitter at @ibmblockchain.

* Marketline. Global Metals & Mining Industry Profile & Value Chain Analysis. May 2018.

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