



## PRESS RELEASE

# ANDRITZ wins #DisruptMining 2019 with innovative Digital Twin technology to train artificial intelligence

*GRAZ, MARCH 11, 2019.* International technology Group ANDRITZ is the winner of the prestigious #DisruptMining 2019 innovation contest hosted by Goldcorp Inc. ("Goldcorp"). After a final round of presentations to a panel of industry experts and in the face of tough competition, ANDRITZ impressed the judges with the innovative use of its worldwide proven IDEAS Digital Twin technology to train artificial intelligence (AI) for autonomous operation of mineral processing facilities.

### ANDRITZ's winning AI innovation

The basis of this innovation is ANDRITZ's simulation software IDEAS, which is used to build a virtual "twin" of a processing plant as a fully dynamic model. With the Digital Twin, customers are able not only to optimize plant operations but also to train their operators. Sohail Nazari, ANDRITZ Automation's business development manager, says: "We thought, if we're able to build training simulators so accurately that they can train operators, why not use the same environment to train artificial intelligence?"

So ANDRITZ developed a Digital Twin of an entire mineral processing operation and created a safe, virtual environment in which AI can make changes, observe the consequences and update its priorities. Over many iterations, it learns the best operating points, how to start up and shut down, how to process minerals and optimize production, and how to respond to abnormal and emergency situations. Once fully trained, the AI can be integrated into real-time operation.

The result is a piece of software that takes over error-prone or repetitive tasks from human operators so that the plant runs at its best operating point, with more consistent production and fewer safety or environmental risks. AI can quickly process information and recommend data-driven solutions that improve the mineral processing operation and assist with plant-wide optimization.

The AI training concept was developed by a team of ANDRITZ control engineers who had previously entered a company-internal innovation contest. As the winners, they were given funding for a prototype and the opportunity to focus on developing the new technology. The recent win at #DisruptMining will enable them to carry the concept further. "At the moment, our artificial intelligence has only run in a simulated environment," says Nazari. "With Goldcorp's support, we will be able to take the important step from the laboratory to the plant."



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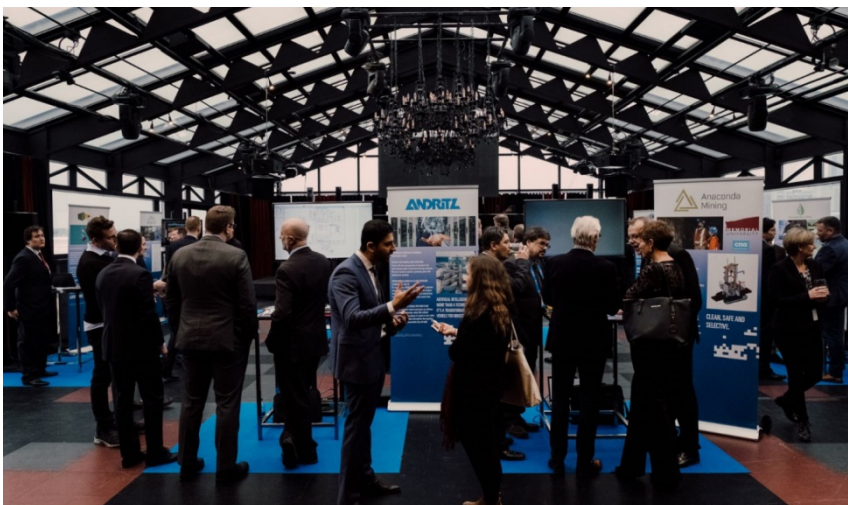
### About #DisruptMining

Now in its third year, #DisruptMining provides a platform for entrepreneurs to showcase disruptive and exponential technologies that have the potential to accelerate innovation in the mining industry. From approximately 90 submissions, six semi-finalists and three finalists were chosen.

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Left to right: Arthur Gooch, Director of Innovation, ANDRITZ;  
Sohail Nazari, Business Development Manager, ANDRITZ  
(Photo source: Goldcorp Inc.)



Finalists and semi-finalists present their concepts.  
(Photo source: Goldcorp Inc.)



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### **PRESS RELEASE AND PHOTO AVAILABLE FOR DOWNLOAD**

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### **FOR FURTHER INFORMATION, PLEASE CONTACT**

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### **ANDRITZ GROUP**

ANDRITZ is an international technology group providing plants, systems, equipment, and services for various industries. The company is one of the technology and global market leaders in the hydropower business, the pulp and paper industry, the metal working and steel industries, and in solid/liquid separation in the municipal and industrial segments. Other important fields of business are animal feed and biomass pelleting, as well as automation, where ANDRITZ offers a wide range of innovative products and services in the IIoT (Industrial Internet of Things) sector under the brand name of Metris. In addition, the company is active in power generation (steam boiler plants, biomass power plants, recovery boilers, and gasification plants) and environmental technology (flue gas and exhaust gas cleaning plants) and offers equipment for the production of nonwovens, dissolving pulp, and panelboard, as well as recycling plants.

A passion for innovative technology, absolute customer focus, partnership, reliability, and integrity are core values to which ANDRITZ is committed. The listed Group is headquartered in Graz, Austria. With almost 170 years of experience, 29,000 employees, and more than 280 locations in over 40 countries worldwide, ANDRITZ is a reliable and competent partner and helps its customers to achieve their corporate and sustainability goals.