Real-Time Location System

This project aims to build a positioning system that will provide location information for assets in an underground environment to within 30 cm of actual. The accrued benefits of this type of technology will touch on safety, process optimization, and automation. This project will build a prototype mesh network of beacons that can automatically position themselves within the mesh. These beacons will be able to transmit both data and positioning information throughout areas of an underground mine. Mobile mining equipment and various kinds of vehicles will be trackable by positioning beacons within the mesh. In the case of mining equipment such as a boring machine, this positioning data in combination with other data being collected while mining can be used to better forecast developing hazards at the mining faces. Significant safety data is collected at the mining face but real-time data driven decisions are not possible because the position of this data is not known until surveyors provide location information. With such technology it may be possible to implement a real-time geotechnical hazard warning for supporting safer production in underground mining.

PROJECT INFORMATION:

Proponent: Saskatchewan Polytechnic

Project Duration: March 2019 to February 2021

Project Cost:	**$**584,500
IMII Contribution:	$260,780
NSERC Contribution:	$270,500
Industry In-Kind:	$ 53,220