

Building bridges to success: IMII and post-secondary education

BY RYAN L. HALL, THE LEADER-POST MAY 24, 2014

There is no question that the mineral extraction industry is an integral part of Saskatchewan's economy, with a variety of resources helping to fuel and drive the growth of the province. As the benefits of mining continue to be felt, there is also a growing awareness that the path forward includes preparing for the opportunities of the future. In order to achieve this goal and ensure Saskatchewan is ready, the International Minerals Innovation Institute (IMII) has been working hard to build bridges between industry, education, and research.

Formed in 2012, IMII is a non-profit organization that was founded to help enhance innovation and research, attract and retain skilled people, serve as a catalyst for industrywide education and research, as well as deliver sustained capacity expansion through education and training, and research and development. Such lofty ambitions, particularly in regards to education, have resulted in IMII adopting a coordinating role that involves providing information, advice and, in some cases, funding to institutions that are interested in mineral field training or research. Practically, this can take on many different forms, but as Engin Ozberk, executive director and Senior Technical Advisor of IMII, said, "At its core, this is about a desire to help in bridging the gap that can exist between industry and education, and doing so in a way that is beneficial to both parties."

Overall, IMII works hard to align the interests and needs of the mineral and extraction industry with the realities faced by postsecondary institutions. Organizationally, this means providing representatives from the six-member large corporations (Agrium, BHP Billiton, Cameco Corporation, K+S Potash Canada GP, Mosaic Potash, and Potash Corp), and those from post-secondary institutions within Saskatchewan the chance to dialogue and communicate with each other - something that can lead to much larger partnerships. "What we want to do," said Ozberk, "is help both sides realize the shared goals they have."

To that end, IMII also functions as a middleman that receives and presents research and development proposals. For their part, member organizations are free to pick and choose which projects they support using two different schemata: a majority-rules set-up for education and training projects or a "payto-play" where member companies who are interested in a research and development project are responsible for 75 per cent of the funding, though only those who provide funding are allowed a say in that particular project. In both cases, a share of the cost falls to IMII itself as it contributes 25 per cent of the funding in research and development projects, and full value for education and training initiatives. These systems provide a direct connection between industry leaders and educational or research centres, as well as fosters communication and cooperation among all the parties involved.

One example of the way IMII is working to coordinate industry and education lies in their advocacy of expanding, or creating, programs that offer training for the mineral extraction industry. "In the past, Saskatchewan found itself crucially short of highly skilled workers when they were most needed" Ozberk explained "and that resulted in some missed opportunities." To ensure that doesn't happen again, IMII has been working with postsecondary schools to increase the number and volume of programs that are offered all across the province. Even though casting such a wide net can be time consuming, Ozberk said that it is crucially important as "the need isn't just for one program, or a certain degree; what we need is more training and education at all levels."

However, this approach is about far more than readying the province for an upswing in the mineral extraction market. Rather, by increasing the number, quality, and volume of educational programs available, people all across the province can have access to opportunities they might not otherwise have. "One of our main goals is to make sure that we include as many post-secondary institutes as possible Ozberk, "so that we can help them provide local options that can bring people from all over the province into this industry."

Despite this, budget concerns and limitations remain legitimate concerns for many institutions, and that is where the coordination aspect of IMII's mandate comes into play. Often the money is simply not there to hire new staff members or purchase training equipment, unless outside help is provided. In these cases, IMII takes proposals from schools and presents them to its membership board with the hope that partnerships can be formed between the parties. When this succeeds, what follows is the creation of new programs that are tailored to meet the needs of both groups - programs that are focused on providing students with practical, useful and applicable education.

Such a situation recently arose at the University of Saskatchewan, where a movement is underway to provide mineralsindustry-specific training within the Faculty of Engineering, actions which may result in the resurrection of the Bachelor of Mining Engineering degree.

However, at least three new faculty members would be required and the cost of hiring them stood as a major obstacle to this goal. This prompted IMII and its members to step up to the plate with the dollars required. "Situations like this show just how important that partnership can be," said Ozberk, "and how the industry and post-secondary institutions can work together."

Beyond funding though, Ozberk and IMII believe that growing educational programs is also beneficial to the post-secondary schools themselves, as it brings new people and ideas into the fold. Not only can this lead to increased enrollments but, in certain cases, it can also open up new opportunities for the institution itself as quality staff members can have a trickle-down effect on all facets of a program. "Once again, an example can be found within universities, where they are continually searching for the best faculty members possible, since these individuals provide top quality education, increase the prestige of the school, as well as attract new students at the undergrad, and graduate level," said

Ozberk.

However, in order to attract these individuals, there is also the expectation that ample research opportunities will be provided, and that meshes well with another of IMII's goals: to serve as a catalyst for industry-driven research and development. Once again, by using proposals and the pay-to-play method, industry and education are able to partner together to fund research initiative that meet the needs of both groups and produce new ideas and innovations that benefit the province as a whole.

An example of this is a joint study by the University of Saskatchewan and SIAST on safety in the mining industry, which has already received nearly \$800,000 in funding for Phase 1 alone. This multi-step project, which is supported by all six IMII members, seeks to review safety programs of these organizations from a multi-disciplinary viewpoint, before continuing on to the next phase featuring recommendations for industry improvement. Remarkably, this project was originally conceived by a graduate student at the university, who wanted to ensure that her many family members and friends who work in the minerals extraction field would have the best chance possible of coming home safely. "This just highlights how practical and locally flavoured IMII's work is," said Ozberk, "and how powerful these partnerships can be."

In the end, IMII believes that the way forward lies in continuing to build the connections between the mineral extraction industry and post-secondary institutions - to the betterment of both parties. "In the end, both sides are concerned with the same thing," said Ozberk, "sustaining and expanding the growth of Saskatchewan."

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