

PROGRESS

Building on the commitment from Industry Members to renew their membership in IMII for the years 2017 to 2019, we are pleased to report the following progress in 2017:

- ◆ **The** Government of Saskatchewan committed \$1.2 Million for the 2017-18 fiscal year – a commendable result which we believe reflected the renewed commitment from our industry members.
- ◆ **IMII's** Research & Development project development process was completely retooled this year. AIMDay™ Minerals 2017, the first such event undertaken for the minerals industry in North America, was held in March and helped us renew our process. It worked very well in terms of identifying industry needs, first and foremost, and then we could identify resources to undertake projects around those needs. In December, following a review of project proposals, IMII's Board of Directors approved three new industry-driven projects.
- ◆ **The** framework for research, development and demonstration projects has also changed significantly. The earliest IMII R&D projects, going back to its initial years, tended to have a wide span and be quite lengthy in duration. That has changed with a strategic focus on projects that feature short time frames and narrow scope. With this, IMII is reacting to industry conditions, we believe, in much the same way as its Member Companies.
- ◆ **IMII** followed a similar path for the identification and selection of its Education & Training projects. Under IMII's Diversity & Inclusion Challenge Program, another first for our industry, top-priority objectives were first identified by Industry Members, after which we moved on to their refinement, followed by the identification of specific programs designed to increase the number of Indigenous people and women in the minerals workforce. Five projects were approved by the Board of Directors, and we are very encouraged by the focus of the projects, designed to address some long term human resource priorities for the industry.



- ◆ **IMII** continues to drive down its administration costs, leaving the maximum amount of financial capacity available for projects. This commitment to achieving more with less is, in our opinion, simply doing the same thing that our Members are doing considering current and immediate-term industry conditions.

KEY EVENTS

- ◆ **Innovation** Enterprise and the International Minerals Innovation Institute (IMII), in collaboration with the University of Regina and Saskatchewan Polytechnic, jointly hosted [™AIMday Minerals 2017](#) on March 22, 2017 in Saskatoon – the first AIMday in North America. AIMday Minerals 2017 was attended by 20 industry representatives from 5 of IMII’s mining member companies who met 39 researchers to find pathways to solutions for specific R&D challenges, and led to three new R&D projects.
- ◆ **On** May 2nd, IMII released its first ever Diversity & Inclusion Challenge Program – the responses to this program resulted in five new E&T projects.
- ◆ **IMII** held its 4th Annual “Let’s Talk Minerals” and featured three speakers under the theme of innovation through the right systems (Andrew Swart, Deloitte – Driving Innovations Through Ecosystems”), technology (Mike McClelland, Cameco – Absolving Data: Purpose, Passion, Perseverance and Productivity), and culture (Lana Elias, University of Saskatchewan – PotashCorp Kamskénow: A Learning Journey in Cultural Responsiveness).
- ◆ **The** Diversity & Inclusion Challenge Program was featured in the article “Opening New Doors” in the Canadian Mining Magazine in October and in the article “Closing the Gap” in a special edition of The Leader Post and The Star Phoenix in November.
- ◆ **In** December, IMII announced a new awards program to recognize outstanding innovations of benefit to Saskatchewan’s minerals industry – the Best Prototype Award was given for the first time on the eve of the 10th Annual Saskatchewan Mining Supply Chain Forum in April 2018.



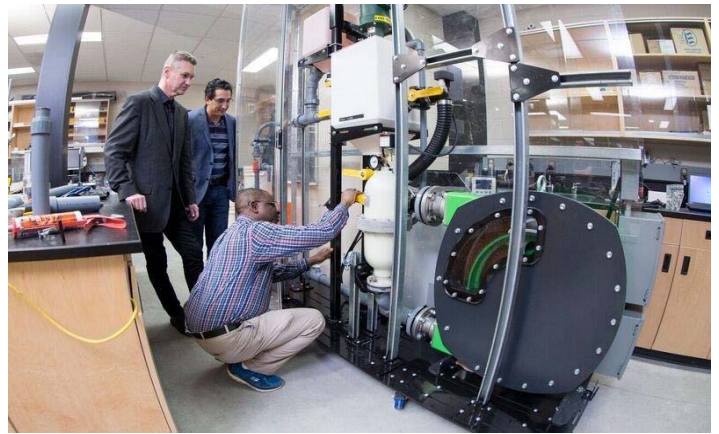
In 2016/2017 there were:

- ◆ 6 levels of programming
- ◆ 13 weekly hands-on science and math activities
- ◆ 16 Science Outreach Instructors
- ◆ 50 classrooms (1204 students + 51 teachers + 44 EAs)
- ◆ 16 community schools

“Let’s Talk Minerals!” keynote speaker
Lana Elias, University of Saskatchewan

PROJECT HIGHLIGHTS

- ◆ **The** Healthy Workplace for a Healthy Workforce project kicked off in January 2017
- ◆ **The** four projects under the Mining Materials Research Cluster – Stress Corrosion, Corrosion Inhibitors, Concrete Corrosion and Slurry Erosion Corrosion, all completed the installation of new laboratory equipment – funded in part by Western Economic Diversification, and moved into the testing phase
- ◆ **The** Slurry Erosion Corrosion and Corrosion Inhibitors projects were both approved for Mitacs funding
- ◆ **The** Concrete Corrosion project demonstrated a first – the ability to image the surface of steel rebar beneath its polymer coating, using a special beamline available at the Canadian Light Source, allowing for a new understanding of how such rebar corrodes in potash mines and mills



New Laboratory Equipment
Photo courtesy of University of Saskatchewan

- ◆ **Field** testing of fibre optic instrumented rock bolts started and completed on time and budget in the Rebar Shear project
- ◆ **The** second set of graduates convocated from the College of Engineering with degrees and Mining Options in Engineering, including the first Indigenous graduate with a mining option in engineering
- ◆ **The** Saskatchewan Geological Short Course project concluded and resulted in a new online resource being available to students and industry professionals



- ◆ **Northlands** College officially opened its Mine School in Air Ronge, and entered into an agreement with the University of Saskatchewan's College of Engineering and College of Arts & Sciences to establish the Pre-Engineering and Science (PRES) program to help transition northern and Indigenous students into university

Mine School Grand Opening
Photo courtesy of Northlands College

PROJECT HIGHLIGHTS

- ◆ **Cumberland** College started a new pre-apprenticeship program with 12 students, seven of whom were Indigenous
- ◆ **On** behalf of its member companies and Innovation Saskatchewan, IMII's Board of Directors approved the winners under its first-ever \$1 million Diversity & Inclusion Challenge which focuses on increasing the number of women and Indigenous people in the mining sector's workforce. They are:
 - ◆ North Rim / RESPEC for Girls in the Classroom: Unearthing Career Opportunities in Mining
 - ◆ Women In Mining / Women in Nuclear SK: Mine Your Potential Mentorship Program
 - ◆ University of Saskatchewan College of Engineering: Indigenous Student Success Program
 - ◆ Saskatchewan Mining Association: Junior & Indigenous Youth First Responders Boot Camp
 - ◆ Saskatchewan Mining Association: Indigenization of Mineral Resource K-12 Lesson Plans & Pilot Camps
- ◆ **IMII's** Board of Directors also approved four new research, development and demonstration projects in 2017. They are:
 - ◆ Investigation of Polymeric Reagents for Potassium Chloride Collection During Potash Flotation: University of Regina
 - ◆ Preliminary Quantification of Scaling Bar Impacts for Underground Mine Safety: University of Saskatchewan
 - ◆ Enhancing Mine Safety and Accuracy Through Underground Ultra-Wideband Positioning System: Saskatchewan Polytechnic
 - ◆ Cigar Lake New Concept Mining Yielding Bolt Test Trial: Cameco Corporation and The Mosaic Company



Photo courtesy of K+S Potash
Canada



Photo courtesy of Innovation Enterprise

BOARD, PANELS AND PROJECTS

IMII extends its thanks to the following individuals for their contributions in 2017 to the governance and activities of the IMII:

Board of Directors

Mike Dirham (Finance & Audit Committee), Agrium

Christopher Ryder (Finance & Audit Committee), BHP

Noel Voykin, Cameco

Eric Cline (Governance, Nominations & Human Resources Committee), K+S Potash Canada

Tom Olson, Mosaic Potash

Mark Fracchia (Governance, Nominations & Human Resources Committee), PotashCorp

Lola Piché, North Rim Exploration

Tammy Bloor Cavers (Finance & Audit Committee), Advanced Education

Kari Harvey, Innovation Saskatchewan

Jessica Theriault, Saskatchewan Mining Association

Dwayne Reeve, Parkland College

Larry Rosia, Saskatchewan Polytechnic

David Malloy (Governance, Nominations & Human Resources Committee), University of Regina

Karen Chad (Governance, Nominations & Human Resources Committee), University of Saskatchewan

Panels

Education & Training

Brandi Tracksell, Agrium

Sean Junor, Cameco

Lisa Poissant, Mosaic Potash

Deb Shewfelt, North Rim Exploration

Andy Melnyk, Innovation Saskatchewan

Tom Weegar, Cumberland College

Toby Greschner, Northlands College

Melanie Roberts, North West Regional College

Karen Rosser, Saskatchewan Literacy Network

Jamie Hilts, Saskatchewan Polytechnic

Esam Hussein, University of Regina

Ken Cenaiko, SIMSA

Joanne Baczuk, SREDA

Trevor Smith, BHP

Maryann Deutscher, K+S Potash Canada

Aaron Fornwald, PotashCorp

Alexandra Foster, Advanced Education

Shelley Romanyszyn-Cross, Carlton Trail College

Lynn Wells, First Nations University of Canada

Randy Johns, Northlands College

Dwayne Reeve, Parkland College

Pamela Schwann, Saskatchewan Mining Association

Gordon Graham, SIIT

Bruce Sparling, University of Saskatchewan

Alex Fallon, SREDA

BOARD, PANELS AND PROJECTS

Research & Development

John Sundquist, Agrium

Martin Wacker, Cameco

Murray Schultz, Mosaic

Lola Piche, North Rim Exploration

Jeff Cutler, Canadian Light Source

Larry Jorgenson, PAMI

Susan Blum, Saskatchewan Polytechnic

Eric Anderson, SIMSA

Joanne Baczuk, SREDA

Kevin Schneider, University of Saskatchewan

Joe Gosselin, BHP

Marcel Mueller-Goldkuhle, K+S Potash Canada

Craig Funk, PotashCorp

Andy Melnyk, Innovation Saskatchewan

Chris Barker, Genome Prairie

Karen Rosser, Saskatchewan Literacy Network

Craig Murray, Saskatchewan Research Council

Alex Fallon, SREDA

Esam Hussein, University of Regina

Steering Committees & Project Teams

Agrium

Cory Laferriere, Patrick Kurtz, Mike Bartsch, Jennifer Nicolay Lawlor and Darren Neely

BHP

Joe Gosselin, Thomas Bradt and Kimm Barker

Cameco Corporation

John Takala and Chris Twiggs

K+S Potash Canada

Marcel Mueller-Goldkuhle and Colin Braithwaite

Mosaic Potash

Kathlene Jacobson, Ben Zettl, Jarid Hancock, John Unrau and Dean Gerhardt

PotashCorp

Jeff Meadows, Sultan Mahmood, Craig Funk, Donovan Hebig, Tanner Soroka and Cole Smith

Saskatchewan Polytechnic

June Anonson, Madeline Press and Chau Ha

University of Saskatchewan

Wonjae Chang, Joyce McBeth, Blain Paul, Richard Evitts, Andrew Grosvenor, Ian Burgess, Akindele Odeshi, Ikechukwuka Ogoucha, Valery Chirkov, Jade Anderson, Angie Gerrard, Grant Ferguson, Matt Lindsay, Jim Hendry, Bruce Eglington, Chris Hawkes, Doug Milne, Donna Beneteau, Paul Hughes, Lisa Feldman and Garret Snell

University of Regina

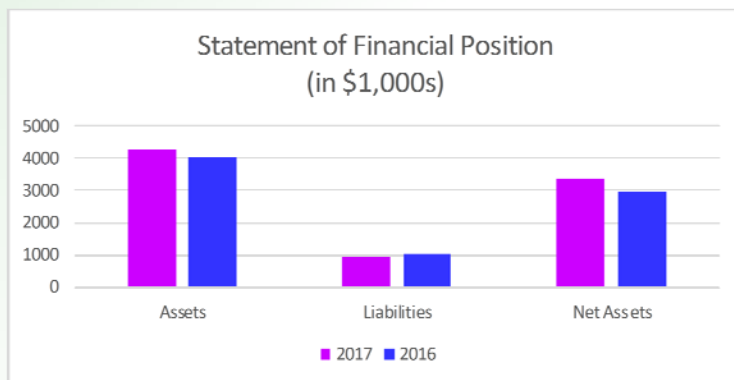
Amy Veawab

Canadian Light Source

James Dynes and Jeff Cutler

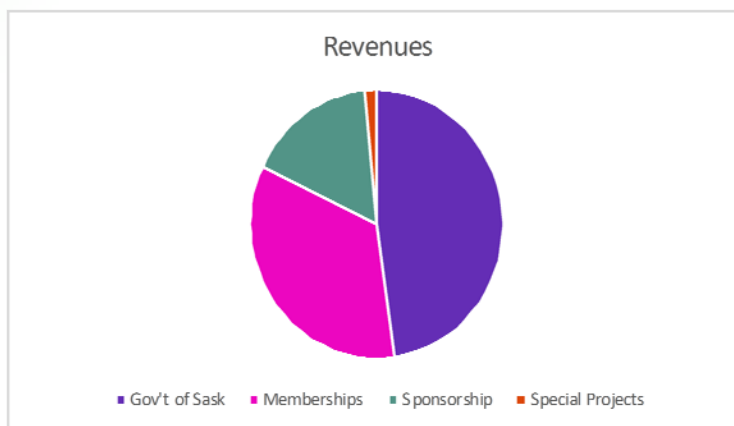
FINANCIAL HIGHLIGHTS

Improved Financial Position



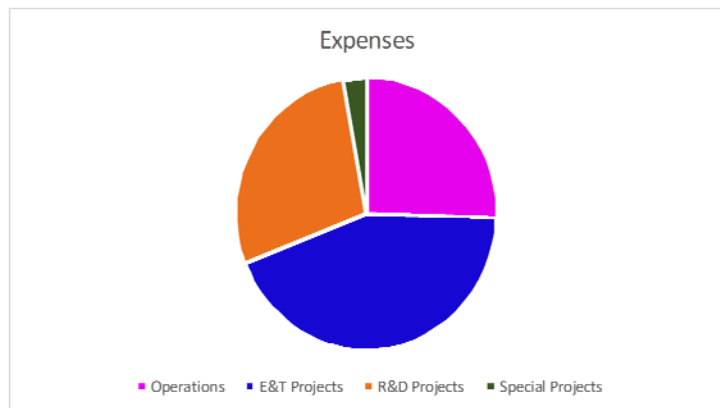
- * \$1.8 million of IMII's net assets at the end of 2017 was committed to fund approved projects in 2018 and 2019, and to maintain a reserve should the organization need to be wound down
- * \$1.5 million was available to fund new projects

Sources of Revenues



- * The Government of Saskatchewan, through Innovation Saskatchewan, contributed \$1.2 million to support IMII's operations and projects
- * IMII's industry members contributed \$700,000 in memberships and nearly \$300,000 to projects

Expenses Focussed on Projects, Not Operations



- * For the 5th straight year, IMII's expenses associated with IMII's operations decreased in both actual terms and on a percentage basis
- * In 2017, 75% of IMII expenses were tied to projects

PARTNERS

Our Members

Minerals Companies – “Company A” Category

Agrium
BHP
Cameco Corporation
K+S Potash Canada GP
Mosaic Company
Potash Corporation of Saskatchewan

Supply Chain Companies

New Concept Mining – new in 2017
North Rim Exploration

Government of Saskatchewan

Innovation Saskatchewan
Ministry of Advanced Education

Post -Secondary Educational Institutions and Research Providers

Canadian Light Source	Carlton Trail College
Cumberland College	First Nations University of Canada
Genome Prairie	North West Regional College
Northlands College	Parkland College
Prairie Agricultural Machinery Institute (PAMI)	Saskatchewan Indian Institute of Technologies (SIIT)
Saskatchewan Polytechnic	Saskatchewan Research Council (SRC)
University of Regina	University of Saskatchewan

Associates

Saskatchewan Industrial & Mining Suppliers Association Inc. (SIMSA)
Saskatchewan Literacy Network
Saskatchewan Mining Association (SMA)
Saskatoon Regional Economic Development Authority (SREDA)
Women in Mining and Women in Nuclear Saskatchewan Inc. (WIM/WiN-SK) – new in 2017

Our Funders

In 2017, IMII enjoyed project funding support from Innovation Saskatchewan, Mitacs Elevate Postdoctoral Fellowship program, and the Natural Sciences and Engineering Research Council’s Engage and Collaborative Research Development programs.



Photo courtesy of Nutrien