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of Engineers
Geoscientists
Manitoba

THE KEYSTONE PROFESSIONAL

AUTUMN 2020



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A Message of Gratitude – To All Volunteers

Early in my career, I was fortunate to work with some of our very prominent senior members who encouraged me to volunteer and become involved in the various activities of our Association. As I witnessed the dedicated volunteerism of these members giving back to the community, it inspired me to do my part. And the rest is history. Therefore, through my last ceremonial presidential message, I would like to express my sincere gratitude to all volunteers whose hard work and dedication have helped us achieve the highest level of regulatory excellence.

Even though the Association exists to enforce the Act enshrined in provincial legislation, a large portion of its activities are shouldered by unpaid volunteers. It is quite a remarkable feat that has been lauded by, and at the same time, confounded, many auditors and reviewers of such governance models. However, to engineers and geoscientists, teamwork and sharing responsibilities come naturally as part of their training. The process of registration also tries to imbibe these values, via the requirement of volunteer service. Beyond that, and upon registration, all it takes is a bit of encouragement and mentorship for members to continue to pay it forward.



It seems incredible that in a blink, my year as President is going to be over soon. The encouragement, support, and inspiration I've received have been uplifting and rewarding.



From my personal experience, I can say that senior members, both practising and retired, have the most important role to play when it comes to motivating younger professionals. Their years of experience, professional wisdom, and institutional knowledge are an invaluable resource to guide us into the future. That is why, in the face of the current debate on membership categories, we have tried our best to keep the senior members engaged, so that we can incorporate their input into our final decisions. These members serve as role models, instill a sense of pride, and inspire fresh recruits to help the professions grow.

Other groups worthy of my gratitude are the regional and ethnic chapters. Over the years, these chapters have taken the role of providing informal support to their

respective members. A very large number of our interns and members work tirelessly to mentor foreign-trained newcomers and help them with information, social support, and networking opportunities that the Association is not able to provide. These chapters fill that void and play an important role in helping new practitioners to become registered professionals.

Last, but not least, are the councillors who sacrifice significant personal family time and work in the background to keep the wheels of the Association spinning. I've been fortunate to have a very forward-thinking and hard-working council support me through my year of presidency. All the new and continuing initiatives that we've worked on in the past year wouldn't have been possible without the support of these passionate selfless individuals.

It seems incredible that in a blink, my year as President is going to be over soon. The encouragement, support, and inspiration I've received have been uplifting and rewarding. One day, when I hope to be in the distinguished category of senior members, I'll fondly look back in the rear-view mirror of life at all these years volunteering on the front lines. In thanking all of you, I would like to quote Winston Churchill's words – *We make a living by what we get, but we make a life by what we give.* ⊕



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Refocusing Post-Pandemic

Looking back over the winter, spring, and summer, many newsworthy events took place. Early in the new year, deadly bushfires were burning up Australia. Iran mistakenly shot down Ukraine International Airlines Flight 752. Donald Trump became the third President of the United States to be impeached, and the world went into lockdown due to the COVID-19 pandemic. In late spring, the tragic death of George Floyd sent protestors to the streets in major cities across the United States and Canada. Conversely, many events did not take place. The NHL hockey season was a bust; no basketball, baseball, football, or summer festivals. The Association's plan for a year-long Centennial celebration was cancelled one event at a time. Physical distancing has changed our daily routines and plans for back to school, work, and community interactions.

Focus Groups

Last winter, before the pandemic began, Probe Research hosted two focus groups for Engineers Geoscientists Manitoba. The purpose was to hear from members on the role of the Association concerning member services, and particularly, services for those entering retirement. Members were recruited via telephone using a custom screening tool and a reduced member data set provided by the Association. A total of 10 participants per group were recruited. The first group was comprised of younger and early/mid-career professionals; the second group was comprised of older/senior and retired members. Both groups included men and women across all industry sectors. Sessions were hosted at a dedicated focus-group facility in Winnipeg.

We Heard from You

In addition to many comments on by-laws, governance, and personal career highlights, both groups expressed the need to create opportunities for engagement of those entering the profession as well as for those leaving. The main theme that emerged was the need to create or maintain avenues for retired engineers and geoscientists to remain engaged in the profession and offer their expertise and mentorship to younger members. Preserving and making use of that expertise was a solution expressed clearly by both groups. One younger member boldly said, "That is the big issue – transferring knowledge. If you invite some older engineers, they will teach you in a practical way". Another said, "Someone who is retired may still want to give back to the profession and volunteer and serve in different capacities".

Mentoring Others

It's not something many think about – mentoring others. The Association, in partnership with ACEC Manitoba, Friends of Engineering, and the Price Faculty of Engineering, has seen great success with the Women in Engineering and Geoscience Mentorship Program; connecting professionals, interns, and students. A lot can be learned from this program and I think the time has come to do more in this area to offer mentorship to more practitioners.

Giving advice, support, and guidance to a new professional is rewarding. There is no better way to welcome others into the profession than to walk with them as they begin their careers. Many are coming to Canada after years of practice in another country. Welcoming newcomers is another

necessary form of mentoring. Half of all applicants to Engineers Geoscientists Manitoba are from outside Canada. Help with networking, job searching, communication skills, and adjusting to the idiosyncrasies of a new culture are just a few of the things mentors can provide to new professionals.

Mentoring Centre

Engineers Geoscientists Manitoba occupies both floors of the building at 870 Pembina Highway. Some of the second-floor space has been developed into meeting rooms and offices, while about half of the space is available for a redesign. Manager of Operations Angela Moore is working with Ideate Design Consulting to develop a plan for a multifunctional workspace. Some of the ideas being considered would include shared workspace, collaboration areas, seminar rooms, and a hospitality centre. There is a vision to provide a highly functional space where applicants, members, interns, and students can access Wi-Fi, resources, and support services for their stages of career development. One-on-one and group mentoring sessions would be offered, in addition to professional development seminars on a variety of topics.

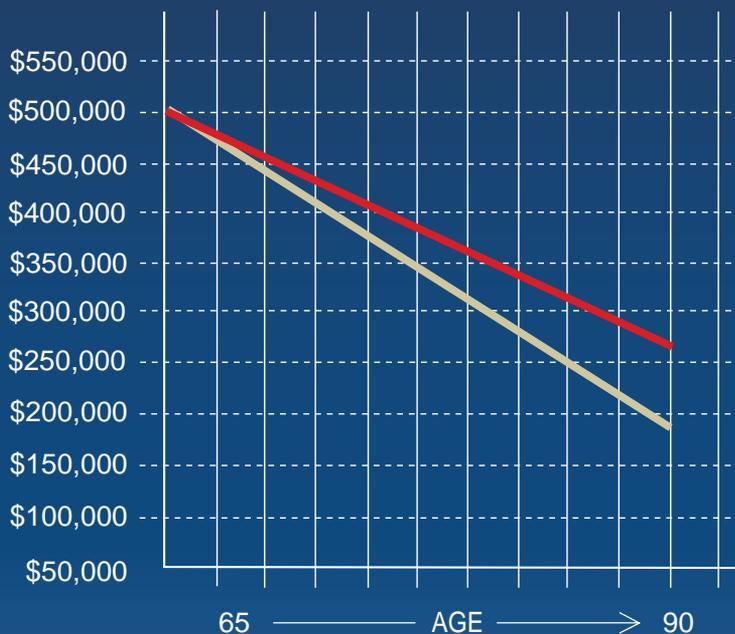
Based on what the focus groups have told us, I am asking all members to consider participating in a formal mentoring program. The future of engineering and geoscience depends on welcoming new professionals and getting them up to speed and integrated into the marketplace of Manitoba. Watch for more details as they become available.

Your feedback is welcomed. If you have any ideas on this topic or others, please email me at GKoropatnick@EngGeoMB.ca. Have a great day! ☺

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Manitoba Trailblazers – Engineers and Geoscientists Make Our Lives Better



Mpho Begin is passionate about healthcare technology and how it helps improve people's lives.

Her curiosity uprooted her from a rural

village in Botswana to Canada, where she graduated with a master's degree in computer engineering from the University of Manitoba. She is using her skills in the medical device industry, ensuring medications are prepared

safely for patients all over the world. She is also an entrepreneur developing an innovative mobile health platform and has a vision of patients receiving the care they need regardless of their location. She believes in paying it forward and volunteers with various organizations in the community, including Immigrant and Refugee Community Organization of Manitoba (IRCOM), Grace Hospital Foundation, and George and Fay Yee Centre for Healthcare Innovation (CHI).



Christian Böhm grew up in Switzerland where he developed an early passion for exploring the outdoors. This led him to

study geology at ETH Zurich (Swiss Federal Institute of Technology-Eidgenössische Technische Hochschule). He used a research grant from Switzerland to do post-doctoral research and teach at the University of Alberta, which included dating of rocks for the Manitoba Geological Survey. Through this work, he got to know Manitoba geology and geologists and decided to join the Manitoba Geological Survey in 2002, knowing he would never run out of exciting geology in Manitoba. As the Chief Geologist, Christian oversees the government's geoscience program. His focus has primarily been on the early evolution of Manitoba, with a geological record going back nearly four billion years!



Alanna Gray joined Precision ADM as a Quality Lead Engineer after completing a mechanical engineering

degree at the University of Manitoba. Precision ADM manufactures medical, aerospace, and industrial components, but Alanna focuses on medical device manufacturing. One of her responsibilities is creating and executing validation plans, a role in which she works closely with clients, subcontractors, and



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regulatory bodies. She plays a critical role in obtaining regulatory approval and ensures all products meet customer and regulatory specifications. Alanna is proud to be part of the team developing products in the fight against the COVID-19 pandemic. Read more about Precision ADM's efforts during the pandemic on page 13.



Albert Fia was born in Lethbridge, Alberta in 1915. After serving overseas with the Canadian Army during the Second World War, he earned a master's degree in engineering at the Royal Military College of Science. In 1958, he resigned his commission with the army to become the new director of Bristol Aerospace's rocket division in Winnipeg, where he would design the Black Brant rocket. In 1981, shortly after his retirement as Vice-President of Bristol, Albert was presented with a NASA Public Service Medal, he was the first person outside of the United States to receive the honour. Known as the Father of Canadian Rocketry, he died in 2004.



Karen Mathers Born and raised in Winnipeg, Manitoba, Karen Mathers holds a master's degree in geological sciences from the University of Manitoba. She has spent the last 22 years working in environmental consulting. As a Principal with Stantec Consulting Ltd., she currently manages the operations of the Environmental Services Group in Manitoba and the Environmental and Engineering Services Group in Thunder Bay.

A big believer in safety, quality, and collaboration/teamwork, Karen loves the diversity of consulting and leading multidisciplinary teams to successful project outcomes for clients.



Dario Schor has been following the RADARSAT Constellation Mission through the design phase, launch,

commissioning, and operations. He started as a summer student at Magellan Aerospace, then joined as a full-time engineer working on flight software. More recently, he moved to Montreal for a two-year Interchange Canada position, supporting satellite operations at the Canadian Space Agency. His goal is simple – learn about the challenges of day-to-day operations,

so that, upon returning to Manitoba, he can apply those lessons to build the next generation of satellites that will keep Canada safe and at the forefront of scientific research.

Know someone you would like to suggest as a Manitoba Trailblazer? Submit their name and story to DWawryk@EngGeoMB.ca. ☎

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Manitoba Companies JOIN THE FIGHT to Eliminate COVID-19

By R. Lewis

The rumblings began back in December 2019 about a potentially deadly virus devastating Wuhan, the capital of China's Hubei Province. For many of us, it seemed worlds away from our realities, and so it became nothing more than just that: rumblings. As the world ushered in the new year, those rumblings seemed to get a little louder and a little closer to our doorsteps with Canada announcing its first case of the novel coronavirus in Toronto on January 25, 2020. Even then, the atmosphere here in Winnipeg in particular, and the rest of Manitoba at large seemed – for the most part – relaxed. That all changed on March 12, however, when Manitoba announced its first case of COVID-19. That day, everything seemed to fall silent. There was a palpable shift in the atmosphere that no one could quite describe, but everyone knew was hovering. What once seemed like a distant notion to us here in Manitoba became a very clear and present reality we could no longer ignore.

With the announcement of the virus, Manitoba's government and health officials took steps to reassure and keep the public informed about every new case and every step being taken to prevent the spread of the virus. Businesses were advised on best practices in the interest of the health and safety of their employees, with warnings that a shutdown of the economy was very likely. While some businesses had the ability to equip their workers with the necessary tools to work from home, others weren't in the position to offer their employees the same opportunity. Many retail companies were forced to shut down operations entirely, leaving many on the

breadline with unsettling questions about where their next paycheck would come from, with no foreseeable timeline on when the virus would relent.

When something as essential as the air we breathe is cause for concern, health and safety had to become a central theme in the fight against the coronavirus; as shortages loomed and demand outstripped supply, particularly as it pertained to the healthcare industry and its dire need for life-saving, health-preserving equipment, the need for companies to fill those gaps, stem the shortages, and to do so quickly and efficiently became increasingly evident. It was at this time that several Manitoba organisations stepped up to meet the increasing health and safety demands, not only here in Canada, but across the United States. Here, we feature two of those organisations.

PRICE INDUSTRIES

Founded in 1949 by Ernest H. Price, Price Industries began its operations in Manitoba selling air distribution products. Price expanded across Canada as a distribution company over the next several decades, manufacturing under licence in the 1960s.

Gerry Price, son of the founder, entered the company in 1977, and in 1987, he became President, subsequently acquiring the company from the shareholders at the time. The company, which celebrated 70 years last year, has become the dominant commercial HVAC manufacturer of ventilation products in North America, and continues to expand supply channels globally.

In the earliest days of the pandemic, Price Industries was designated by the government as an essential service. While providing ventilation systems for use in critical environments has been the business of the day for Price Industries for many years, the company was faced with the almost-overnight and herculean task of meeting an extraordinary demand to create safe spaces to house patients and those who had the responsibility of caring for them. As more and more hospitals were overrun with more COVID-19-positive patients than their capacities could handle, hotels, convention centres, and shuttered hospitals were desperately sought out and transformed into "healthcare" facilities. This is where the innovation of Price Industries' products came to bear. In order to meet the rigid standards of a typical healthcare facility such as a hospital, alternate facilities were converted almost literally at the drop of hat to negative-pressure isolation rooms to accommodate the growing crisis. These rooms were outfitted with fan filter units, which remove airborne viruses and other contaminants from the atmosphere of a space. With COVID-19 classified as an airborne virus, it doesn't take much of an imagination to see how these fan filter units would boost health and safety for those in harm's way. Not only were these units handy in makeshift facilities, they also served to keep healthcare workers safe in critical workspaces.

While Price Industries' fan filter units have been instrumental in keeping exhaust air from negative-pressure environments clean, it is not the only product that the company has seen fly off





its distribution shelves. In Calgary, APEL Extrusions, a Price subsidiary, has been hard at work supplying support systems used in the creation of portable shelters, which are also serving as makeshift hospital facilities, while at its operations in Wisconsin, AROW Global, employees have been busy keeping up with the demand for protective systems for public transportation workers.

While it's one thing to make the products that they do day in and day out, in this particular period where demand has reached unprecedented proportions, it's a fair question to ask how the company has fared in meeting that demand at a time when borders have been closed, and everyday services that many of us take for granted, such as cross-border shipments, have been overtaxed. Price Industries has stepped up to the challenge *du jour* with its 1,400 employees in Manitoba, and 3,500-plus employees across North America working around the clock to meet the needs of the healthcare sectors at a critical time.

The company is seeking to increase its "Price Strong" workforce – also the company's slogan – with a hiring drive, and is also working on an expansion project at its facility, which will incorporate health and safety measures that reflect what our new normal could look like in the future.

Price Industries is not taking the health, safety, or contribution of its employees for granted either, ensuring that they are equipped with the gear needed to stay safe while they work, such as masks; maintaining signage that keeps employees cognisant of the recommended two-metre physical distance; keeping sanitizing tools readily accessible to everyone; and ensuring that regular cleanings, particularly in high-touch areas, are undertaken throughout their facilities. The company

is also incorporating many new HVAC technologies into its expansion to showcase the new normal reality that offices will be facing.

While the demand for its products in fighting COVID-19 has levelled out in some areas, the company has seen opportunities to branch out into other places where health and safety are of paramount importance, such as dental offices and facilities working on creating and testing potential vaccines.

If there is anything that the company has learned from this pandemic, according to its VP of Operations, Sean Gaudreau, it's the importance of consistency in leadership, clear communication and taking advantage of the opportunity to serve in a time of crisis. Gerry Price added, "The well-being of our team members is always our number one priority, as they are the ones doing the heavy lifting, and taking remarkable care of our customers, which is what truly differentiates Price."

PRECISION ADM

Another company deemed essential at the height of the pandemic was Precision ADM, which offers Advanced Digital Manufacturing® services. Established in 2015, the Winnipeg, Manitoba-based company is a spin-off of the Orthopaedic Innovation Centre, which offers medical testing capabilities and expertise in support of the medical device industry.

A leader in the manufacture of medical devices, Precision ADM provides engineering solutions for the aerospace and energy sectors, and specializes in additive manufacturing, or 3D printing. This innovation has proven valuable to the medical field in reducing production costs, bringing new and advanced technologies to the forefront of the field, while maintaining rigorous, quality standards of production.

Amid a global crisis, however, where shortages of basic personal protective equipment, such as masks, seemed to take on intrinsic value, the company's President and CEO, Martin Petrak saw an opportunity to apply Precision ADM's expertise in 3D printing and its extensive knowledge of the medical field. Precision ADM joined forces with the Orthopaedic Innovation Centre to set up a taskforce of key engineers, which included lead project engineers Trevor Penner, Ryan Olson and Trevor Gascoyne, as well as lead quality engineer Alanna Gray. The taskforce took into account the fact that there was no other company in Canada undertaking a project such as this, which in turn meant that Precision ADM had to focus on developing a digital and agile supply chain for the Canadian system.

Long before the pandemic hit, Precision ADM had spent years developing and acquiring its medical certifications. As a result of that hindsight, the company was able to secure the bid to mass produce reusable N95 masks and meet the demands of its medical supply chains. Considering that these masks are typically made for one-time use, the fact that they would be reliable for up to 30 uses, and could even be disinfected after each use was, in itself, a huge step forward in battling the virus, particularly within the healthcare setting where they have proven invaluable to frontline workers.

Perhaps the most notable among the company's products at this key phase in getting the virus under control is its nasopharyngeal swab, known as CANSWAB™. Martin Petrak had proposed the idea of creating a swab to his team after coming across literature to support the company's foray into making the product. With the full backing of his team, he next approached the Winnipeg Regional Health Authority, which later became Precision ADM's first client to

order the swabs. Once the company crossed this bridge, it went through the process of regulatory submissions with Health Canada. The newly engineered 3D-printed swab received the green light from the federal government in July for production. The company has since almost tripled its workforce from an original 22 employees to 60 in a 100-day period, many of whom include university engineering students. Precision ADM has also acquired an additional facility to meet the demand for the swabs as provincial governments rely on them in their efforts to continue mass virus testing.

“Ramping up a production cell with new technology at such an accelerated rate is filled with its challenges, but tackling each problem with engineering best-principles and utilizing our experience in materials, 3D printing, and medical device manufacturing made every obstacle surmountable,” said Ryan Olson, Mechanical Engineer at Precision ADM.

This is a big step for the company as it requires ramped-up production efforts from an initial 480,000 swabs per month to upwards of two million. As the first

product made in Canada for fighting COVID-19, there’s also that unspoken pressure and responsibility to ensure that mass production still equals quality.

“As an organization, we were able to quickly pivot to new types of devices using our experience in regulatory approval, medical device manufacturing and problem-solving and risk-based thinking. We are thrilled to produce a high-quality product that is manufactured, packaged, sterilized and distributed in Canada,” said Alanna Gray, Quality Engineer at Precision ADM.

As the company takes those steps to meet the demands here in Canada, it is also looking at the role it can play in other global markets hard hit by the virus and still struggling with shortages and alarming rates of infection. As the company continues to branch out in its operations and the services it offers, it is looking at the potential for supplying other types of swabs and custom reusable masks.

The company president believes that the industry’s response and its coordination with governments in efforts

to contain the pandemic are no small feats and go a long way in being prepared for a scenario such as this, should it ever arise again.

FRONTLINES OF INNOVATION

To date, Manitoba has been spared the worst effects of the pandemic, which is still plaguing parts of Canada, the United States, Europe and Latin America. The province, and several of the companies located here, have played a significant role in fighting to eliminate the virus. While some have completely shifted the focus of their operations to fill supply shortages, others have ramped up production, while still maintaining quality, efficiency and the safety of their employees to ensure global quotas are met.

We don’t often give much thought to the behind-the-scenes work of companies like Price Industries and Precision ADM, but if this pandemic has revealed anything, it is that these are the companies on the frontlines of innovation working relentlessly, along with healthcare and other public workers to bring an end to a global crisis. . ⊕



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Habitat for Humanity Build Days

As the Association celebrates 100 years in Manitoba, the Centennial Outreach Task Group invited practitioners to join its members in giving back to our community through two Build Days with Habitat for Humanity. On July 15 and 16, over 50 volunteers and Association staff rolled up their sleeves to work together on a new condo development site in Winnipeg.

Habitat homes are truly the homes that love built. They are constructed almost entirely by caring volunteers, with the support of dedicated and skilled Habitat for Humanity Manitoba staff. While all Build Days are crucial to the success of Habitat's program, these Build Days were particularly significant, as the site in Amber Trails was the first to reopen in Canada post-lockdown; our volunteers being the first that Habitat welcomed anywhere in the country since March. It takes many caring hands to build a Habitat home, and the enthusiasm, positive attitudes, and work ethic of our volunteers kicked this project off successfully. We are truly grateful to the volunteers who gave their time for such a worthy cause. ☺

DID YOU KNOW?

- The first Habitat for Humanity home in Canada was built in Winkler, Manitoba in 1985.
- By 1987, Winnipeg would be home to the first national Habitat organization outside of the United States.
- In 1991, the first-ever ReStore was launched in Winnipeg.
- In 1993, the first international Jimmy & Rosalynn Carter Work Projects would be hosted in Winnipeg and Waterloo, Ontario.

Source: <https://www.habitat.org/where-we-build/canada>

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“As an organization that exists for the benefit of Manitoba’s residents, Engineers Geoscientists Manitoba’s mandate is aligned with Habitat for Humanity’s endeavour to provide safe, decent, and affordable housing for all Manitobans, said Jitendra Paliwal, P.Eng., FEC - President, Engineers Geoscientists Manitoba.”

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2020 KEYNOTES



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Bob McDonald,
CBC's Quirks and Quark



**OVERCOMING
IMPOSTER PHENOMENON**
Dr. Brenda Lee



**LEADERSHIP - INSIGHTS
FOR THINKING DIFFERENTLY**
Randy Grieser, ACHIEVE
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**THE ISSUES OF POLITICAL
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Dr. Reece Malone,
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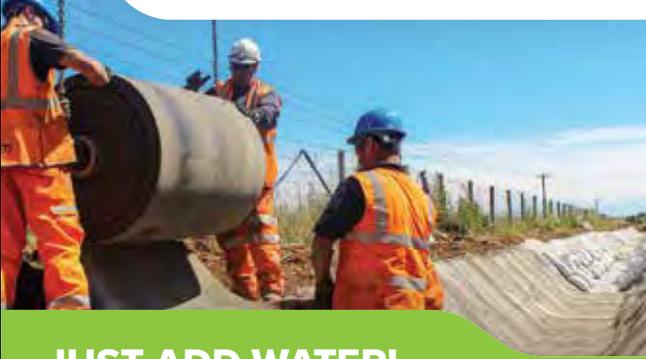
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Infrastructure Summit Empowers First Nations Youth

By. S. Sectar, EIT



A brand-new youth recreation centre in Keeseekoowenin Ojibway First Nation. Carpentry students building homes and earning hours towards a Red Seal in Nisichawayasihk Cree Nation. Renovations on an Indigenous Food Centre and teaching kitchen in Wasagamack First Nation. These are just a few of the infrastructure projects that came as a result of the first-ever Manitoba First Nations Youth Summit hosted by Indigenous Services Canada in partnership with First Peoples Development Inc. and the National Screen Institute of Canada.

Leadership at Indigenous Services Canada wanted to create an initiative that would empower First Nations youth to have a real, long-term, and positive impact on their community. They also wanted to provide an opportunity for youth to gain experience and insight into the infrastructure procurement and planning process and use that knowledge to conceive, create, and present proposals to a panel of executives in a real-world environment. They partnered with First Peoples Development Inc. and the Manitoba First Nations Youth Summit was born.

The journey began in October 2018 when youth from 51 Manitoba First Nations were asked to imagine an infrastructure project for their respective community. They were then invited to Winnipeg to share their ideas and learn about community infrastructure development and planning, proposal writing, and to develop their presentation skills. In Winnipeg, youth were partnered with, and received mentorship from, Indigenous Service Canada engineers. Similar to the profession of engineering, where after one identifies a need or an issue then organizes technical solutions, engineers explained how the professional proposal writing process can be used to address their community's infrastructure needs. Where a recreation centre

might be the youth's intended goal, engineers helped shape the concept with choices and considerations such as square footage, programming space requirements, location, land-use history, and access to roads and utilities. No project process would be complete without a demonstration in estimating a budget and project schedule. Youth were taught to identify risks, such as winter road delivery restrictions, or unforeseen subsoil, which could impact costs and the time required to complete their project. As well, the project implementation process and special considerations such as whether a full design-bid-build procurement or a more expedited design-build methodology should be used were also explained.

Youth advocate and create

To capture the process and proposal progress, students were given camera equipment and received mentorship from First Peoples Development Inc. and the National Screen Institute of Canada. From there, youth captured their experiences using film, writing, and song. In March 2019, the youth were invited back to Winnipeg to present their proposals in front of a panel of executives and engineers from Indigenous Services Canada and staff from First Peoples Development Inc. and the National Screen Institute of Canada. The youth's adept and creative use of film, song, and other multimedia allowed their proposals to transcend into the world of storytelling. Each team's novel presentation of their proposal was so effective, all eight teams had their proposals approved and would now see their projects move from dreams into reality.

In total, over \$4 million in funding for project completion was awarded to Sayisi Dene First Nation, Wasagamack First Nation, Ebb and Flow First Nation, Waywayseecappo First Nation, Skownan First Nation, Dakota Tipi First

Nation, Keeseekoowenin Ojibway First Nation, and Nisichawayasihk First Nation communities. Youth from Ebb and Flow and Keeseekoowenin First Nations would each construct a new youth recreation centre in their community. In Sayisi Dene First Nation, the renovation of a youth centre would create a safe space for young community members to gather. Wasagamack First Nation identified the need for a comprehensive post-secondary training facility and decided to renovate their existing community school to create a teaching kitchen and Indigenous Food Centre. Dakota Tipi wanted to be able to host hockey games and tournaments in their community and would construct a new outdoor ice rink facility. Skownan First Nation proposed a multi-use community building using a unique Star-Blanket configuration. Waywayseecappo would employ community youth to revitalize and construct a fitness facility, dance studio, and Elder lodge spaces. Lastly, Nisichawayasihk Cree Nation's youth would help construct homes within their community while earning hours towards a Red Seal.

After the First Nations Youth Summit events in Winnipeg, projects proceeded into the design and construction phases. Back in their communities, youth used their experiences to advocate for their peers and had the opportunity to work alongside band leadership in positions that allowed them to gain valuable experience in community construction, program development, and engineering. The youth worked alongside Indigenous Services Canada engineers, Chief and Council representatives, architects, project managers, and contractors to be involved in all aspects of major capital procurement. Youth were exposed to everything from drafting terms of reference to evaluating, reviewing, and publicly tendering construction contracts. When additional carbon-reduction funding became available, youth seized the opportunity to incorporate 'green' initiatives in their projects such as geothermal HVACs and solar power systems. In many cases

construction was undertaken by youth community members themselves, allowing them to gain transferrable experience to become future community infrastructure leaders.

Throughout the process, Indigenous Services Canada engineering staff learned much as well. Opportunities to increase participation and learning were encouraged, and roles were re-examined. From concept, to design, to construction, the Youth Summit projects provided an opportunity to employ more than an engineering skillset; people were able to become educators and mentors as well.

Some lessons learned included the importance of letting people safely run with the process. While mistakes were inevitable, the experience and knowledge gained were priceless. Second, remembering to take the time to educate and transfer knowledge. Despite the best of intentions, oftentimes throughout the flurry of construction, there was not much time to transfer knowledge. Finally, developing programming is just as essential to the success of a facility as the construction. Usually, outside of an engineer's expertise, it can be difficult to assist clients with putting programs for their facilities in place. Reaching out to a passionate person with expertise in the field allowed us to both help the client and learn a lot along the way.



Ground-breaking ceremony at the Dakota Tipi Outdoor Rink featuring Vegas Golden Knight Zach Whitecloud in August 2019.



The youth of Nisichawayasihk Cree Nation work on constructing homes while earning hours towards their Red Seals in September 2019.



Keeseekoowenin Ojibway First Nation Youth Recreation Centre reaches substantial completion.

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At the time of publication, most of the Youth Summit projects are nearing completion, or are already complete. Some delays have been encountered due to the COVID-19 pandemic, and many grand opening ceremonies have been postponed to ensure the safety of all community members. Fortunately, some projects were not affected by the COVID-19 pandemic. In August 2019, Brandon, Manitoba's Zach Whitecloud of the Vegas Golden Knights attended the ground-breaking ceremony for the Dakota Tipi First Nation outdoor rink. While the celebration of a completed project is important, the goal of this initiative was to provide an opportunity for youth to address some of the needs of their communities and lead a major infrastructure project. The Manitoba First Nations Youth Summit provided an innovative way to empower First Nations youth and advance reconciliation. ☯

LET'S ADD TO GERRY'S GIFT



Last spring Gerry and Barb Price gave the Faculty of Engineering of the University of Manitoba an amazing gift of \$20 million. A celebration was held in the Engineering and Information Technology Complex atrium, and a host of speakers paid tribute to the Price family. In honour of this gift, the University renamed the Faculty of Engineering to the Price Faculty of Engineering.

This transformative gift will allow the Price Faculty of Engineering to expand opportunities for Manitobans to study engineering in their home province and contribute to the well-being and prosperity of Manitoba through the 2020s and beyond.

If you missed this great event, you still have an opportunity to share in the energy and excitement.

Consider adding to Gerry's gift with your donation. The Price Faculty of Engineering and the University have been hit hard by the pandemic. In-person classes and labs have become severely constricted by new post-pandemic safety protocols. Your gift will help to cover these new expenses at a time when it is needed most.

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Government Relations – *The Need for Sustainability in Engineering and Geoscience Practice*

By C. Hull, P.Eng.

What did you do in the war, Mommy and Daddy?

After both World Wars, this was a question that children would often ask their parents. There may come a time where our children and grandchildren will be asking all of us something similar: “How did you help save humanity?” I sure hope they don’t ask, “Why didn’t you help save us when you could?”

We need to transform our way of living to become sustainable. To do so, we need to be able to meet “the needs of the present without compromising the ability of future generations to meet their own needs”.¹

The need to make a change may not be immediately clear. For many of us, this is a time of abundance - but that abundance comes by borrowing from the future. Canadians are among the world’s biggest per capita consumers of the planet’s resources. If everyone lived as we do, we’d need four planets. For example, Canada’s Earth Overshoot Day,² the date on which Earth would fall if all of humanity consumed like the people in this country, occurs around March 18 each year.

Furthermore, most practitioners may not think of their practice as being related to sustainability.

However, engineers and geoscientists have a critical role in the move toward sustainability. Our practice holds this uniquely important role, for three reasons:

- Engineering and geoscience activities are global and pervasive.
- Those activities have a high degree of economic and social importance.
- Those activities have had, and continue to have, profound impacts on the environment.

We need to adjust engineering and geoscience practice – in all disciplines – to support this shift to sustainability. To that end, and with the guidance of our Sustainable Development Task Group, Engineers Geoscientists Manitoba is undertaking a project to develop and distribute Sustainability in Practice



knowledge, training, and tools. This is expected to be a multi-year project with engagement and contribution opportunities for all our members.

Sustainability has been likened to a three-legged stool: economy, society, and environment (or profit, people, and planet). The economic leg of the stool is the one we are probably most accustomed to and aware of. Completing our projects on-budget is at the core of what professional engineers and geoscientists do. Our *Code of Ethics* reminds us that the societal and environmental legs are required to make that stool stable: “Professional engineers and geoscientists shall hold paramount the safety, health, and welfare of the public and the protection of the environment, and promote health and safety within the workplace”.

But what do we need to do differently? As we undertake our practice, regardless of engineering or geoscience discipline, and as we embrace our responsibility to future generations, we need to consider factors beyond the constraints and requirements of the projects immediately before us.

As our Association undertakes this project to support, develop, and promote sustainable practice in Manitoba, we intend to work with and learn from other engineering regulators and academics. Here are some starting points from elsewhere in Canada:

Engineers Canada (EC) has offered an introductory *Sustainability in Practice* online course through the Polytechnique Montréal for some time now. It’s a good place to start.

Other provincial regulators are already headed in this direction. For example, Engineers and Geoscientists BC has published *Professional Practice Guidelines – Sustainability* for their members. This document states that within their scope of professional practice their members have a responsibility to:

1. maintain current knowledge of sustainability,
2. integrate sustainability into professional practice,
3. collaborate with peers and experts from concept to completion,
4. develop and prepare clear justifications to implement sustainable solutions, and
5. assess sustainability performance and identify opportunities for improvement.

Academics are working in support of this shift in professional practice. A concise and comprehensive overview and integration of the three aspects of sustainability into engineering practice has been proposed by the Groupe de Recherche en Économie et Développement International (GRÉDI) from the University of Sherbrooke in Quebec. They have proposed a framework of principles in their paper *Sustainable development in engineering: a review of principles and definition of a conceptual framework*.³ Their study

recommends that a few guiding principles be integrated into practice for all projects.

But what's the urgency?

Within the broader sustainability challenge is the overarching and growing peril of the climate emergency. We have recently been given a sense of the depth of the consequences and a timetable for action on climate change. In autumn of 2018, the Intergovernmental Panel on Climate Change (IPCC) released its *Global Warming of 1.5°C* report. This report compared the difference in the severity of impacts between 2°C and 1.5°C of global heating. The consequences of just this small amount of additional heating are significantly more destructive. The report also quantified how quickly we need to take carbon out of the atmosphere to limit that temperature rise to 1.5°C. The action required is deep and urgent.

Recently, the Government of Canada has started to require us to apply a climate lens for infrastructure projects seeking federal funding. This means assessing how the projects will contribute to, or reduce, carbon

pollution, and consider climate-change risks in the location, design, and planned operation of a project. To help us meet this requirement and to help lead us toward this new paradigm of practice, Engineers Canada has provided us with *Principles of Climate Change Adaptation for Engineers*.

And there may be liability risks if we don't take climate change into account. There is the looming prospect of lawsuits against municipalities if new infrastructure fails to protect residents and businesses. The most likely example is with respect to severe weather events. Designers will need to ensure that climate-change modelling is included in their process if they want their structures to perform adequately and, in the worst case, to respond to litigation.

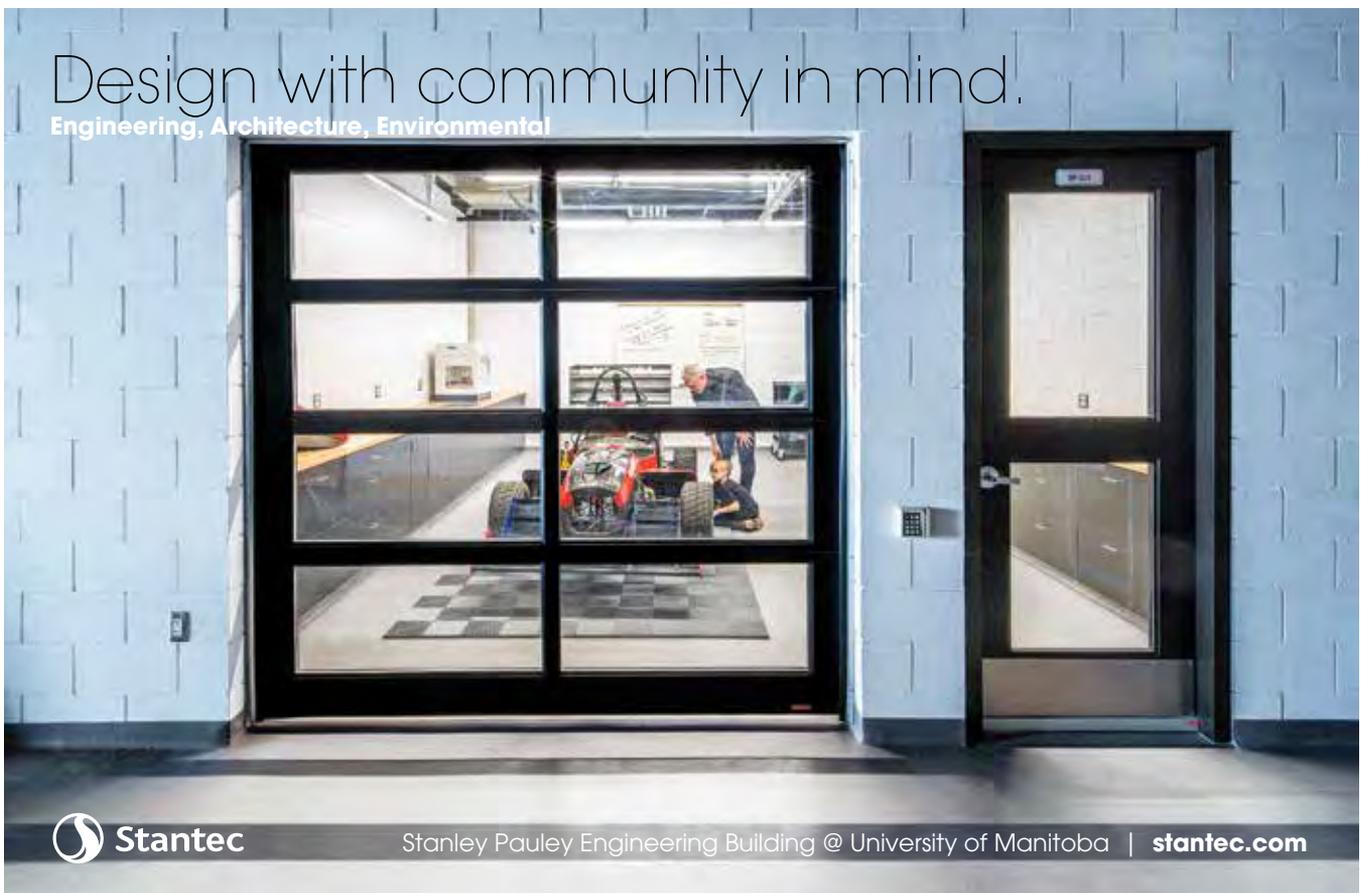
Our project will focus on these concerns through a guiding coalition. We will start with our Sustainable Development Task Group and invite key stakeholders and professional organizations beyond our association. We will build this coalition and then extend our efforts to engage practitioners and the public. We think

there will be an opportunity for input from our members as we build and execute the plan.

More and more people are becoming concerned about the fate of our planet and aware of the urgent need for action. It is up to engineers and geoscientists – not just to show the way, but to apply their expertise and practice to find and implement the solutions.

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- ³ B. Gagnon, R. Leduc, L. Savard, *Sustainable development in engineering: a review of principles and definition of a conceptual framework*, University of Sherbrooke, November 2008, <https://www.semanticscholar.org/paper/Sustainable-Development-in-Engineering%3A-A-Review-of-Gagnon-Leduc-Leduc/795fa17448284becde6a3a780f2fde0ee1ff9158> 



Meet the People That Make Life Work Better

Shirley Mayadewi, P.Eng.

Member Profile

By R. Lewis



Shirley Mayadewi is not someone who gets complacent. Having been in the field of engineering for the past 14 years, she's constantly on the move in her quest for new opportunities, not only for herself but for other women in the field of engineering and young women still trying to find their footing on a career path. It's part of the reason she founded the Winnipeg Career Women Network in early 2019, a non-profit organization that fosters career development and offers advice to women in need. It is also why she volunteers her time with Engineers Geoscientists Manitoba's mentorship program.

It would be an understatement to say that Shirley understands the struggles of finding one's place in a sea of opportunity, which can, at times, become daunting when you're not quite sure what your next move should be, or where that next move could take you. Shirley, with the encouragement of her family, left Indonesia behind to pursue her studies in Canada at the University of Windsor.

Shirley's perseverance saw her earn her degree in three years while working on mastering English as her third language. She quickly switched gears, leaving Ontario for Manitoba to pursue her master's degree at the University of Manitoba, after being offered a fellowship, working hard, and grasping opportunities as they came her way. And she's also no different from many other women who are wearing several hats, with a husband and two children, ages two and five and a budding career at Manitoba Hydro over the last seven years. She says that being targeted in her approach to her family life and her career is key to her progress. Shirley's constant search for more efficient methods of operation and process improvement, and her passion for STEM education are also evident in her approach of developing systematic, evidence-based results, and seeking out experts on subject matters where she isn't as knowledgeable proves a strength.

What was the catalyst for you entering the engineering profession?

I entered the engineering profession not knowing much about it. I grew up in Indonesia and didn't know any engineers in my life. My dad is a self-taught business owner who had to quit middle school to work and help his family as they were poor. However, he strongly believed that education was important and instilled that in my siblings and me. While helping my dad with his business, manufacturing commercial-grade steel cabinets, shelving, and racks, I discovered

that I liked designing and building. When I wanted to pursue a university education in Canada, my dad was very supportive, but the only condition was that I picked a degree that would offer stable employment. Initially, I wanted to get into architecture, but it wasn't available at the University of Windsor. The next closest program available was engineering. I was informed by the university advisor that the post-graduation job prospects would be good, so I picked engineering. I fell in love with engineering after working for several years, once I realized how

fascinating the projects are and how they made people's lives better and easier.

What does a typical workday look like for you?

I am relatively new in my current position and learning to study power transmission system reliability. We use power system software and models to analyze issues and simulate different development options. If there's a problem that requires expertise from other areas, we collaborate with the subject matter experts to come up with a robust solution.

What advice do you have for people considering entering the geoscience and engineering professions?

If you would like to know more about certain engineering disciplines, set up a meeting and talk with a few engineers working in the areas of interest to you. Ask about shadowing engineers. If you don't know any engineers, contact Engineers Geoscientists Manitoba. Contacting engineers is a good start to pursuing this great profession.

What are the three most memorable projects you've worked on?

The first memorable project that I worked on after graduating was satellite stream failover equipment that would automatically switch to secondary feed if problems are detected with primary input. It was part of the system used to broadcast the FIFA World Cup in South Africa. I thought that was neat. Since then, the projects that I was proud of were the ones where I was able to bring together a team of diverse subject matter experts to solve a problem. I enjoy the

process of slicing big problems into smaller ones and bringing the right people together to tackle the problems. I also get satisfaction from completing projects that involve implementing automation and developing systems or processes to eliminate repetition and improve efficiency.

Do you have a 'dream project'?

If so, what is it?

When the time is right, I hope to have the opportunity to participate in projects that use technology to improve the quality of life of underserved communities and their future generations. Simple, low-cost, easy-to-implement technology that is sustainable and has a big impact.

What do you get out of engineering that you couldn't get out of any other line of work?

The opportunity to continuously learn and challenge yourself. In engineering, you're not restricted to very narrow job functions. I have worked for different companies, in many distinctly different roles, meeting people from different backgrounds, professions, levels of organizations. I have gained skills, experiences, and perspectives that I can transfer to new positions and make me a more well-rounded engineer and person. An engineering degree equips you with a large toolbelt and lets you take your career in many directions and places that you probably didn't envision. It also allows you to switch jobs as you grow to experience new challenges.

Are there Engineers Geoscientists Manitoba initiatives that you are involved, in or support?

I volunteer as a mentor for the Women in Engineering and Geoscience Mentorship Program. I also volunteer at schools to encourage female students to pursue STEM fields. I grew up in a culture where many still believed that having a daughter was seen as less fortunate than having a son, and girls were seen as less capable than boys. I have proven that it is not true, and want to give confidence to girls that may have similar experiences. I think it's important as professional engineers for us to share our experiences and insights with young students to

better prepare future engineers, as there are things that cannot be taught in the classrooms. If you are thinking of joining this cause, and have some questions, feel free to contact me. I find it rewarding to give back to the community that I have benefited from.

What makes your current job such a great place to work?

I work with colleagues that are well known for innovation, excellence, and being the leaders in their fields and encourage each other to grow. I'm excited to be learning from and collaborating with them. Manitoba Hydro is very supportive of work and family balance. The benefits and flexibility that they offer enable me to focus and give my best work for the company.

What do you hope the engineering and geoscience professions will look like 20 years from now, here in Manitoba?

My hope for engineers and geoscientists is that there are more female members and more diversity in leadership positions. With many new technologies developing rapidly around the world, there may be many that can be adapted to benefit Manitobans. Diversity is important to improve creativity and allow rapid learning and change. Having different perspectives and voices at the table is valuable for business, particularly in decision making. Research shows that there is a direct correlation between highly-skilled immigration and an increase in the level of innovation and economic performance in cities and regions.¹ Diversity can give Manitoba an edge in innovation and growth.

When you're not working, you can be found...?

Playing and relaxing with my husband and young kids, reading, cycling, gardening, and planning our next tropical snorkelling trips.

How much of a balancing act is family life and work life and what's your secret to keeping on top of both?

In the household of two working parents, my husband and I found that good planning, clear division of responsibilities, albeit not always equal, and regular communication are the keys. On top of that, putting our kids in good childcare programs and knowing that my kids are well cared for, challenged, and happy lessens my working mom's guilt and allows me to focus at work. I also do my best not to bring work or work stress home, be present, and focus on having quality time with my family.

What tips can you offer to young engineers just starting in the field or persons who are considering geoscience or engineering as a career?

Do an engineering co-op or internship as soon as you can, to experience the real-world challenges. When you identify a problem, instead of simply pointing out the problem, formulate and offer possible solutions too. Network, be proactive and talk to the people that inspire you. Seek out mentors that you respect and have genuine connections with, but be specific when asking for advice or help to be respectful of their time. Choose the right environments where you can grow and be encouraged to excel, and don't be afraid to initiate change if it's not the right environment for you. ☺

Reference

¹ <https://www.weforum.org/agenda/2019/04/business-case-for-diversity-in-the-workplace/>

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NOTICE

Under the *Engineering and Geoscientific Professions Act* and the Association's Discipline By-law

This is notice that, on June 29, 2020, Mr. S. M. Petrovich, P.Eng. consented to the registration of a conviction and issuance on a charge of professional misconduct or unskilled practice in accordance with section 35(1)(f) of *The Engineering and Geoscientific Professions Act*.

Mr. Petrovich was the subject of an order, dated April 6, 2020, by The Association of Professional Engineers and Geoscientists of British Columbia (Engineers Geoscientists British Columbia), regarding his involvement in the project for a property located in Edgewater, British Columbia (the "Property"). Specifically, Mr. Petrovich:

1. failed to design screw piles (the "Piles") for new deck piles at the Property, in or around April 2016, to the reasonable standard expected of a professional engineer, by failing to:
 - i. assess on-site soil conditions adequately, or at all;
 - ii. obtain sufficient information about the Property to conduct a proper analysis of factors that might have, and did, affect the Piles;
 - iii. sufficiently document the design for the Piles;
 - iv. provide the qualifications for the design to the installer; and
 - v. provide a design drawing to the installer;
2. signed and affixed his seal to a letter, dated April 14, 2016, regarding "Screw Pile Inspection/Compliance" for the Property (the "Assurance Letter"), that stated "a detailed inspection was completed by a Professional Civil Engineer for the screw pile installed at [the Property]" on April 7, 2016, when he knew neither he nor a Professional Engineer under his supervision had done a site visit to inspect the Piles on that day, or at all, and he knew, or ought to have known, that the wording of the Assurance Letter was misleading;
3. failed to conduct a site visit at the Property in a reasonable amount of time after being made aware of issues arising with the Piles by the Property owner in, or around, June 2017; and
4. failed to make field-review notes when making a site visit on, or around, December 26, 2017.

Having received Mr. Petrovich's consent, Engineers Geoscientists Manitoba's Investigation Committee has registered a conviction and imposed the following penalties.

- His license with Engineers Geoscientists Manitoba will be suspended until July 17, 2020.
- He will make reasonable arrangements for the orderly transfer of his ongoing professional engineering project files to other professional engineers.
- The Investigation Committee will review the Engineers and Geoscientists British Columbia's General Practice review and, if the outcome of the review is unacceptable, Engineers Geoscientists Manitoba reserves the right to conduct its own review.
- Within six months from the acceptance of the imposition of these penalties, he will provide the Association with written notice that he has completed and passed the Professional Practice Examination.
- In the event that he fails to comply with any of the terms relating to the penalties, his membership in the Association will be suspended until every default has been remedied in accordance with the terms relating to the penalties.
- The full text, or a summary, of the registered conviction and order will be published by the Association in print, and electronic, publications, including on the Association's website.

Grant Koropatnick, P.Eng., FEC, CEO & Registrar

New Geoscientists Canada President

A warm welcome goes to Michael Parkhill, P. Geo., who took office as President of Geoscientists Canada for 2020-2021 on June 5, 2020. As President, Mr. Parkhill will continue to have Geoscientists Canada work on admission alignment support tools to assist and support the geoscience practice regulators across Canada, work to support diversity and inclusion initiatives, and, monitor effects that the COVID-19 pandemic may have on the geoscience profession.

Parkhill is a Quaternary Geologist with the New Brunswick Department of Natural Resources and Energy Development, Geological Surveys Branch. He has over 35 years of geoscience experience dealing with drift mapping and sampling projects documenting Quaternary and bedrock geology.

New Engineers Canada President

Congratulations to Jean Boudreau, P.Eng., who, in May 2020, was elected as President of Engineers Canada for the 2020-2021 term. In this role, she will join the organization's board in working with regulators across the country to advance the profession.

Boudreau, who has over 30 years of experience as a senior transportation specialist in civil engineering, highway planning, and design and construction projects, works with GEMTEC Consulting Engineers and Scientists, headquartered in Fredericton, New Brunswick.

Dr. Jonathan Beddoes, retires as Dean of the Price Faculty of Engineering

After nine years in the role of Dean of the Price Faculty of Engineering, Dr. Jonathan Beddoes has retired. During his tenure, Dean Beddoes led many successful accreditation cycles, celebrated the opening of the new \$28-million Stanley Pauley Engineering Building, increased enrollment in the Price Faculty of Engineering by 60%, and expanded the relationships between the architecture and engineering professional communities.

After a combined 37 years in both professional and academic engineering, Dean Beddoes bid farewell to the University of Manitoba on June 30, 2020. His time as Dean has been marked by many significant events, including the renaming of the Faculty to the Price Faculty of Engineering, in honour of the Price family's generous \$20-million gift in March 2020. Dean Beddoes will also be remembered for his tireless effort in seeing that the needs of students were met, and that faculty members prioritized the interests of students, and advanced conversation and action around equity, diversity, and inclusion initiatives.

The impact of Dean Beddoes' achievements is amplified by his steady hand as a leader, his respect for the voices of those in the Faculty, who actively reach out to students, staff, faculty, and the external community to create partnerships, and as someone who celebrated and highlighted others' achievements.

Dean Beddoes plans to spend more time with his children and grandchildren, but will continue to contribute to the success of the Price Faculty of Engineering. We wish him well in his well-deserved retirement.

NOTICE

Under the *Engineering and Geoscientific Professions Act* and the Association's Discipline By-law

This is a notice that, on July 14, 2020, Mr. J. W. Arthur, P.Eng. consented to the registration of a conviction and issuance of a reprimand on a charge of professional misconduct or unskilled practice in accordance with section 35(1)(f) of *The Engineering and Geoscientific Professions Act*. The conviction arises out of Mr. Arthur's structural design of three identical wood-framed commercial two-storey buildings in Winnipeg.

In the course of his involvement in this project, Mr. Arthur undertook a project that was outside of his area of professional competency. In doing so, he relied on design software and methodology, which was not in compliance with current Manitoba building codes and design standards, to produce the structural designs.

In addition to the reprimand, Mr. Arthur consented to a restriction from practising structural engineering until he satisfies the Investigation Committee as to his competence in structural engineering.

Grant Koropatnick, P.Eng., FEC, CEO & Registrar



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M. Suliman

In Memoriam

Robert John Romanetz



The Transition from Retired Member to Senior Member

This fall, members will vote on a proposed change to the by-laws developed by Engineers Geoscientists Manitoba's Council, which will alter the categories of membership prescribed by the by-laws. This change was precipitated by a legal opinion that identified a discrepancy between the Act and by-laws. The final product, however, aims to better recognize the contributions that retirees can provide to the Association.

The journey towards the final product began when Engineers Geoscientists Manitoba received a legal opinion scrutinizing non-practising categories of membership. This legal opinion pointed out that our Act defines a 'member' as:

- a natural person who holds a valid and subsisting **certificate of registration**, and
 - whose name is entered on the register of the Association as a **professional engineer or professional geoscientist**
- It then defines 'certificate of registration' as:
- the certificate issued under the seal of the Association certifying that a member is **entitled to practice** and, similarly, that a 'professional engineer/geoscientist' is:
 - any natural person who holds a valid certificate of registration or temporary licence **entitling him or her to practice**

From these definitions, it is clear that members have the right to practice. Although the Act allows us to create categories of membership, all by-laws must "not be inconsistent with this Act". Therefore, a by-law that creates a non-practising category of membership is invalid. The current 'Retired Member' category stems from one such by-law.

In exploring the options to address this legislative inconsistency, Engineers Geoscientists Manitoba engaged general members and retired members alike.

These engagement sessions made it clear that many retirees have concerns about their situations. They also created a clear understanding of the elements that motivate retirees to maintain their membership while others simply resign.

The consistent message from retirees was that they maintain their membership:

- a. because it speaks to their personal identity (e.g., I am an engineer/geoscientist),
- b. to stay connected with the profession (e.g., networking, PD seminars), and
- c. to contribute to the professions.

A common concern noted by those who participated in the engagement sessions was that resigning their membership might prevent them from maintaining these elements.

The path forward chosen by Engineers Geoscientists Manitoba's Council seeks to meet the desire of retirees while also addressing the legislative inconsistency. This includes not only by-law changes but the development of policies and programs that will support these changes. One key example will be the creation of an association-wide mentorship program.

From the advice of legal counsel, one thing is clear; the 'Retired Member' category by-law must be removed. This by-law must be removed as it creates a prohibition on the right to practice, contrary to the intrinsic right of being a member. In addition to this change, the by-law proposal also creates a new category of membership 'Senior Member'.

The 'Senior Member' category's purpose is to recognize the many years of contributions that an individual provides to the Association throughout their career. This recognition comes in the form of member dues waiver and the right to use the new post-nominal P.Eng.(SM)/P. Geo.(SM). In keeping with the Act, this new category of

membership includes the right to practice. Along with this right comes the duty to maintain current with the professions and to certify this currency by reporting to the ProDev Program.

However, Senior Members, by virtue of the fact that they are no longer practising and have contributed to the professions for many years, will have their ProDev targets reduced to a new minimum. Here is an example of annual activities that a Senior Member can undertake to maintain compliance with ProDev:

1. Attend Engineers Geoscientists Manitoba's PD Conference.
2. Read for ½ hour per week throughout the year.
3. Attend the Annual General Meeting.

In parallel to this new category of membership, Council has developed several policies. One will clarify that members who choose to resign may still refer to themselves as an engineer or geoscientist, provided that it is clear that they are no longer practising. With this new policy, someone who resigns may, for example, use the designation P.Eng.(Ret)/P.Geo.(Ret).

Given all of these changes, Engineers Geoscientists Manitoba is fully aware that some individuals will require direct attention. Luckily, our policies and processes provide flexibility. For example, a Senior Member who requires a special level of ProDev targets can still apply to their peers on the Continuing Competency Committee for abatement. We, therefore, encourage anyone with questions about this transition to contact the Association.

As always, I appreciate comments and discussion about standards issues. If you'd like to talk about the above topic or any other area of concern, please do not hesitate to contact me at MGregoire@EngGeoMB.ca. ☎

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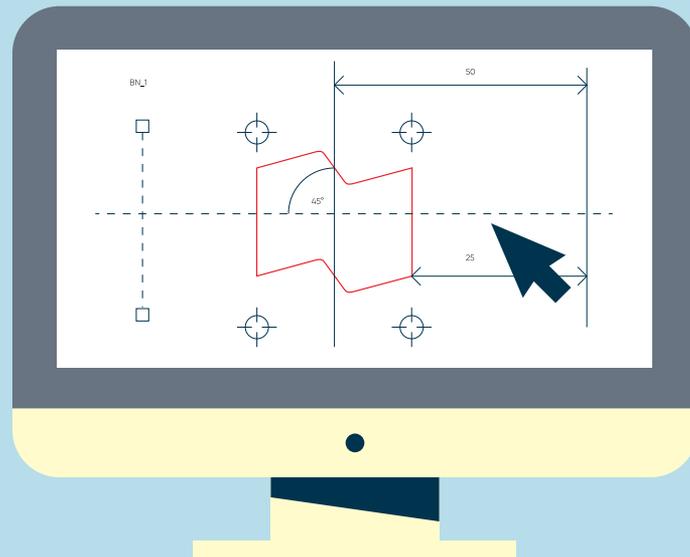
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Matthew and his family have had a tough time, while Jen and her family have been lucky. But that doesn't mean Jen's family is immune to critical illness – which is why **it's important to be prepared.**

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1 Canadian Cancer Society, "Nearly 1 in 2 Canadians expected to get cancer: report," June 20, 2017.
2 Heart & Stroke, "Stroke Report 2016 just released!," June 9, 2016.
3 ctnews.ca, "The Health of Canadians: Looking back at 60 years of heart health," February 3, 2015.
4 Net 5-year survival rate.
5 Survival rate for those who have a heart attack and get to a hospital. Heart & Stroke, "Getting to the Heart of the Matter," 2015. 6 Heart & Stroke, "The Heart & Stroke 2017 Stroke Report," July 19, 2017.
7 TheRecord.com, "Cancer patients face high out of pocket expenses," April 15, 2017.

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Canadians will develop cancer.¹



1 in 3
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1 in 2
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