MISSION STATEMENT

We envision the youth of Manitoba inspired and empowered by the possibilities of science, engineering and technology. We envision a Manitoba where all youth, regardless of background, gender or socio-economic status are enriched in their science, math and technology education. The young people today will become Manitoba’s vibrant and diverse workforce of leaders tomorrow; these youth will be empowered by their knowledge and appreciation for science, engineering and technology.
OUR MANDATE

WISE Kid–Netic Energy works to ignite an interest and life–long passion of science and engineering in all Manitoba youth.

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INTRODUCTION

In 1990 WISE (Women in Science and Engineering) Kid-Netic Energy was formed at the University of Manitoba. It has grown to be one of the largest STEM (Science Technology Engineering Math) not-for-profit outreach programs in Canada. Our organization offers science and engineering workshops, clubs, camps and events to youth from Kindergarten to Grade 12 throughout the entire province of Manitoba. Annually we reach between 25 000 and 50 000 youth depending on funding levels. Our approach is simple – present STEM in messy, memorable and engaging ways so Manitoba youth feel motivated to learn more and more. We reach all Manitoban youth. We particularly target underrepresented youth like girls, Indigenous youth and youth facing socio-economic challenges. There is a saying, “You can’t be what you don’t see”, and in response to this saying we try and get as many youth doing hands-on, experiential activities with amazing young role models pursuing undergraduate degrees in science and engineering. We hope you enjoy reading this annual report. Please contact us if you have any questions or concerns.
Thank you for taking the time to give one-on-one attention to my students with exceptional needs, making coding basics accessible.

Jemma Desilets, Ste. Anne Elementary, Ste. Anne, MB
OUR INSTRUCTORS

Our instructors are our champions. All of our instructors are undergraduate university students pursuing engineering, science, or STEM-related degrees. From that pool we preferentially hire women, Indigenous peoples, and other minorities. We pride ourselves on hiring undergraduate students that reflect the diversity of students throughout Manitoba. Each is trained to deliver all of our Manitoba science curriculum-based workshops. They also receive classroom management and Indigenous cultural training. We provide meaningful employment for our instructors to develop strong leadership and presentation skills.

During the fall and winter our instructors work part-time delivering outreach close to Winnipeg to accommodate their classes and labs. In the spring and summer they work full-time and travel extensively to all corners of the province including Thompson, Flin Flon, Cranberry Portage and Dauphin in northern Manitoba, dozens of rural communities throughout southern Manitoba, and First Nations communities like Pinaymootang First Nation, Wanipigow First Nation, Skownan First Nation, Norway House Cree Nation, Sapotaweyak Cree Nation, and Sagkeeng First Nation.
OUR WORKSHOPS

Showcasing a variety of science and engineering topics, our workshops are highly interactive, and bring technology and hands-on activities to classrooms.

wisekidneticenergy.ca/workshops
OUR WORKSHOPS

In 2019-2020, we offered over 20 different curriculum-based workshops to schools, and four different hands-on workshops to communities organizations including libraries and daycares. Overall, we had another exceptional year of workshop delivery. Between April 1, 2019 to March 31, 2020 we saw an outstanding 48 704 students. Our hands-on, Manitoba science curriculum-based workshops for Kindergarten to Grade 12 are a hit in classrooms all over the province of Manitoba. Teachers have enthusiastically invited us into their classrooms and we could not be more excited to be working with passionate educators. We offer a wide variety of choices for budding scientists and engineers, and are always updating our programs to keep them current. We facilitate dissections, design-build-test challenges and plenty of fun educational games. We bring all the supplies and clean up afterwards. We charge minimally and offer the same rates for schools within and outside the city of Winnipeg. In November, 2017, we were able to start offering 6 of our workshops for free, thanks to CanCode, a federal government initiative to promote education in digital literacy and computational thinking. We strive to spark curiosity and build momentum towards positive experiential learning. Please go to our website (www.wisekidneticenergy.ca) to view our current workshop catalogue in French and English.

FUN FACTS ABOUT WORKSHOPS

- Total audience of 48 704 from Kindergarten to Grade 12
- Total CanCode audience of 22,619
- 2170 workshops delivered April 1, 2019 – March 31, 2020
- 1054 free CanCode workshops delivered April 1, 2019 – March 31, 2020
Well prepared, presented and energetic! High engagement from all my students. Love it! Thank for making such a valuable program be accessible to students. Great exposure to coding especially for females.

Ms. Ambraram, Stanley Knowles School, Winnipeg, MB
# Workshop Delivery Broken Down by School Division

April 1, 2019 – March 31, 2020

<table>
<thead>
<tr>
<th>Division</th>
<th>Kids per Division</th>
<th>Division</th>
<th>Kids per Division</th>
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</thead>
<tbody>
<tr>
<td>Borderland</td>
<td>297</td>
<td>Portage Rose</td>
<td>719</td>
</tr>
<tr>
<td>Franco-Manitobaine</td>
<td>156</td>
<td>Prairie Spirit</td>
<td>199</td>
</tr>
<tr>
<td>Evergreen</td>
<td>42</td>
<td>Red River Valley</td>
<td>941</td>
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<tr>
<td>Frontier</td>
<td>845</td>
<td>River East Transcona</td>
<td>5692</td>
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<tr>
<td>Garden Valley</td>
<td>1056</td>
<td>Seine River</td>
<td>1283</td>
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<tr>
<td>Hanover</td>
<td>2229</td>
<td>Seven Oaks</td>
<td>2321</td>
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<tr>
<td>Interlake</td>
<td>628</td>
<td>St. James-Assiniboia</td>
<td>1698</td>
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<tr>
<td>Lord Selkirk</td>
<td>479</td>
<td>Sunrise</td>
<td>780</td>
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<td>Louis Riel</td>
<td>3148</td>
<td>Western</td>
<td>250</td>
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<td>Mystery Lake</td>
<td>1829</td>
<td>Winnipeg</td>
<td>5134</td>
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<tr>
<td>Pembina Trails</td>
<td>4302</td>
<td>Other/Private</td>
<td>9006</td>
</tr>
<tr>
<td>Portage la Prairie</td>
<td>2049</td>
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<td></td>
</tr>
<tr>
<td><strong>Total Students</strong></td>
<td><strong>45 083</strong></td>
<td></td>
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</tr>
</tbody>
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Excellent presentation; kids loved it and we will definitely book another presentation next year.

K. Fehr, Ingleside School, Grand Hutterite Colony, near Oakville, MB
OUR CAMPS

Camp programming is fun, interactive, and hands-on. It includes indoor and outdoor activities, and incorporates everything from physical activity to creative design and build challenges, to playing with digital technology.

wisekidneticenergy.ca/camps
I love this camp and everything about it! I really want to study engineering when I grow up! Please come back next year! Camper, Sapotaweyak Cree Nation, MB
| 1. CHURCHILL       | 16. PINAYMOOTANG FIRST NATION |
| 2. BROCHET         | 17. PEGUIS FIRST NATION       |
| 3. SHAMATTAWA      | 18. WANIPIGOW FIRST NATION    |
| 4. THOMPSON        | 19. LITTLE BLACK RIVER FIRST NATION |
| 5. FLIN FLON       | 20. SAGKEENG FIRST NATION     |
| 6. FRONTIER SCHOOL DIVISION CAREER X | 21. BROKENHEAD OJIBWAY FIRST NATION |
| 7. THE PAS & OPASKWAYAK CREE NATION | 22. TYNDALL |
| 8. CROSS LAKE FIRST NATION | 23. BEAUSEJOUR |
| 9. NORWAY HOUSE CREE NATION | 24. WINNIPEG |
| 10. WASAGAMACK FIRST NATION | 25. ST. FRANCOIS-XAVIER |
| 11. GARDEN HILL FIRST NATION | 26. VIRDEN |
| 12. SWAN RIVER      | 27. KILLARNEY                |
| 13. SAPOTAWEYAK CREE NATION | 28. CLEARWATER |
| 14. SKOWNAN FIRST NATION | 29. MORDEN |
| 15. DAUPHIN        | 30. WINKLER                  |
|                    | 31. ALTONA                   |
|                    | 32. CARMAN                   |
|                    | 33. STEINBACH                |

Highlighted locations received week-long camps in Summer 2019

 Paladin location

fly-in location
OUR CLUBS

Our clubs include hands-on activities, field trips, and mentor events on a weekly basis. Club members have the opportunity to interact with professionals, see the heart of the University of Manitoba, and explore science and engineering on a more in-depth level.

wisekidneticenergy.ca/clubs
GIRLS CLUBS

Offering quality extra-curricular science and engineering programs is crucial to the development of Manitoba’s future scientists and engineers; making intentional space in these programs for groups who are underrepresented in STEM is a priority for WISE Kid-Netic Energy. We have a well-established Girls Club program that gives kids opportunities to get excited about science and engineering in a setting outside of their science classroom. This year we offered Girls Club for 19 Grade 6-8 students in the fall, and 20 Grade 3-5 students in the winter on Saturdays at the University of Manitoba. Our Inner-City Girls Club hosted by Pinkham School included 20 Grade 3-6 students, and was offered throughout the fall and winter. In both programs, participants meet with their instructors each week to explore a new STEM topic, with a mixture of youth-selected and instructor-selected themes.

The best part of Girls Club was the variety in programs, and including field trips! Kept my daughter engaged, and excited to attend each week!

Parent of a Girls Club Member, Winter 2020
ROBOT FIGHT CLUB

In the winter of 2015, we started our All Girls Robot Fight Club, with the goal of having more girls participate in the Manitoba Robot Games programming challenge. This year, we had our largest group yet with 11 participants. Unfortunately, due to Covid-19, the club was cut short by two weeks, and the Manitoba Robot Games were postponed/cancelled. Nevertheless, the girls learned how to code the Lego Mindstorms, and had a guest come in to talk about coding opportunities for women in the Winnipeg gaming industry. Our instructors have continued to make the All-Girls Robot Fight club a fun and ever-evolving learning environment for the participants, and we look forward to see it continue next year.
I enjoyed this program a lot and I learned many new things that will prepare me for my future studies in post-secondary.

Program Member
OUR OUTREACH

WISE Kid-Netic Energy is dedicated to inspiring all youth to explore Science and Engineering. We have special initiatives to provide outreach to underrepresented groups.

wisekidneticenergy.ca/outreach
ADOPT-A-CLASS

Our Adopt-a-Class Program has been offering inner-city, or socio-economically challenged schools free workshops since 2012. This program recognizes the challenges of certain neighbourhoods, and provides programming to schools that might not otherwise be able to access our services. This year’s schools included Brooklands, Champlain, David Livingstone, Dufferin, Elmwood, King Edward, Niji Mahkwa, Norquay, Pinkham, River Elm, Sisler, Southeast Collegiate and William Whyte. Between September 2019 and March 2020 we have already delivered 45 workshops, and visited 937 youth. We are so grateful to those who participated in the UM’s crowdfunding campaign to support this program. Just over $7000 was raised. And as always, we are thankful to Actua, The Winnipeg Foundation, and other private donors for their contributions. Learn how you can contribute by visiting our website.

They really enjoyed how hands on everything was, and the fact they could each get their own materials.

Madison Bell, Niji Mahkwa School, Winnipeg, MB
INDIGENOUS OUTREACH

In the spring of 2019 we delivered workshops and camp to Skownan First Nation, Sapotaweyak Cree Nation, Wanipigow First Nation, Pinaymootang First Nation and Sagkeeng First Nation. Just through our Grades 4-6 camp alone, we reached just over 400 youth.

As always we partnered with Frontier School Division to bring Career X to Cranberry-Portage at Fontier Collegiate Institute. Students from small communities throughout the north without high schools joined us in Cranberry-Portage for a week of camp activities. In addition, during the summer we delivered camp in Norway House Cree Nation, as well as at Ma-Mow-We-Tak Friendship Centre in Thompson.

This program is absolutely amazing! I am a teacher at Sagkeeng Junior High, and the facilitators came to our school a couple of weeks ago. The students were very engaged, and learned a lot. At the end we wrote thank you letters as a class, and everyone wanted to take part. I would highly recommend this program to all schools.

Sharilee Swaity, Sagkeeng First Nation, MB
MAKE YOUR MOVE

Make Your Move is a unique annual outreach opportunity that invites young female leaders in Grade 8 to a special event designed to challenge and to inspire them. Engineers Canada has set the ambitious goal of 30 per cent female participation in engineering by the year 2030. In support of this goal, we hope to influence young women attending the event to choose the correct science and math courses for admission into the faculty in the future. At the event each team is matched up with a female engineer mentor. Together they participate in a design-build-test challenge that encourages teamwork, creativity, and ingenuity. In 2020, 60 girls attended the event sponsored by TREK Geotechnical, Manitoba Hydro, FWS Group, KGS Group, Macdon, Price Industries, RTDS Technologies, Hatch, Standard Aero, NSERC Chair for Women in Science and Engineering, Price Faculty of Engineering, Stantec, Boeing, McCain, Dillon, WSP and Emergent Biosolutions.

My favourite part of the event was the design challenge. It was fun and inclusive, making this an overall wonderful experience. I was really glad that we all had mentors both to teach and help us, but also as someone who knows the ropes. On a side note, the food was awesome and having breakfast was a really good idea.

Make Your Move Participant
GO ENG GIRL & GO CODE GIRL

Go Eng Girl and Go Code Girl are free of charge public events for girls in Grades 7-9 that explore engineering and computer science/engineering. These events are framed in an encouraging and interactive way through hands-on activities and challenges. A key component of each event is also about providing information and resources to the students and their parents about how they can continue in these fields. In November 2019, Go Eng Girl reached 35 participants, and in February 2020, Go Code Girl hosted 87 participants. Thank you to all of the volunteers who help to make these two events extraordinary.

I liked that we were able to create something that others can use, and that it will be donated.

Go Eng Girl Participant

It was really fun with the different challenges that showed us how to code.

Go Code Girl Participant
OUR FINANCES

REVENUE: $719,000

- Sponsors/Donors – 51%
- University of Manitoba – 24%
- Income Generated – 8%
- Federal Government – 14%
- Provincial Government – 2%
EXPENSES: $729,000

- Non-Student Wages & Benefits – 35%
- Student Wages & Benefits – 27%
- Travel – 12%
- Materials and Supplies – 26%
What I liked most about the program was that she was being active, interacting with other kids, but also would come home with something she learned.

Parent of a Camper, Norway House Cree Nation, MB
OUR SUPPORTERS

2019-2020 FISCAL YEAR FUNDERS

We have many generous supporters that make our work possible.
WISE Kid-Netic Energy is a Proud Network Member of Actua

Actua provides training, resources and support to a national network of local organizations offering science and technology education programs. Actua members reach over 250,000 youth per year, in 500 communities nationwide. Please visit Actua on the web at www.actua.ca.

2019 ACTUA NATIONAL FUNDERS

2019 ACTUA MANITOBA FUNDERS
OUR FUTURE

WISE Kid-Netic Energy looks forward to maintaining close ties with the Faculty of Engineering and the Faculty of Science at the University of Manitoba, and aligning ourselves closely with their strategic outreach objectives. We look forward to strengthening our ties with teachers and schools within the province so we can continue to support efforts to attract more youth into careers in Science, Technology, Engineering and Math. Our province has a bright future ahead and we know our talented youth are the conduits to our joint success.