

actüa™

Youth · STEM · Innovation
Jeunesse · STIM · Innovation

ACTUA 2018/2019 ANNUAL REPORT



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Actua is incredibly proud to support and represent a network of 40 members located at universities and colleges across Canada. All network members share the mandate of developing essential employability skills and confidence in youth in STEM. Actua network members deliver on and off-campus programming in over 500 communities covering every province and territory in Canada.

British Columbia

Coast Mountain College
Prince Rupert
Digi Camps

Simon Fraser University
Burnaby
Science ALIVE

Thompson Rivers University
Kamloops
EUReka! Science Program

University of British Columbia
Vancouver
Geering Up

University of Victoria
Victoria
Science Venture

Yukon

Yukon College
Whitehorse
YC Kids Camps

Alberta

Red Deer College
Red Deer
Red Hot Science at RDC

University of Calgary
Calgary
Minds in Motion

University of Lethbridge
Lethbridge
Destination Exploration

Northwest Territories

Aurora College
Inuvik
*Aurora Research Institute
STEM Outreach Program*

Saskatchewan

First Nations University of Canada
Regina
FNUniv Science Outreach Programs

University of Regina
Regina
EYES

University of Saskatchewan
Saskatoon
SCI-FI Science Camps

Manitoba

Brandon University
Brandon
Mini University

University of Manitoba
Winnipeg
WISE Kid-Netic Energy

University of Winnipeg
Winnipeg
Wii Chiiwaakanak Learning Centre

Nunavut

Nunavut Research Institute
Iqaluit
Simply Science

Ontario

Canadore College
North Bay
First Peoples' Centre

Carleton University
Ottawa
Virtual Ventures

Lakehead University
Thunder Bay
Superior Science

McMaster University
Hamilton
Venture Engineering and Science

Nipissing University
North Bay
NUScience Explorations

Ontario Tech University
North Oshawa
*Ontario Tech University
Engineering Outreach*

Queen's University
Kingston
ASUS Summer Camps

Queen's University
Kingston
Queen's Engineering Outreach

Six Nations Polytechnic
Brantford, ON
*Six Nations Polytechnic
STEAM Academy*

Trent University
Peterborough
TRACKS Youth Program

University of Guelph
Guelph
Creative Encounters with Science

University of Ottawa
Ottawa
uOttawa Engineering Outreach

University of Toronto
Toronto
Engineering Outreach

University of Waterloo
Waterloo
Engineering Science Quest

Western University
London
*Western Engineering
Outreach Programs*

York University
Toronto
Science Engagement

Quebec

École Polytechnique de Montréal
Montréal
Folie Technique

Centre d'interprétation des Biosciences
Laval
Musée Armand Frappier

Université du Québec à Trois-Rivières
Trois-Rivières
Génitrucs

New Brunswick

University of New Brunswick
Fredericton
Worlds UNBound

Nova Scotia

Dalhousie University
Halifax
SuperNOVA

St. Francis Xavier University
Antigonish
X-Chem Outreach Program

Newfoundland and Labrador

Memorial University
St John's
Memorial Engineering Outreach



WHO WE ARE

Actua is Canada's leading science, technology, engineering and mathematics (STEM) education outreach organization. Our 40 network members located at universities and colleges across Canada, coupled with our Outreach Team, annually engage 300,000 youth in 500 communities nationwide. Our for-youth-by-youth program delivery model equips Canada's most underserved and underrepresented youth with the skills they need to be the future drivers of innovation. It inspires them to fulfil their critical role solving real-world problems and contributing to Canada's social and economic prosperity.

Actua is a national leader in breaking down the barriers that prevent many of Canada's youth from accessing transformational STEM experiences and participating in STEM studies and careers. Our national inclusivity programs are customized to engage girls and young women, Indigenous youth, new Canadians, economically disadvantaged youth, and youth living in remote communities. Canada will not achieve its full innovation potential without the full participation of these groups.

Working together, with our network members, our corporate partners, government agencies and other like-minded groups, we are moving the dial on Canada's future innovation, economic and social competitiveness and prosperity.

MESSAGE FROM THE CHAIR

It is a privilege to present to you Actua's Annual Report for 2018-2019. This year saw Actua deepen its impact and extend the reach of its work to more young Canadians than ever.

In a time of dizzyingly rapid change, Actua remains steadfast in its over 25 year commitment to prepare youth for the unpredictable future of work. Actua's programming fuels curiosity and confidence in youth, building foundational skills in science, technology, engineering and mathematics (STEM), contextualized to their communities and everyday life experiences. All year, through camps, workshops, clubs and outreach activities, Actua's network members are preparing youth to contribute to Canada's economic and social advancement.

Actua has always made it a priority to reach underserved and underrepresented youth, developing programs across the country that can engage these youth. This includes programs for Indigenous youth, youth living in Northern and remote communities, at-risk youth, girls and young women.

Actua's Board is particularly proud of the growth of the Indigenous Youth in STEM program which now includes the delivery of for-credit STEM experiences for high school students at partner community land-camps across the country.

Finally, the Board is happy to welcome Actua's newest network members, Ontario Tech University, Canadore College, Aurora College and Six Nations Polytechnic, to the Actua family. Each of these new members brings exciting approaches and knowledge into the network, and we look forward to growing together.

On behalf of the Board, thank you to the many private sector, government and community partners that have supported Actua's mission this year. The board is also grateful for Actua's exceptional staff and leadership for delivering another year of growth, continued relevance and meaningful impact for the youth Actua serves.

Susan Holt
Chair, Actua Board of Directors



BOARD OF DIRECTORS



Susan Holt (Chair)

Vice-President, Strategy & Communications;
PQA Testing/PLATO Testing



Paul Ledwell (Past-Chair)

Clerk of the Executive Council and Secretary to
Cabinet, Deputy Minister of Policy and Priorities;
Province of Prince Edward Island



Jennifer Flanagan (Secretary)

CEO, Actua



Kim Warburton (Director)

Vice-President, Corporate & Public Affairs;
TD Bank Group



Trevor Cuddy (Director)

Director, Continuing Professional Development,
Faculty of Medicine, University of Toronto



Kris Smith (Director)

Executive Vice President, Refining & Marketing;
Suncor Energy



Marshall Shelf (Director)

Director; Finance, Insurance & Travel;
Google Canada



Tyler Wish (Director)

CEO, NAC Bio



Kilikvak Karen Kabloona (Director)

CEO, Nunavut Tunngavik Incorporated



Melisa Yestrau (Director)

Science Venture at University of Victoria



Jan O'Donnell (Director)

Independent Contract (CFO)

MESSAGE FROM THE CEO →

MESSAGE FROM THE CEO

This year was another exciting year of significant growth for Actua and our network of member organizations - welcoming three new network members. We were also pleased to welcome a number of new corporate supporters including The Future Skills Centre, CIBC, Mastercard, Canadian Internet Registration Authority (CIRA), Nintendo of Canada and CN. And hot off the press - we are very proud to receive \$12 million of the Government of Canada's phase two of CanCode funding, supporting the development of coding and digital skills for youth.

Actua's long-standing strength has been the significant geographic outreach of our network members - to over 500 communities covering every province and territory every year. Continued and increased support from government, as well as from our wonderful long-standing corporate sector partners has enabled us to sustain and grow this reach every year. This support has also enabled us to significantly scale our deeper impact programs - those that engage youth over longer periods of time. We know this repeat exposure is essential to achieve measurable impact and long-term economic impact. These deeper impact programs have included multi-year programming with Indigenous youth, extensive employability training with our student employees, piloting of high-school

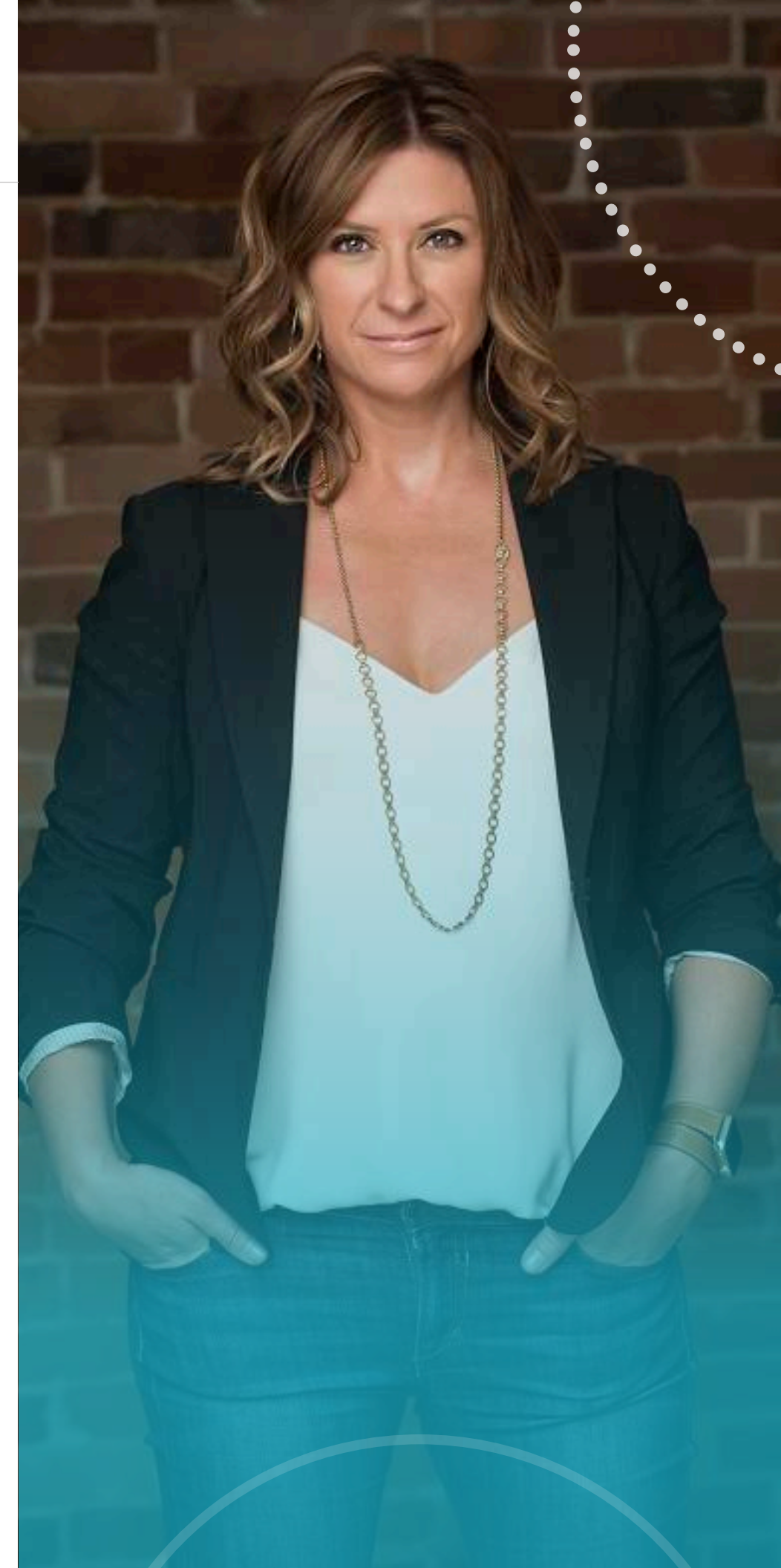
work experiences, and career mentoring with girls and young women. We have continued our long standing commitment to implementing the Truth and Reconciliation Commission calls to action through our Indigenous Youth in STEM program. Beyond having Indigenous representation at all levels of our organization, from our instructors, to our board of directors, we are working with Indigenous community partners year after year to not only engage over 35,000 Inuit, First Nation and Metis youth but to ensure this engagement is sustainable and build on the strength of Traditional Knowledge.

Actua's network is also continuing to push the agenda on the inclusion and advancement of girls and women in STEM. I'm proud to say that collectively, we are engaging over 150,000 girls a year in skills and confidence building STEM experiences. This continues to be a major priority, especially as we see continued questioning of these efforts in the media.

I look forward to another great year of growth for Actua's network, who are inspiring the next generation of great innovators.

Jennifer Flanagan
Actua President and CEO

TWEET @ACTUACEO



ACTUA'S PROGRAM DELIVERY MODEL

We mobilize the dynamic skills and enthusiasm of young leaders across Canada who share their passion for STEM with Canada's youth.



LEADERSHIP

Board members from the public and private sectors provide strategic leadership. Actua's national team provides on the ground training, resources and support to our network members.



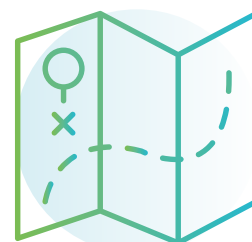
NATIONAL IMPACT

Together, we are engaging and inspiring **300,000 Canadian youth** in **500 communities** across every province and territory!



NETWORK MEMBERS

40 network members located at universities and colleges across Canada engage **1,000 undergraduate students** in science and engineering fields as instructors and **1,400 high schools students** as volunteers who serve as incredible role-models for youth.



OUTREACH TEAM

A team of highly trained instructors from across Canada are equipped to deliver programming in rural and remote areas not yet served by our network members and incubate new programs and growth opportunities for Actua.



TWO MILLION FACE-TO-FACE HOURS

Actua's network delivers two million face-to-face hours of high impact programs each year.

HIGHLIGHTS OF 2018/2019

ACTUA RECEIVES \$12M IN CANCODE FUNDING

In July 2019, the Government of Canada announced Actua as a recipient of **\$12 million in CanCode program funding**. The two year program was designed to support organizations like Actua to engage Canadian youth in coding and digital skills learning opportunities. This funding is supporting Actua's university and college-based network member programs and outreach team's delivery of coding and digital skills camps, clubs, and workshops **in 500 communities**.

It is also supporting Actua's National Teacher Training program which will engage **15,500 teachers across Canada from 2019-2021**.

INVESTMENTS IN FUTURE SKILLS

Both the public and private sector are increasingly focusing on and investing in ways they can prepare Canadian youth to excel in future jobs. In addition to Actua's regular national programs, we are helping achieve this through the delivery of employability skills training for youth in their senior years of high school, and in undergraduate university and college programs. We're proud to share the following investments in Actua this year that will help prepare youth for the future of work:

- \$2.3 Million from Government of Canada's Future Skills Centre
- \$1.1 Million from RBC Foundation in collaboration with [RBC Future Launch](#) and;
- Grant support from the Mastercard Impact Fund

DELIVERING LAND-BASED LEARNING FOR INDIGENOUS HIGH SCHOOL STUDENTS

Actua is piloting a series of for-credit land camps as a national strategy for moving the dial on high school graduation rates for Indigenous students and preparing them for their future roles as innovators and leaders in exciting careers. The camps are built on a foundation of land based learning, with local cultural concepts and Traditional Knowledge shared by Elders and Knowledge Keepers. STEM and digital skills are then integrated within land-based activities so that connections are made between aspects of culture and Traditional Knowledge and modern science. Land-based learning, and on-the-land camp programs are not new. These happen every year at hundreds of locations across Canada. What is new is the notion that the skills acquired through this land based learning, coupled with the integration of STEM and digital skills delivered by undergraduate students in STEM studies - can play a key role in improving high school graduation rates among Indigenous students and breaking down barriers to Indigenous engagement in a future workforce. To date over 200 Indigenous students have attained high school credit through this initiative. Communities across Canada are expressing strong interest in partnering with Actua to grow this initiative. We are grateful to the Future Skills Centre, as well as our corporate sector partners including Suncor Energy Foundation, Imperial and others for their early investments in this program.



HIGHLIGHTS OF 2018/2019

GOOGLE AND ACTUA BRING AI TO THE CLASSROOM

In May, 2019, Google.org announced a \$500,000 grant to Actua's national Coding and Digital Skills program. The grant will go towards developing artificial intelligence (AI) curriculum for Canadian high-school students across the country, including communities where access to technology is more limited.

The new program will first involve exploring existing high school AI content and identifying gaps. Actua will then work with a team of leading AI experts to develop new content that covers basic principles of AI, how it works and how it will influence future careers beyond just computer science (from music, to medicine, to farming). The program will also highlight Canada's rich history and pride when it comes to AI. In its pilot year (2019-2020), Actua expects the AI programming will reach up to **15,000 students** in every province and territory across Canada. **It will also engage 500 teachers in AI training.**

CONFERENCE BOARD OF CANADA REPORT ON ACTUA'S ECONOMIC IMPACT

In 2018, the Conference Board of Canada conducted a study on Actua's economic impact in Canada. Below are some key findings from the report:

- Actua and its partners provide programs that motivate youth—particularly girls and Indigenous youth—to consider post-secondary education and careers in science, technology, engineering and mathematics (STEM).
- In 2015-16, Actua delivered STEM programs to over 263,000 youth—including 132,000 girls and 38,000 Indigenous youth—across all provinces and territories.
- The Conference Board of Canada estimates that Actua's 2015-16 activities will generate an overall economic impact of \$57.2 million arising from just \$16.1 million in operating expenses.
- The substantial economic impact of Actua's activities is a result of higher earnings to participants who choose STEM education and careers because of their Actua experience, as well as spin-off effects on employment and the economy more generally.
- Every \$1 million invested in Actua STEM programs generates \$3.5 million in GDP.



NETWORK MEMBERS AND AWARD RECOGNITION

Actua's 40 network members at universities and colleges across Canada are at the forefront of innovative delivery of STEM programming. Each year, Actua recognizes outstanding performance by network members overall and in specific areas of program delivery.

This year, **the Actua Award for Excellence**, which recognizes network members who exemplify a commitment to quality and innovation in all aspects of their program, was awarded to Venture Engineering and Science at McMaster University.

The Actua Experience Award, which this year recognized excellence in the engagement of girls and young women in STEM, was awarded to

Science Venture at the University of Victoria.

The Mentorship Award, which recognizes excellence in helping youth learn from professionals in a variety of STEM fields, was awarded to WISE Kid-Netic Energy at the University of Manitoba.

The Actua Make Friends with Science Award, which recognizes outstanding achievement in showcasing the transformational experiences that network members provide, through photos and other media, was awarded to Destination Exploration, University of Lethbridge.

NATIONAL PROGRAMS



INDIGENOUS YOUTH IN STEM (INSTEM) PROGRAM

Inclusion and Reconciliation - Inspiring ALL Youth Through STEM

Actua's national Indigenous youth in STEM outreach program (InSTEM) is a customized community-based approach to annually engage 35,000 First Nations, Métis, and Inuit youth in locally and culturally relevant STEM education experiences.

We work closely with Indigenous communities, Aboriginal Resource Centres at our network member institutions, Indigenous leaders, and Indigenous organizations. These organizations include Indspire, Indigenous Works, and hundreds of First Nations, Inuit and Métis organizations across Canada to ensure Actua's model is reflective of successful practices in Indigenous youth engagement.

Actua's InSTEM program starts with the premise that STEM concepts are intrinsic to Indigenous ways of knowing and day-to-day life of Indigenous peoples. Our role is to facilitate the connections between aspects of culture, Traditional Knowledge, and modern science, thereby opening the pathway for youth to explore their potential as future innovators in STEM. The program has recently grown to also include land-based for-credit programming for Indigenous high school students as a means to improve high school graduation rates among Indigenous youth.

GO WHERE KIDS ARE PROGRAM

The Go Where Kids Are program recognizes that many youth do not have the opportunity to attend a STEM outreach program, even if the program is offered at no cost. In order to engage these hard to reach youth, Actua and our network members partner with youth serving organizations such as family resource centres, immigrant community organizations, Boys and Girls Clubs, YM/YWCAs, and others who already have these youth engaged. This model allows us to annually engage over 30,000 underrepresented and underprivileged youth. Our commitment is to provide sustained programming in these locations, returning each year to strengthen the impact of the programming on the youth we reach.





ACTUA'S TEACHER TRAINING PROGRAM

Actua's teacher training program, launched in 2017, is designed to connect K-12 educators from coast to coast with innovative and inspiring professional development opportunities. Our network members and education team travel the country to deliver educator conferences, professional development days, after-school and weekend training sessions, in-classroom mentorship, and provide supporting resources. The mission of this program is to equip teachers, like students, with the toolsets, skill sets, and mindsets to integrate coding and digital skills into classroom instruction. Actua's Teacher Training Program will engage 15,500 teachers across the country and is currently supported by CanCode, Microsoft Canada and CIRA.

NATIONAL GIRLS PROGRAM

Actua inspires girls to explore their important and unique roles in STEM. Through inquiry-based, girl-led content, Actua encourage girls to take risks, invent, and communicate their learning with others in an all-girl environment, inspired by women role models and mentors. Actua also supports gender equity and LGBTQ awareness training for all instructors, intentional gender equity policies in co-ed programs, and general principles around inclusivity and creating a safe space for learning. Actua's National Girls Program plays an important role in building girls' self-efficacy, resilience, and future economic independence. Each year, Actua reaches over 10,000 girls annually through our high impact, all-girl initiatives.

Building off of a three year project successfully concluded with Women and Gender Equality Canada (formerly known as Status of Women Canada), and now with a new \$1 million donation from TD Bank Group, through its corporate citizenship platform, The Ready Commitment, Actua is rolling out across its network evidence-based models of successful practices in engaging girls with digital skills strengthening numeracy and preparing them for their roles as future innovators, and informed, safe, digital citizens.





ACTUA IN THE NORTH

Actua has been working in and with Northern Canada for over twenty years. Every year, Actua reaches 8,500 youth in over 40 communities spanning the Yukon Territory, Nunavut, and the Northwest Territories. Actua has built sustainable, meaningful relationships with Northern communities to ensure that the STEM content we deliver is reflective of local cultural and economic development.

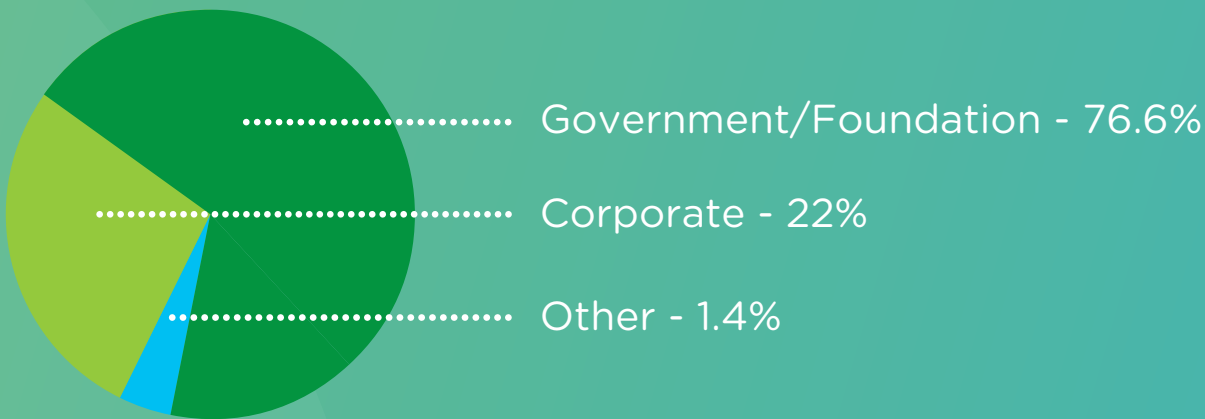
Through direct connections with local industry, researchers, and education institutions, Actua facilitates exposure to northern career opportunities. Programming is made relevant to northern contexts through partnerships with local industry, the Canadian High Arctic Research Station, Ocean Networks Canada, and others. Actua also works with its three northern network members at Yukon College YK, Aurora College NT, and Nunavut Arctic College NU to provide northern youth with direct connections to post-secondary education experiences and inspire them to engage in further study and careers. Through experiential learning, and opportunities to design and build while solving simulated real-life northern challenges, youth gain important critical thinking, collaboration and problem solving skills. They become motivated to pursue further studies and realize their potential as informed community leaders and drivers of local economic development.

As a means to deepen the program's impact, Actua is also providing northern teachers with resources and training opportunities to help them incorporate STEM and digital skills activities in their classrooms. Hundreds of teachers participate and thousands more students benefit from the extended learning opportunity.

FINANCIAL SUMMARY

The majority of Actua’s resources are directed to program development and implementation. This includes supporting the critical services delivered by a network of member organizations located at universities and colleges across Canada. In 2018, Actua’s budget was \$12 million. This does not include the local operating budgets of our 40 network members.

REVENUES



EXPENSES



ACTUA SUPPORTERS



Nunavut Arctic College
Shopify
Canada Foundation for Innovation

The McCain Foundation
Government of Nunavut,
Department of Economic Development
and Transportation

Kakivak Association
Nunatsiavut Government
Accenture





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