



YEAR 1

Strategic Science Fund: 2024-2025

Actua Public Annual Report

actua

Youth · STEM · Innovation
Jeunesse · STIM · Innovation

Table of Contents

Executive Summary	2
Year 1: Activities Undertaken and KPIs	4
Summary of Evaluations and Audits Conducted	6
Financial Performance	12
SSF Expenditures	12
Matched Fund Revenue	13
Leveraged Fund Revenue	13

Executive Summary

Actua has achieved exceptional results in Year 1 of our SSF-funding project. We have met or exceeded all Key Performance Indicator (KPI) targets and made significant strides in expanding and diversifying Canada's science and innovation talent pipeline. This report highlights key achievements and outlines robust financial stewardship.

Key Achievements and Progress Towards Objectives

Building Canada's Future Innovation Talent

In 2024-25, Actua delivered programming that significantly expanded Canada's future talent pipeline. Our SSF-supported programs played a vital role in developing future innovation talent in scientific fields aligned with Canada's priorities. This year, we engaged 558,762 youth in skill development programs across 726 communities in all 13 provinces and territories—surpassing our target of 325,000 by a wide margin. This included 60,556 youth participating in French-language programming. We made substantial progress in reaching equity-deserving youth, including Indigenous youth, girls in all-girls programming, Black youth, youth with disabilities, and youth facing socio-economic challenges. By engaging these youth, Actua is ensuring Canada's future talent pipeline is robust, diverse, and equipped to lead in the economy of the future.

Facilitating the Exchange of Knowledge in Canada and Abroad

To amplify the impact of our youth reach, Actua delivered and participated in several knowledge exchange events, hosting six thought leadership initiatives, and securing 23 media engagements, fostering national dialogue on equity-focused STEM talent development. Collaborations with fellow SSF recipients, including the Canadian Association of Science Centres and the Council of Canadian Academies, further amplified our reach and impact. We also delivered three Indigenous Youth in STEM summits, sharing best practices in Indigenous youth engagement with a broad Canadian audience. We engaged 44 Indigenous youth in intensive leadership development and employment networking, directly putting our evidence-based approaches into practice.

Advancing Science Literacy and Science Culture in Canada

These knowledge-sharing efforts were matched by targeted investments in science literacy and culture, ensuring more youth have access to the skills and mindsets needed to succeed in a changing economy. Actua strengthened its role in fostering innovation skills by expanding its network of local organizations dedicated to science literacy. This year, we welcomed two new postsecondary members in regions with limited program access and built new or stronger partnerships with 22 local youth-serving organizations, extending our reach to more underserved youth across the country.

Increase the Quality of Internationally Competitive, Leading-Edge Research in Areas Critical to the Health, Economic and Social Well-being of Canadians

To sustain and guide this work into the future, Actua advanced leading-edge research that will inform both program design and policy development. In Year 1, we initiated four major studies including a literature review on science culture in Canada, a discussion paper on systemic change in STEM skill building, a collaboration with the Munk School on STEM inclusion for youth with disabilities, and a national survey with Abacus Data on youth perceptions of artificial intelligence (AI). These studies provide a strong foundation for future initiatives and ensure our work remains closely aligned with federal priorities.

Outcomes and Impact

Actua's programs deliver measurable, lasting change for youth across Canada, backed by rigorous, ongoing evaluation. Each year, we assess our programs to ensure they not only meet but exceed the skills, confidence, and engagement levels needed for future success in STEM. The results from this year's impact evaluations highlight the transformative effect of our work:

- **80% of youth** reported improved STEM skill development.
- **62%** gained confidence in their STEM abilities.
- **63%** expressed increased interest in learning more about STEM.
- **47%** are more interested in studying STEM in university or college, and **40%** in a STEM career.
- **83% of Indigenous youth** reported increased understanding of Indigenous land-based knowledge.
- **91% of Actua instructors** felt confident in fostering inclusion and accessibility in STEM, and **94% of instructors** felt confident in fostering anti-racist mindsets and behaviours in STEM.

Financial Performance

In Year 1, Actua received \$6,859,200 from the SSF. The SSF funding was spent across Research (\$256,000), Knowledge Mobilization (\$430,000), Networking (\$5,174,000, including \$3,210,000 to Network Members), and Operational Costs (\$999,200). Actua secured \$5,830,000 in matched funds and leveraged federal funds and underwent its annual audit in March 2025, receiving a clear audit opinion.

Year 1: Activities Undertaken and KPIs

In fiscal year 2024/25, Actua made significant and measurable advances in expanding, enriching, and diversifying Canada's science and innovation talent pipeline; facilitating knowledge exchange and thought leadership on equity-driven youth STEM engagement; advancing science literacy and science culture; and investing in research to better understand the Canadian science and innovation landscape. We are pleased to report that we met or exceeded all KPI targets for Year 1.

Expanding, Enriching, and Diversifying Canada's Youth STEM Talent Pipeline

Overall, with support from SSF, Actua engaged 558,762 youth in STEM skill development programs in 726 communities in all 13 provinces and territories, exceeding our target of 325,000 youth in Year 1. Of those, 60,556 youth were engaged in French-language programming. The total reach is also inclusive of the following reach disaggregated by youth demographic, exceeding all of our targets:

- **51,874 Indigenous youth**, including 387 who received high school credit through land-based learning experiences;
- **51,096 girls** in all-girls programs;
- **14,473 Black youth**;
- **2,658 youth with disabilities**;
- **182,602 youth facing socio economic challenges.**

Actua also successfully engaged **1,188 postsecondary students** in paid work experiences as STEM instructors, building their in-demand and career-readiness skills.

Facilitating Knowledge Exchange and Thought Leadership

Actua delivered three InSTEM summits that created transformative opportunities for 44 Indigenous high school and postsecondary youth. Through participation in the Forward Summits, major corporate and public sector gatherings that bring together hundreds of Indigenous and non-Indigenous business leaders to advance economic reconciliation, these youth served as panelists, leaders, and learners. They inspired their adult peers while gaining valuable insights into the diversity of STEM career opportunities across Canada.

In addition, Actua hosted six thought leadership events in Year 1, sparking national conversations on critical issues including resilience in the innovation economy, preparing youth for an AI-driven future, and strategies for building an inclusive, future-ready science culture in Canada.

Investing in Research to Better Understand the Canadian Science and Innovation Landscape

To guide our work into the future, Actua advanced leading-edge research that will inform both program design and policy development. In Year 1, we initiated four major studies to deepen our understanding of the rapidly evolving science and innovation landscape and strengthen our impact on equity-focused STEM.

Our first study was a literature review on Science Culture in Canada, examining how the concept has evolved over the decades, why it matters, and how it must be reimaged in an era of growing science denial and advancing technological development. The review explored how to develop a more inclusive and relevant definition of science culture that addresses the erosion of trust in science, enables all Canadians to see themselves as part of it, and supports Actua in tailoring programs that build a nation rooted in scientific curiosity and understanding. The paper will be finalized in Year 2 and serve as a foundation for knowledge mobilization and conference presentations in Canada and abroad.

The second study focused on systemic change in STEM outreach for underrepresented youth, to help us better outline the shifts in fundamental structures, policies and institutional cultures required to create equitable and inclusive STEM learning environments. The resulting discussion paper, to be shared in Year 2, synthesizes diverse perspectives on systemic change, gathers insights on how STEM outreach can contribute to it, and examines strategies for tracking progress. This work will strengthen Actua's approach to engaging equity-deserving youth in STEM.

Our third study was a collaboration with the Munk School of Global Affairs and Public Policy at the University of Toronto. Their research on making STEM more inclusive for youth with disabilities included a literature review and interviews with Actua network members and other leading organizations serving youth with disabilities. The findings are already shaping Actua's program design for this audience to further ensure no Canadians are left behind in the innovation economy.

Finally, our fourth study conducted by Abacus Data was a national survey of youth, educators, and parents on perceptions of Artificial Intelligence (AI), especially in relation to education, youth development, skills and well-being. The results revealed that while AI is rapidly becoming embedded in work, education, and social life, young people may not be adequately prepared to navigate its opportunities and risks, and educators may not be fully equipped to guide them. These insights directly support Canada's federal priority as reflected in Prime Minister Carney's 2025 Mandate Letter, which underscores the need for timely skills and training to prepare Canadians for AI-driven opportunities. The study's findings will be published in Year 2 and will inform Actua's AI programming for years to come.

Advancing Science Literacy and Science Culture in Canada

In Year 1, Actua made significant strides toward strengthening science culture across Canada. We welcomed two new network members, Concordia Youth Engagement at Concordia University and TMU Engineering Outreach at Toronto Metropolitan University, bringing our national network to 43 organizations. As a national leader, Actua advances science culture through thought leadership, research, and media engagement, as outlined above. Equally important, our impact is felt locally in communities across all 13 provinces and territories, through the work of our network members and outreach team. This year, we established new or strengthened partnerships with 22 youth-serving organizations, furthering our goal of reaching more equity-deserving youth.

A strong science culture also depends on multi-sector investment. In Year 1, Actua secured more than \$5.8 million in matched and leveraged funding to support our SSF-funded project. This included \$2.3 million in in-kind contributions from network members, \$2.6 million from corporate supporters, and \$575,000 from other federal sources. We also welcomed four new corporate partners doubling our target and strengthening the long-term sustainability of our work.

Summary of Evaluations and Audits Conducted

To measure and communicate the impact of our Year 1 programming, Actua conducted a series of robust evaluations assessing changes in youth's skills, confidence, and future intentions to pursue STEM. These evaluations provide evidence of how our programs are equipping the next generation with the tools to thrive in a rapidly evolving innovation economy.

Impact across all programs

In support of Canada's goals to build STEM skills, increase the number of STEM graduates, and enhance national science, technology, and innovation literacy, Actua and our network members deliver a diverse range of STEM experiences from intensive camps to ongoing clubs. Survey feedback from participants demonstrates strong progress toward these objectives, showing measurable gains in skills, confidence, and long-term interest in STEM pathways.

Actua Program Impact on STEM Skills and Confidence

- 80 percent of surveyed participants said they learned or *did something new in STEM*.
- 62 percent said that, because of the program, they are *more confident in their STEM abilities*.
- 63 percent said they are *interested in learning more about STEM*.

Actua Program Impact on Education & Career Intentions

As a result of their participation in an Actua-supported program:

- 45 percent of participants are more or much more interested in taking *optional STEM classes in high school*.
- 53 percent are more or much more interested in *going to university or college*.
- 47 percent are more or much more interested in *studying STEM in university or college*.
- 40 percent are more or much more interested in a *career in STEM*.

Impact across Actua's all-girls programs

We must continue to break down barriers to girls' and women's participation and achievement in STEM. Increasing their representation not only advances individual success but also ensures that science and innovation address issues and opportunities uniquely affecting women in areas that have historically been overlooked. Actua works to change this by delivering a range of evidence-based all-girls programs that create safe, engaging spaces where girls can strengthen their STEM skills, build confidence, and deepen their interest in STEM pathways.

Evaluations from Year 1 show that these programs are achieving their intended impact, with measurable gains in skills, confidence, and aspirations among participants—clear evidence that targeted interventions can help close the gender gap in STEM.

All-Girls Program Impact on STEM Skills and Confidence

- 81 percent of all-girls program participants surveyed said they *learned or did something new in STEM*.
- 60 percent said that, because of the program, they are *more confident in their STEM abilities*.
- 67 percent said they are *interested in learning more about STEM* – compared to 63 percent among participants in all Actua programs.

All-Girls Program Impact on STEM Education & Career Intentions

- 48 percent of all-girls program participants surveyed are more or much more *interested in taking optional STEM classes in high school* – compared to 45 percent among all Actua program participants.
- 56 percent are more or much more interested in *going to university or college* – compared to 53 percent among all Actua participants.
- 49 percent are more or much more interested in *studying STEM in university or college* – compared to 47 percent among all Actua participants.
- 40 percent are more or much more interested in a *career in STEM* – the same level as participants across all Actua youth participants.

Impact across Actua's Indigenous Youth in STEM Programs

Improving STEM education and career outcomes for Indigenous youth must start from Indigenous knowledge and experience. Actua works with Indigenous communities and partners to offer programs that centre Indigenous knowledge, leadership, and land-based learning. These programs have contributed to increased confidence among Indigenous youth, greater interest in Indigenous knowledge and STEM, and greater interest in STEM education and careers.

Actua's Indigenous Youth in STEM (InSTEM) program model offers multiple ways for Indigenous youth to get involved. From workshops, camps and clubs for younger youth, to high school for-credit land-based learning, internships and instructorship programs for older youth, Actua's model provides STEM, digital skills and land-based learning and wrap-around support. The programs are delivered by Actua's network members and Actua's Outreach team in collaboration with Indigenous community partners and education authorities.

Actua's outreach team engages youth where Actua's network members are not currently delivering, including the North. In 2024, Actua's outreach team engaged youth in summer camp programs in many communities across the Arctic including Nunavut, NWT and in Northern Alberta. Participant feedback shows the program was a valuable learning experience that left a deep impact on the campers.

Indigenous Outreach Camp Impact

- 77 percent said they *learned or did new things related to STEM*.
- 65 percent said camp helped them see *where STEM is in their community*.
- 74 percent said they *learned or did new things related to coding or digital skills*.
- 64 percent said that camp helped them *feel more confident in coding or digital skills*.

Education and Career Intentions

As a result of camp:

- 70 percent of participants are *more interested in STEM*.
- 57 percent are more interested in *taking STEM classes in high school*.
- 73 percent said they *now know more about jobs in STEM*.
- 56 percent are *more interested in a job in STEM*.

Indigenous Internships Impact

Actua supports the participation of a number of high school students in an internship program intended to help them gain a better understanding of and engagement with STEM, develop leadership skills, and contribute to their professional skills and career readiness. The internships emphasize Indigenous Knowledge, STEM, and the connections between them. As evidenced below, internships are an extremely effective way to create impact.

Indigenous Youth Experience in the High School Internship Program

- 100% of Indigenous participants who completed a post-program survey were satisfied or very satisfied with the program overall.
- 88% agreed the program improved their *understanding of STEM*.
- 88% agreed or strongly agreed the program improved their *enjoyment of STEM*.

Indigenous Knowledge and STEM

- 60% agreed or strongly agreed that the program increased their *understanding of Indigenous land-based knowledge and cultural practices*.
- 40% agreed or strongly agreed that the program increased their *understanding of the connections between Indigenous land-based knowledge and STEM*.
- 80% said they would like to *learn more about the connections between Indigenous land-based knowledge and STEM*.

Confidence and Workforce Readiness

- 70% said that, because of the program, they are more or much more *confident in their ability to be an instructor or leader*.
- 100% agreed or strongly agreed that, after participating in the program, they *feel better prepared for the workforce*.

Future Intentions

- 90% said that, because of the program, they are more or much more likely to *take a STEM course in high school.*
- 80% said that, because of the program, they are more or much more likely to *attend university or college.*
- 90% said that they are more or much more interested in *studying STEM in university or college.*
- 70% said that they are more or much more interested in *pursuing a career in STEM.*
- 70% said that, because of the program, they are more or much more likely to *pursue other opportunities to participate in Indigenous Land-Based STEM education.*
- 100% said that, because of the program, they are more or much more likely to *take a short Indigenous land-based work-placement opportunity if one were offered.*

Comments from Indigenous Interns

- “My internship is my first major job experience. It has taught me so many professional skills and how I work.”
- “My internship taught me how to keep myself accountable and how I can work. The pay helped my family out with buying necessities.”
- “The internship was a wonderful experience that further prepared me for a career in STEM.”

Instructor Training for Inclusive STEM and Career Readiness

Instructors for Actua's STEM programs are post-secondary students in STEM. Instructors not only serve as critical and effective role models for youth participants but also have the opportunity to strengthen their own STEM employability skills as they enter the workforce in the coming years. To support the skill development of instructors who will enter the STEM talent pool in the near term, Actua and its network members provided intensive, paid opportunities for instructors to develop their teaching, leadership and professional skills. A mix of online and in-person training, along with opportunities to deliver STEM programs and connect with other instructors and STEM leaders, are core features of Actua's instructor training.

Actua Instructor Training Impact

- 82 percent of instructors surveyed said they *feel better prepared for the workforce* following training.
- 80 percent said they *expanded their professional network* through the training program.
- 80 percent *feel better prepared to secure a job*.
- 72 percent *feel better equipped with the skills and knowledge needed to work in the industry that interests them*.
- 66 percent *feel more aware of possible career paths* in the fields that interest them.

Supporting Diversity in STEM

- 87 percent *feel the training program prepared them to be better advocates for diversity in STEM*.
- 91 percent *feel confident in their ability to foster inclusion and accessibility in STEM* following the program.
- 94 percent *feel confident in their ability to foster anti-racist mindsets and behaviours in STEM*.

Financial Performance

SSF Expenditures

SSF funding was spent within the fiscal year in the following four categories:

Research: \$256,000

Actua's research expenses included research positions, executing research partnerships, research training and the commissioning surveys.

Knowledge Mobilization: \$430,000

Actua's knowledge mobilization spending included the costs of Indigenous youth leadership engagement, new community engagement resources for InSTEM programs, and thought leadership activities.

Networking: \$5,174,000

Actua's Networking expenses includes \$3,210,000 of funds that were further distributed to ultimate recipients (Actua's Network Members). The remaining funds supported Actua's own delivery activities including workshops and summer camp programs in Northern Canada, participation in three Forward Summits, and hosting a national training summit which brought together over 40 network member organizations.

Operational Costs: \$999,200

Actua's operational cost spending supported portions of administrative salaries & benefits, rent and other office expenses, and professional fees such as translations, legal, human resources, and bookkeeping. This budget line also supported staff travel to attend and present at conferences related to Actua's Strategic Science Fund objectives.

Matched Fund Revenue

Total matched funds in Year 1 were **\$5,255,000** and were a combination of cash and in-kind support. This funding came from a wide range of sources including: provincial/territorial/municipal government, post-secondary institutions, not-for-profits, businesses, and other partners. This funding amount also included new private sector investments.

Leveraged Fund Revenue

Total leveraged funds in Year 1 were **\$575,000** which came from other federal government sources.