

ANNUAL REPORT 2018-19

BOLD IDEAS WITH BIG IMPACT[®]



**GRAND
CHALLENGES
CANADA**



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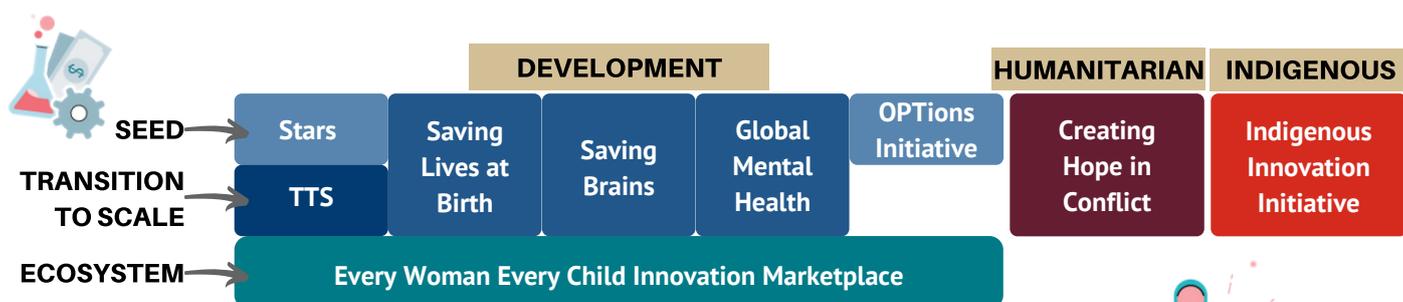
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GRAND CHALLENGES CANADA AT A GLANCE





A MESSAGE FROM THE CHAIR

OF THE BOARD OF DIRECTORS

This was an exciting year for Grand Challenges Canada (GCC). Under the leadership of our Co-CEOs, Dr. Karlee Silver and Ms. Jocelyn Mackie, our three pillars are doing very well: our Development Innovation programs have matured and continue to demonstrate outstanding results, our Humanitarian Innovation program has become a growth area for our organization, and the Indigenous Innovation Initiative is attracting funding for its first program. I continue to be proud of, and impressed by, our dedicated and high-performing staff, and what they accomplish. In my view, we are continuing to mature and demonstrate Canadian and global leadership in innovation for impact.

Our work would not be possible without support and deep engagement from a broad range of global leaders, institutions and organizations.

Without these, we would not be able to achieve our mission: to catalyze innovation that saves and improves the lives of the most vulnerable in Canada and low- and middle-income countries (LMICs).

This year, in particular, I would like to thank the anchor partners and funders in each of our pillars:

- **Global Affairs Canada** for their leadership and support of Grand Challenges Canada and for championing the vital role of innovation in development
- The **U.S. Agency for International Development's Office of U.S. Foreign Disaster Assistance**, the **U.K. Department for International Development**, and the **Department of Foreign Affairs of the Netherlands**, which are partners in the Creating Hope in Conflict Humanitarian Grand Challenge
- The **McConnell Foundation** and the **Department of Women and Gender Equality**, for their support of the Indigenous Innovation Initiative.

I would like to highlight our longstanding partnership with the Grand Challenges team at the **Bill & Melinda Gates Foundation** and the other members of the global Grand Challenges network, especially **Grand Challenges India**, **Grand Challenges Africa**, and **Grand Challenges South Africa**. I would also like to recognize our longstanding partnership with the **Canadian Institutes of Health Research (CIHR)** who have lent their knowledge and expertise to our peer review processes from our very first Request For Proposals until today.



A MESSAGE FROM THE CHAIR

OF THE BOARD OF DIRECTORS

Finally, I would like to thank all of the other funders, delivery partners, innovators and mentors who enable the success of the GCC platform.

As always, I am deeply grateful to the **Rotman Family Foundation** for their ongoing support. They have anchored our work across all of our pillars since our founding and continue to play a key role in our work going forward.

On a personal note, I would offer my continued gratitude to the volunteers who contribute so much time and expertise to the governance of Grand Challenges Canada through our Board of Directors, Scientific Advisory Board, Investment Committee and Indigenous Innovation Council. A particular thanks to our committee chairs:

- **Johanne Charbonneau**, Chair of the Audit, Finance & Risk Committee
- **Morris Rosenberg**, Chair of the Governance & Human Resources Committee
- **Gerhard Pries**, Chair of the Investment Committee



- **Carol Dahl**, Chair of the Scientific Advisory Board
- **Jeff Cyr**, Chair of the Indigenous Innovation Council

Our work would not be possible without your guidance and support.

Best regards,

Guylaine Saucier, CM, FCPA
Chair of the Board of Directors



A MESSAGE FROM OUR CO-CEOS

As an organization that stewards public funds, we believe deeply in the importance of broadly sharing our progress and results, and the lessons we are learning. Our Annual Report also provides an opportunity for us to reflect on the past year – on innovators who are making a difference, on our growing and maturing team, and on our path forward in the years to come.

Over the past twelve months, our first as co-CEOs, we worked closely with the Board of Directors and partners to chart a vision for the coming years.

We have grown and broadened from our original focus on innovation within global health and development to become a platform for innovation for impact.

We have begun to test our innovation platform in two new domains – humanitarian innovation and Indigenous innovation – each of which has equal potential for growth and impact as our original development innovation work.

Our ambitious vision is to grow each of these three pillars into transformative vehicles to save and improve lives.

In the coming year, you will begin to see the realization of this vision:

- Our **Development Innovation** team will continue to work closely with our partners at Global Affairs Canada to deliver on their development innovation priorities and to map out our work together in the years to come.
- Our **Humanitarian Innovation** team will continue to support innovations for energy, life-saving information, water and sanitation, and health in conflict zones through the Creating Hope in Conflict in partnership with USAID, UKAID and the Ministry of Foreign Affairs of the Netherlands. As the initial rounds of funding seed dozens of humanitarian innovations, we will be seeking partners to help us transition to scale the most promising ones.
- Our **Indigenous Innovation** lead will build out her team and get ready to launch our first challenge, working closely with the Department of Women and Gender Equality as well as other partners from the public, private and not-for-profit sectors in Canada.



A MESSAGE FROM OUR CO-CEOS

We look forward to sharing with you in future Annual Reports our progress and lessons learned across all three pillars of our work.

We would like to thank all of our funders and partners, hard-working staff, and board members and advisors who make it possible for the GCC platform to support innovators who are saving and improving the lives of the most vulnerable people around the world. And, of course, we would also like to acknowledge the powerful passion embodied by the hundreds of innovators we support who know that, together, we can catalyze a brighter future for all.



Sincerely,

Jocelyn Mackie
Co-CEO

Karlee Silver
Co-CEO



HIGHLIGHTS 2018-19

**OUR CUMULATIVE
IMPACT TO DATE**

“There is something deeply human and transformative about how Grand Challenges Canada nurtures its innovators [...] you are an ambassador of the Canadian people and their values.”

DR VISHWAJEET KUMAR, FOUNDER AND CEO OF COMMUNITY EMPOWERMENT LAB (INDIA); GCC-SUPPORTED INNOVATOR

\$329.8 M +



IN SUPPORT OF
INNOVATION
PROJECTS

1,060 +



INNOVATIONS
CATALYZED

131



AGREEMENTS
SIGNED THIS
FISCAL YEAR

up to
1.6 M



LIVES
SAVED
BY 2030

up to
51 M



LIVES
IMPROVED
BY 2030

85+



COUNTRIES WHERE
PRODUCTS OR
SERVICES ARE
IMPLEMENTED

10,000 +



JOBS
CREATED

940



PUBLICATIONS IN
PEER-REVIEWED
JOURNALS

168



PATENTS
CREATED

2:1

LEVERAGE
RATE



FOR EVERY \$1 GOVERNMENT OF CANADA
FUNDING DEPLOYED, \$2 HAS BEEN
LEVERAGED FROM INVESTORS AND
PARTNERS.



One million or more lives

WE HELP INNOVATORS SCALE TO OVER A MILLION LIVES REACHED.



ubongo

703,000

people reached to date

4.2 million

people to be reached by end of GCC funding

8.2 million

people to be reached by 2030

Ubongo "Akili and Me" leverages the power of entertainment and the reach of mass media to help young children in Sub-Saharan Africa be ready for school.



momconnect

618,000

people reached to date

1.2 million

people to be reached by end of GCC funding

7 million

people to be reached by 2030

Praekelt Foundation "MomConnect" seeks a reduction in maternal and neonatal death rates in Sub-Saharan Africa through a free, stage-based mobile messaging platform.



LIXIL

2.1 million

people reached to date

15 million

people to be reached by end of GCC funding

46.7 million

people to be reached by 2030

Lixil "SaTo Pan" Global Sanitation Social Enterprise improves access to affordable toilets for extremely low-income households.

Sustainable Development Goals

ADDRESSED BY OUR PLATFORM.

1 NO POVERTY 	2 ZERO HUNGER 	3 GOOD HEALTH AND WELL-BEING 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY 	8 DECENT WORK AND ECONOMIC GROWTH 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	10 REDUCED INEQUALITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	16 PEACE AND JUSTICE STRONG INSTITUTIONS 	17 PARTNERSHIPS FOR THE GOALS 	Primary: 3, 4, 5, 6, 7, 16 Secondary: 1, 2, 8, 9, 10, 17

Stars in Global Health



Canada



Global Affairs
Canada

Affaires mondiales
Canada

The Problem

Ensuring healthy lives and promoting well-being is essential to sustainable development. Intolerable inequities in health persist around the world and innovation is required to accelerate the achievement of the health-related Sustainable Development Goals, and yet, promising innovations – especially those that emerge from where the challenges are most acutely experienced – often lack the resources needed to demonstrate their potential for impact.

The Program

The Stars in Global Health program provides seed funding to the best and brightest innovators – both in low- and middle-income countries and in Canada – to test transformative ideas that have the potential to improve the lives of some of the world's most marginalized populations. The platform is flexible and responsive to a variety of challenges and can be leveraged to source pipeline in a highly-targeted way. It is also designed so failures are realized early and inexpensively.



656



innovations funded by Grand Challenges Canada across the first nine rounds, chosen from more than 3,900 applications from innovators in over 85 countries.

25%



of innovations that received seed funding through Stars are being transitioned to scale, two thirds of these are doing so without further funding from Grand Challenges Canada.

100%



of innovations selected this year through a focused Stars call are designed to improve sexual and reproductive health and rights.

34%



of innovations selected this year address gender based violence; 10% address child, early and forced marriage.

“We found that teaching the girls about advocacy [...] enabled them to strengthen their voice as a group to then try and make some changes within certain society norms. This is [an important lesson] that has come out of our interactions with Grand Challenges Canada.”

ERIC KADURU,
CO-FOUNDER OF
KADAFRICA



CASE STUDY:

Family planning in IDP camps in Afghanistan

Rose Charities and Tabish

Mother and child mortality rates in Afghanistan's Internally Displaced Person (IDP) camps are some of the highest in the world, driven in part by the fact that in Afghan culture men make health decisions for women.

Rose Charities implemented an innovative approach in Kabul-area refugee camps with their Afghan partners, Tabish, to address this gender inequity with respect to family planning.

By working with elders and religious leaders in the camps, men's groups were formed, and discussion of family planning was facilitated. In parallel, Tabish midwives worked with women to sensitize them to modern contraceptive methods.



Photo credit: Tabish Organization, Afghanistan

PROOF OF CONCEPT ACHIEVED

- Men's knowledge and attitudes changed, and informed spousal dialogue increased.
- 40% of men engaged requested contraception.
- 90% of women engaged requested contraception for the first time.



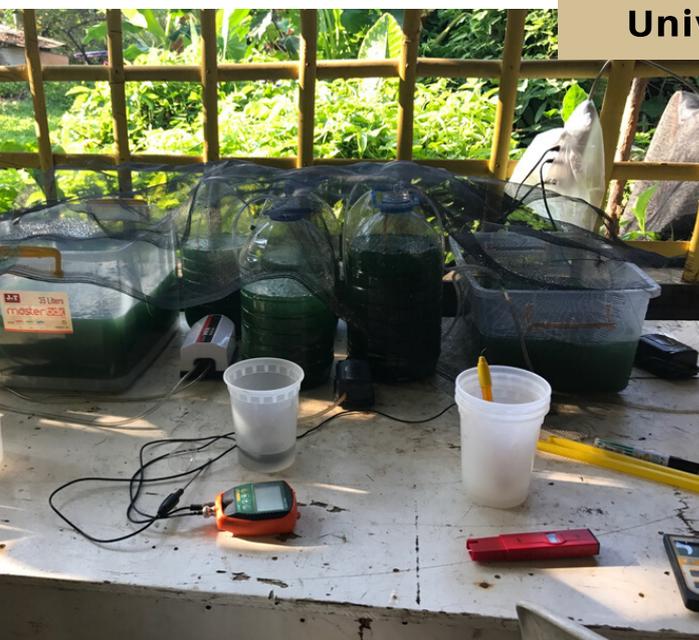
NEXT STEPS

- Approach will be sustained in the three Afghan IDP camps where it was originally tested.
- Team will seek to expand the approach into others of the hundreds of Afghan IDP camps, pending successful fundraising.

CASE STUDY:

FAILING FORWARD - Locally-produced Spirulina for supplementation in children

University of Toronto



We all know that innovation takes time, and failure is part of the innovation process. Innovators from the University of Toronto sought to improve the nutrition of children in the Philippines using dried noodles fortified with Spirulina, a type of blue-green algae that has been identified as a rich source of vitamins and nutrients. The team set up growth facilities in Canada and the Philippines. However, they soon discovered that the cost of growing Spirulina in the field is still too high for the product to be considered as an alternate protein source for the average Filipino.

Transition to Scale

Canada



Global Affairs
Canada

Affaires mondiales
Canada



Australian Government
Department of Foreign Affairs and Trade



The Problem

Few investors focus exclusively on global health innovation, especially for early-stage innovations requiring \$250,000 to \$5,000,000 in financing to progress. This leads to innovations with potential for transformative impact on the poorest, most vulnerable populations – particularly women, girls and children – struggling to transition from pilot phase to scale.

The Program

With targeted support and financing – which includes a mix of grant and repayable instruments – Grand Challenges Canada enables innovators to strengthen their capacities, validate the impact of their solution, and attract private or public capital to approach sustainable impact at scale.

“[We’re] ...impressed with the evolution of the transition-to-scale (TTS) portfolio over time and results achieved to date. The diversity of TTS innovations with respect to subsector, types of entities funded, and scaling pathways pursued was also notable.”

SCIENTIFIC ADVISORY BOARD
EXECUTIVE COMMITTEE

\$143M



in transition to scale
investments.

over



\$285M

in funding leveraged
from private sector, local
governments, and
civil society.

44



low- and middle-income
countries (LMICs) innovations are
implemented in.

43%



of innovations are led by
women.

179



innovations supported.

SHOEBOX Ltd.: Grand Challenges Canada's first successful exit

Grand Challenges Canada invested in SHOEBOX Ltd., an Ottawa-based company, in 2014. SHOEBOX is the first clinically-validated iPad-based audiometer, which enables efficient and low-cost testing for hearing loss outside of traditional and expensive sound booths. Their vision is to democratize access to hearing care, with a key goal of reaching one billion ears. The SHOEBOX has been used to reduce the overall cost of hearing care for patients globally and support ototoxicity monitoring in tuberculosis patients in low- and middle-income countries.

In December 2018, SHOEBOX Ltd. was acquired by Sivantos Group, a global audiology technology leader. The commitment to global access continues, ensuring product affordability.



KEY SUCCESS FACTORS:

- Shift the marketing of SHOEBOX from audiologists to businesses and non-governmental organizations
- Shift to a subscription-based sales model where patients in low- and middle-income countries pay nothing



CASE STUDY:

Public-private partnerships - a profitable proposition?

Hewa Tele

Maternity facilities require medical oxygen to ensure healthy moms and babies: a critical component of safe caesarian sections is anaesthesia, which requires oxygen, and at least 50% of babies looked after in medical facilities need oxygen. On the African continent, oxygen is 10 to 13 times more expensive than in high-income countries.

Hewa Tele ('abundant air' in Swahili) is a social enterprise focused on saving lives in Kenya by providing affordable quality medical oxygen to health facilities.

The company aims to address the issues of price, reliable supply, training of health facility staff and availability of oxygen-related equipment through their comprehensive product and services offerings.

The Hewa Tele model combines a technology for oxygen production and cost-effective hub-and-spoke distribution model with a social mission that includes the not-for-profit activities of medical training and education. Each Hewa Tele plant has secured government commitment as a partner and a customer, which provides Hewa Tele priority access to the public sector market and the opportunity to pursue high-margin customers in the private sector.

Hewa Tele broke even in 2017, a first in the transition-to-scale portfolio.



"I'm glad, I benefited from the oxygen because... if it was not for it, I don't know where I would be. So I'm happy, I'm grateful, I'm not sick and this is my baby."

PATIENT, MAMA LUCY HOSPITAL, NAIROBI, KENYA



"We now have enough oxygen for all patients who require it, we no longer need to choose who to give oxygen depending on severity of the disease."

PHOEBE ADHIAMBO, NURSE AT SINDO HOSPITAL, HOMA BAY COUNTY, KENYA

IMPACT TO DATE



- Hewa Tele has provided oxygen for more than 100,000 medical procedures
- Over 50,000 people have received life-saving procedures enabled by HewaTele oxygen; 62.5% were children and women of child-bearing age
- Outgoing referrals have declined by over 50% in all facilities supplied by Hewa Tele.



CASE STUDY:

Container-based sanitation services for Haiti's urban slums

Sustainable Organic Integrated Livelihoods (SOIL)



Photo credit: Vic Hinterling

Globally, 35% of urban communities are unsewered and lack access to safe sanitation. This challenge is amplified in some contexts like Haiti, where, prior to 2010, there were no government-run waste treatment facilities. This led to the country having to battle the largest and most virulent cholera outbreak in recent global history.

SOIL builds and installs safe, hygienic container-based “EkoLakay” toilets for people in Haiti’s vulnerable urban settlements at a fraction of the cost of building sewers. SOIL collects and safely transforms waste into agricultural-grade compost. To date, SOIL has provided its ecological sanitation services to more than 5,000 people, while also producing rich, organic compost that serves as a natural resource for Haiti’s badly-depleted soils.

SOIL is now working with partners to develop the first results-based financing mechanism to enable 100% cost recovery of container-based sanitation services by 2025.

CASE STUDY:

Reducing the risk of sexual violence

Fightback Nepal

Fightback Nepal has designed a program to build girls’ physical, mental, and vocal skills to prevent, mitigate and manage the risk of sexual and gender-based violence. Fightback also trains adolescent boys, parents and teachers to address discriminatory cultural norms so that the onus of reducing sexual violence does not rest solely on girls. Fightback has reached over 7,600 schoolgirls.

Fightback Nepal is a for-profit business that generates revenue by offering courses in private schools and companies. The government supports courses offered in public schools. They can train 200 adolescents at a time, which facilitates scale and sustainability.



Photo credit: SPRING Accelerator



CASE STUDY:

A ground-breaking Development Impact Bond to save newborn babies in Cameroon

Grand Challenges Canada; Cameroon Ministry of Public Health; Global Financing Facility; Nutrition International; World Bank Group; Fondation Kangourou Cameroun; Kangaroo Foundation Columbia; Social Finance UK; MaRS Centre for Impact Investing

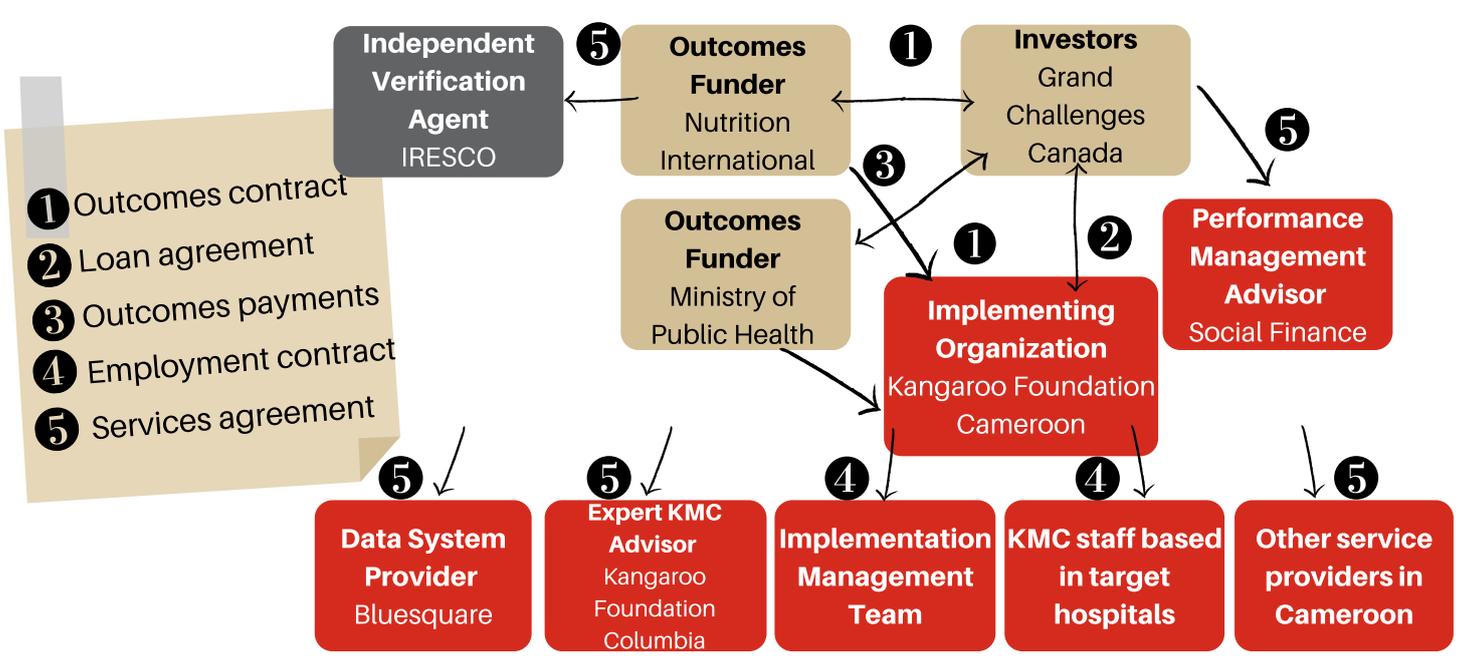
Kangaroo Mother Care (KMC) is a globally recognized best practice to save and improve lives of low-birth-weight and pre-term infants through skin-to-skin contact and exclusive breastfeeding. In 2014-16 Grand Challenges Canada supported Kangaroo Foundation, Colombia to test an innovative approach to scale and sustain quality KMC in hospitals in Cameroon. Positive results from this approach paired with the Cameroon government prioritizing KMC as a key element of their maternal and child health strategy led Grand Challenges Canada to structure a Development Impact Bond with partners to provide financing for scale. With this innovative financing model, Grand Challenges Canada is providing the initial \$1M investment to Kangaroo Foundation Cameroon so they can scale quality KMC across ten hospitals in five regions of Cameroon, reaching 2,200 low birth weight and premature newborns, while Nutrition International and the Government of Cameroon have committed to pay up to \$3.7M upon the achievement of key outcomes, like percentage of enrolled infants who are a healthy weight at their 40-week follow up.



WHY IT'S IMPORTANT:

- First Development Impact Bond in which a local government is an outcomes funder.
- Could act as a model for financing the scale up of quality KMC in other countries.

Photo credit: Fundación Canguro



Saving Lives at Birth



A PARTNERSHIP OF



BILL & MELINDA GATES foundation



KOICA Korea International Cooperation Agency

The Problem

Virtually all of the 303,000 maternal deaths, 2.7 million newborn deaths, and 2.6 million stillbirths that occur each year happen in low- and middle-income countries.

The Challenge

The Saving Lives at Birth partners seek groundbreaking prevention and treatment approaches for pregnant women and newborns in poor, hard-to-reach communities to reduce maternal, newborn death and prevent stillbirth around the time of delivery.



74%



of the innovations transitioning to scale have formal partnerships with public sector actors.

20%



of innovations have received follow-on funding, providing continuity along the scaling journey.

118



unique innovations supported with 148 seed, validation or transition-to-scale awards.

67%



of the innovations are devices or products.

Saving Lives at Birth has demonstrated its strong ability to catalyze the development of products and devices that are desperately needed in the maternal and newborn health space. In contrast to many other maternal and newborn health funders, a large part of the Saving Lives at Birth portfolio now comprises new products and devices. The time to scale products and devices, however, is longer than service delivery innovations. The Saving Lives at Birth partners have needed to address this relatively slower maturation timeframe by focusing on accelerating progress of innovations through fostering collaborations and building innovator capacity.



CASE STUDY:

Newborn hypothermia alert bracelet

BEMPU Health



Photo credit: BEMPU Health

Premature and low-birth-weight babies have a high incidence rate of hypothermic events, which make them vulnerable to diminished growth, poor organ development and death in low-resource settings. The TempWatch is a newborn temperature-monitoring wristband that alerts caregivers if their newborn is hypothermic. Caregivers are reminded to provide skin-to-skin care if alerted, and to seek advanced medical intervention if the alarm persists. The TempWatch bracelet was named one of Time Magazine's 25 Best Inventions of 2017. With funding from Saving Lives at Birth, and strategic partnerships with India's central and state governments and UNICEF, BEMPU has been able to secure orders and distribution of the device in low-resourced public health facilities that should help set the company on a path towards financial sustainability. To date, 20,246 bracelets have been sold.

CASE STUDY:

Newborn ventilation skills enhancement to improve newborn health outcomes at birth

Mbara University of Science and Technology

Birth asphyxia results in up to 1.8 million stillbirths and newborn deaths annually. These deaths can be averted by empowering birth attendants to ventilate babies quickly and effectively. The Augmented Infant Resuscitator (AIR) is a universally-compatible add-on device to existing bag-mask devices that provide intuitive, real-time actionable feedback to birth attendants during ventilation training. Birth attendants ventilating with AIR device feedback attained effective ventilation 51% faster, and maintained effective ventilation 50% longer, than controls using standard bag-mask.

With funding from Saving Lives at Birth, and a strategic partnership with Philips Healthcare to advance the global commercialization of the AIR device, the team is on its way to ensuring newborns take their first breath as quickly as possible.



Saving Brains



A partnership of:

The Problem

250 million children globally are not reaching their developmental potential due to poverty, poor health and nutrition, insufficient care and stimulation, and other risk factors to early brain and childhood development.

The Challenge

Saving Brains supports holistic solutions that protect and nurture early brain development and can be scaled up in an equitable and sustainable manner.



“As one of the largest investments in early childhood interventions in low- and middle-income countries, the Saving Brains portfolio has unique potential to inform understanding of processes towards scaling.”

LEARNING FROM SAVING BRAINS:
INFORMING POLICIES AND
SCALE-UP FOR EARLY CHILDHOOD

\$66.9M 

invested to date.

130 

innovations and a platform of experts providing innovator support.

7M 

children estimated to have improved development by 2030 as a result of Saving Brains innovations.

37% 

of innovations that received seed funding have transitioned to scale.

“The Saving Brains data is a treasure trove [offering] so much to be learned on implementation.”

DR. PIA BRITTO, CHIEF OF EARLY CHILDHOOD DEVELOPMENT, UNICEF

Saving Brains is helping to shape the global conversation on early childhood development: Data from the Saving Brains portfolio were the basis of several publications in a series on “Informing design and implementation for early child development programmes”, published in April 2019 in Archives of Disease in Childhood. The development of the series was funded through the Bernard van Leer Foundation, a partner of Saving Brains, and it builds on an evaluation of Saving Brains funded by Grand Challenges Canada.



CASE STUDY:

Saving Bangladeshi Babies' Brains

International Centre for Diarrhoeal Disease Research, Bangladesh



Photo credit: International Centre for Diarrhoeal Disease Research, Bangladesh

Saving Bangladeshi Babies' Brains (SB3) is addressing the developmental challenges related to very young malnourished children by combining nutrition care and psychosocial stimulation. It was conceptualized after innovating with a set of early childhood development activities which resulted in the largest demonstrated improvement in cognitive outcomes of any innovation across the Saving Brains portfolio – and of any trial so far conducted in developing countries. SB3 is delivered to parents in group sessions by staff at existing community health clinics. Funding from Grand Challenges Canada has catalyzed the support of the Bangladesh National Government to scale SB3 to 550 clinics over the next few years. It will then be ready to scale to all 13,000 community clinics in the country. By 2030, 3 million children will access the intervention, with 2.2 million children having improved development.

CASE STUDY:

On-site childcare for migrant workers

Mobile Creches

Children of migrant construction workers in India are often left in unsafe living conditions without access to adequate health, nutrition or early learning while their parents are on the build site. Through partnerships with construction companies and government, Mobile Creches offer high-quality workplace-based childcare that provide a safe, nurturing environment; nutritious meals; opportunities to play and learn; and access to health services, including immunization and growth monitoring for these vulnerable children. With GCC funding, they have proven their ability to dramatically extend their impact by supporting other non-governmental organizations to replicate their model, and are now expanding to other industries reliant on migrant workers like textiles and tea.

Mobile Creches is expected to reach over 550,000 children by 2030, nearly four times the impact they would have had prior to GCC funding.



Photo credit: Mobile Creches

Global Mental Health

Canada



Global Affairs
Canada

Affaires mondiales
Canada



The Problem

Mental disorders contribute to 14% of the global burden of disease worldwide. Around 75% of this burden occurs in low- and middle-income countries where scarce resources and a shortage of trained professionals mean individuals living with mental disorders have limited access to evidence-based treatments. Even in contexts where treatment is available, widespread stigmatization faced by those living with mental illness means that they are often unwilling or unable to access this care.

The Challenge

Grand Challenges Canada seeks innovative ideas to improve treatments and expand access to care for people living with mental disorders.



“There can be no health or sustainable development without mental health.”

DR. DEVORA KESTEL, DIRECTOR
MENTAL HEALTH AND SUBSTANCE ABUSE
WORLD HEALTH ORGANIZATION

32



countries in which projects
are being implemented.

\$47.6M



invested to support projects
and catalyze the Mental
Health Innovation Network.

95



innovative projects
supported.

52%



of innovators who were
awarded seed funding
achieved proof of concept.

72%



of innovations are led by
institutions in low- and
middle-income
countries (LMICs).

Grand Challenges Canada has established itself as a pioneer and thought leader at the vanguard of mental health innovation with support of the Government of Canada, our primary funder. Global mental health innovations transitioning to scale with the support of Grand Challenges Canada have been able to reach tens of thousands of people to date and have the potential to improve the lives of 1.5 million people by 2030. More work still needs to be done to reach the millions in need of care. That's why Grand Challenges Canada continues to work alongside, and support the efforts, of partners and initiatives that recognize mental health as a critical part of the global development agenda.





CASE STUDY:

Empowering people living with HIV/AIDS and depression

Social Emotional & Economic Empowerment of Depressed HIV Persons through Knowledge of Group Support Psychotherapy (SEEK-GSP)



The relationship between mental health and poverty is well documented. SEEK-GSP is an approach that recognizes this and empowers people living with HIV/AIDS and depression in Northern Uganda by enhancing emotional and social support, the ability to practice positive coping skills, and income-generating (livelihood) skills. Individuals with depression are identified and treated through weekly group support psychotherapy sessions led by trained lay health workers. Participants in a trial of SEEK-GSP showed sustained reduction in depression symptoms, and also increased adherence to anti-retroviral therapy (ART) and suppression of HIV. Given that 60% of young people living with HIV are failing on ART, the SEEK-GSP team now plans to modify SEEK-GSP for this population at high risk.

CASE STUDY:

Alternative living spaces for greater inclusion

The Banyan

For people living with serious mental disorders and intellectual disabilities, institutionalization in mental health hospitals is often the only alternative to being homeless or living in poverty. In response to this reality, The Banyan developed Home Again, which fosters choice-based, inclusive living spaces for individuals with persistent and severe mental health issues. The shared homes provide service users with informal peer support, and are linked to a range of supportive services that promote continuity of care, and social.

With support from Grand Challenges Canada, The Banyan has shown that Home Again leads to higher social inclusion rates and functionality, and significant reduction in stigma in neighborhoods where the homes are located, all at approximately one third of the cost of facility-based care. As a result, the Banyan can now count on the government's support to ensure the long-term adoption and sustainability of the Home Again model across multiple states in India.



Photo credit: JJ. Rajendran

OPTions Initiative



Supported by an anonymous donor.

The Problem

The impact of unsafe abortion is profound. There are more than 25 million unsafe abortions annually, about 97% of which occur in the developing world.

As a result, approximately seven million women and girls are admitted to health facilities with complications and tens of thousands of women and girls die annually, making unsafe abortions one of the leading global causes of maternal mortality.

The Challenge

The Options for Pregnancy Termination Innovation (OPTions) Initiative seeks innovative and transformative approaches that enable women's and girls' access to safe abortion in low- and middle-income countries, where there are one or more legal grounds to support it. The OPTions Initiative funds the development and testing of new approaches to increasing early access to existing abortion products and services, and new methods of pregnancy termination.



85% 

of applicants are women.

54 

countries that applications were received from.

219 

applications received.

20% 

of award nominees are testing new methods of pregnancy termination that are an improvement over existing methods.

20 

innovations nominated for seed awards.

 **OPT**ions

Innovation Marketplace



The Problem

Each year almost six million children die before the age of five and almost 300,000 women die in pregnancy and childbirth. A number of promising and proven innovations that could prevent these deaths fail to scale and sustain impact due to the lack of continued access to capital and scaling support.

The Program

The Every Woman Every Child Innovation Marketplace accelerates the development, scale and sustainability of innovations that offer the greatest opportunity to save and improve lives of women and children in low- and middle-income countries by providing critical connections to funders, partnerships and support mechanisms.



Photo credit: Timothy Erau

\$30M



in capital raised since 2016.

34



innovations supported.

22



low- and middle-income countries innovations are supported in.

217



connections to scaling partners facilitated.

The Every Woman Every Child Innovation Marketplace is a strategic alliance of development innovation organizations including the Bill & Melinda Gates Foundation, Grand Challenges Canada, the Norwegian Agency for Development Cooperation and the United States Agency for International Development.

The Every Woman Every Child Innovation Marketplace selects innovations with the greatest potential to save and improve lives from across the global landscape; and supports the portfolio of innovations by leveraging internal expertise and strong networks to provide critical connections to scaling partners including funders, implementation, commercialization and supply-chain partners, governments and support networks with an aim to accelerate their paths to scale.



CASE STUDY:

An innovative public-private model to improve maternal and newborn health outcomes



Jacaranda Health

Despite an increase in facility-based deliveries, Kenya's maternal mortality rate fails to decrease due to a substandard quality of maternal care. Through their for-profit arm, Jacaranda Maternity continually innovates to provide affordable, high-quality maternity services for low-income women. Through their non-profit arm, Jacaranda Health implements their tested low-cost innovations in public hospitals through training, mentorship, digital services and partnerships with government.

The Innovation Marketplace prioritized Jacaranda for its potential to improve maternal and newborn outcomes across the Kenyan public health system, and for its potential for scale and sustainability. The Innovation Marketplace has worked with Jacaranda to refine term sheets, address cost of operations, refine their expansion strategy in Kenya, and connect them to coveted investors who will fuel their next phase of work. By 2030, GCC estimates that up to 2,446,000 maternal and newborn beneficiaries could access Jacaranda's interventions, of which 22,000 lives could be saved and 15,000 women's and newborn lives could be improved.



LOW-COST INNOVATIONS IN MATERNAL CARE TESTED AND DEPLOYED BY JACARANDA HEALTH:

- **Promoting Moms during Pregnancy & Postpartum with Tips & Signs (PROMPTS)** is a package of mobile messages that encourage women to seek care throughout the pregnancy and postpartum continuum.
- **Midwife Emergency Obstetric and Newborn Care Training and On-site Readiness Strengthening (MENTORS)** is a mentorship program for midwives that provides the skills and knowledge necessary to recognize and manage complications associated with pregnancy, childbirth and the postpartum period.
- **A toolbox of clinical and operational resources that can be replicated in low-resource settings in Africa, akin to a "hospital-in-a-box" model, is currently being codified.**

Creating Hope in Conflict



CREATING
HOPE
IN CONFLICT:
A HUMANITARIAN
GRAND CHALLENGE

The Problem

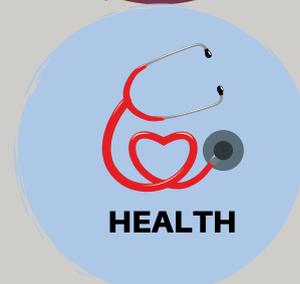
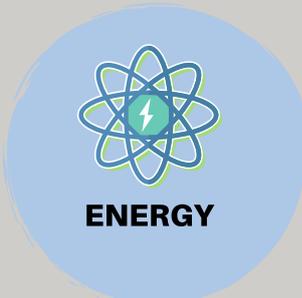
Today, over 201 million people require humanitarian assistance. Millions of the most vulnerable people in conflict zones are currently unreachable by traditional humanitarian aid delivery. As the length, complexity, frequency and scope of armed conflicts increase, it is progressively more difficult to reach affected people in insecure areas with lifesaving and life-improving humanitarian assistance.

The Challenge

Creating Hope in Conflict partners seek to fund and accelerate solutions that enable lifesaving or life-improving assistance to reach the most vulnerable and hardest-to-reach people in conflict-generated humanitarian crises. We are specifically interested in innovations that engage the private sector and involve input from affected communities.



We seek innovations that address one or more of these areas of critical need



\$30M



in capital raised since 2016.

615



applications received from 86 countries.

2



new partners joined in the past year.

25



innovations supported.

CASE STUDY:

Sentry Syria - Internet air-raid siren system prevents casualties, warns affected populations

Hala Systems Inc.

In 2016, Hala Systems formally launched Sentry Syria in partnership with Syria Civil Defense with the aim of saving lives and averting injuries during airstrikes. Hala's Sentry system uses a combination of Internet sources, artificial intelligence, and remote-sensing technology to validate information from multiple sources, allowing for detection, identification and prediction of threats. On average, Sentry warns users of an impending airstrike eight minutes before it occurs, using social media and peer-to-peer messaging programs. Sentry also acts as a low-cost, exportable knowledge platform that gathers critical data in war zones and disaster areas to create a record of events.



IMPACT TO DATE

- To date, Sentry has documented 10,000+ airstrikes, resulting in warnings to over two million people.
- The Sentry platform has been proven to reduce casualties in conflict settings by 20%-30%.
- Humanitarian Grand Challenge funding will enable Hala to invest in their technology platform to improve the service offering to affected communities in Syria and other conflict settings.
- Sentry will be expanded to include new threat-detection capabilities and the warnings will be offered to civilians using new outreach channels to reach an additional one million civilians.



Photo credit: Hala Systems

Indigenous Innovation Initiative



La fondation
McConnell
Foundation

Johnson & Johnson

The Problem

There is a huge opportunity to increase Indigenous people's participation in the Canadian economy.

Innovation is recognized as being an important driver of economic, social and environmental progress and productivity, and is crucial for solving complex and intractable challenges. Top-down solutions have been the mainstay for addressing problems in Indigenous communities, but with little or even detrimental effect. Too often, innovation initiatives are inaccessible to, or even exclude, Indigenous peoples.

The Program

Created by Indigenous leaders and built on a foundation of Indigenous ways of knowing and being, the Indigenous Innovation Initiative seeks to empower and enable Indigenous innovators and communities to identify and solve their own challenges, transform lives, and drive inclusive growth.

The Indigenous Innovation Initiative's work is hosted by Grand Challenges Canada and guided by an Indigenous Innovation Council.



The Indigenous Innovation Initiative developed a collaborative and consensus-building model (a modified Delphi process) called the Three-stranded Basket approach, to identify the most pressing or important challenges in identified priority areas. Typical Delphi processes find consensus amongst experts and academics. Our process is based on traditional Indigenous ways of knowing and being, and brings voice to those with lived experiences as the experts, including academics, community practitioners and Indigenous youth and their communities.





PROGRESS TO DATE

- In June 2019, the Government of Canada pledged up to \$10 million to seed a transformative approach to empower Indigenous Gender Equality through social entrepreneurship to strengthen their communities through innovation. We look forward to bringing new partners on board and launching this program in the year to come.
- As part of Three-stranded Basket approach, we brought together over 40 Indigenous community leaders, scholars, and individuals with lived experiences in Toronto and Saskatoon, and asked them to identify the top challenges related to Indigenous mental health. A meeting with up to 25 Indigenous youth will be held in Montreal in the Fall. We will be disseminating the results from this Three-stranded Basket engagement next year.



DISH WITH ONE SPOON TREATY TERRITORY

As GCC began to develop the Indigenous Innovation Initiative, we began to reflect on our own relationship with the Indigenous peoples and communities in Toronto, where we are located. In recognition of this important relationship, all meetings now start with a formal Indigenous Treaty and Land Acknowledgement. Our website, email signatures, business cards and other important works additionally recognize that we work in territory that is covered by the Dish with One Spoon Treaty.

This centuries-old treaty was initially part of the Great Law of Peace between two or more Nations living alongside each other – for the Haudenosaunee, Mississaugas and the Anishinaabe people in the area known as Toronto. It describes the agreement for peaceably sharing the hunting territory and protecting the land in a spirit of peace, friendship and respect. The teachings speak to our responsibility to ensure the dish is never empty and to take care to ensure there is enough to sustain our future generations; most importantly, the spoon has smooth edges to remind us of our responsibility to avoid conflict.

Throughout all our programs at Grand Challenges Canada, the Dish with One Spoon Treaty teachings are a daily reminder of our ongoing privileges as Canadians on First Peoples' territory and of our responsibilities both to support strong relationships and to ensure sustainability at all levels, as well as the ongoing work each of us needs to do in moving towards reconciliation.



LESSONS ABOUT INNOVATION FOR IMPACT

Grand Challenges Canada is, at our core, a learning organization. We are constantly working with our funders and innovators to learn, assess and improve our processes and programs. Here are some lessons we have learned this year:



1. THE IMPORTANCE OF SIMULTANEOUSLY BUILDING THE INNOVATION PIPELINE AND SUPPORTING THE BEST INNOVATIONS TO GO TO SCALE

The way we support innovations to transition to scale is a unique component of our innovation platform. It is so impactful that it can be tempting to focus resources, which are limited, solely on transitioning innovations to scale at the expense of strategically refreshing a pipeline of new ideas with seed funding. We have realized, however, that to interrupt or eliminate seed funding is a mistake. We have learned that our TTS program works best when it is aligned – temporally and strategically – with an internal seed pipeline that can provide a steady influx of promising projects.

Our Stars program is a unique opportunity for low- and middle-income country (LMIC) innovators, who may not otherwise have access to seed funding, to test their bold ideas. This program is consistently viewed by LMIC members of our Board of Directors, Scientific Advisory Board, and Partners as being one of our most impactful, and important for building innovation capacity in LMIC countries. Linking our Stars and transition-to-scale programs also allows us to set expectations early about the evidence an innovation has to demonstrate before receiving TTS funding, which allows for a more efficient transition between funding phases. Finally, 15% of seed innovators do not need any further funding from GCC to continue on their path to scale and sustainability, which provides immense value for money.

2. THE POWER AND IMPORTANCE OF BRINGING INNOVATORS TOGETHER



Convening innovators to accelerate learning is a fundamental component of a high-functioning innovation platform. The augmented infant resuscitator (AIR) device – described in more detail in the Saving Lives at Birth (SL@B) section of this report – is a great example of what can happen when a broad community of innovators is convened periodically to spark and build on each other's insights.



While attending DevelopmentXChange (the annual convening of SL@B applicants and awardees) in 2011, Dr. Santorino was challenged by a fellow innovator to articulate his frustration about the short-lived impact of current newborn resuscitation training methods. Because of this experience, Dr. Santorino and his colleagues participated in a hack-a-thon at Massachusetts General Hospital that resulted in the idea of the AIR. Dr. Santorino and his team secured a SL@B seed award in 2013 to prototype and test the AIR, which, in turn, led to an encounter with representatives of the multinational company Philips at DevelopmentXChange 2015; Phillips expressed interest in his innovation. He furthered his work with a SL@B validation award in 2015.

In 2018, a commercial license was signed between Philips and Mbarara University / Massachusetts General Hospital to commercialize the AIR. This agreement includes strong global access provisions as a result of the funding conditions attached to GCC's SL@B funding.



3. THE IMPORTANCE OF INCLUDING VOICES OF PEOPLE WITH LIVED EXPERIENCE

The Delphi process that has traditionally been used to identify Grand Challenges is powerful and has a number of demonstrated successes, including the original Grand Challenges in Global Health and the Grand Challenges in Global Mental Health. We have begun to realize, however, that it also has an important blind spot as it privileges experts and academics over those with lived experience.

We began to address this challenge in the Humanitarian Grand Challenge where those with lived experiences of humanitarian crises have helped to shape and select the innovations that were chosen through our funding competitions. In fact, we witnessed humanitarian experts being convinced to fund specific innovations as a result of the reviewers with lived experience who participated in the review process.

The Indigenous Innovation Initiative has adapted the Delphi process to reflect Indigenous ways of knowing and being to create the Three-Stranded Basket approach to identify the Grand Challenges in Indigenous mental health. The Three-Stranded Basket approach weaves together expert (academic and thought leader) opinion with the lived experience of youth, as well as community service providers and practitioners. We are now exploring how to meaningfully engage youth in the innovation cycle so we can implement what works when we seek innovations targeted at youth (e.g., youth mental health).

While the innovators we support have been doing this from day one, going forward, we will be increasingly deliberate in elevating the voices of those with lived experience to enhance the likelihood that the innovations we fund reflect the contexts and needs of those who are most impacted by the challenges that we seek to solve, and therefore the likelihood of successful solutions.

4. THE HIGH COST OF BEING FIRST



In the transition-to-scale section of this report we highlighted the exciting opportunity to launch one of the first Development Innovation Bonds with a focus on Kangaroo Mother Care. Although this is an exciting opportunity, and one that could be transformative for mothers and infants, significant resources were required to bring this to fruition, resulting in high transaction costs. From inception to launch, the process required extensive engagement and investment to align with the right partners who were willing to accept the risks associated with these bonds, defining the roles interested partners would play (outcomes funder versus investor), and ensuring the capacity of the implementation team to



manage the financing mechanism of the bond. In all, the estimated transaction cost is \$2.2M, not including GCC personnel costs over the course of three years.

Despite the high transaction costs, the processes and structures introduced by results-based financing have the added benefit of transforming institutional culture to focus on outcomes and help create frameworks and governance structures to support the achievement of these outcomes. These impacts last beyond the lifetime of the project, creating long-term systemic change. Looking ahead, there have been innovations in the impact financing ecosystem to address the inefficiencies often encountered with these types of bonds. These include pooled funding dedicated to impact bonds that can rapidly deploy investment or outcomes funds to aligned projects.

Our hope is that other organizations and institutions that wish to use a results-based financing mechanism of this kind in the future can learn from our work and leverage our investment to improve their time and resource efficiency.



5. CONTINUOUS LEARNING AND IMPROVEMENT: BUILDING CAPACITY, DEFINING SUCCESS

Each year, we invite our Scientific Advisory Board members to offer their analysis of Grand Challenges Canada's performance and impact and to provide suggestions for continued improvement. In their assessment of FY 2018-19, they recommended that GCC should continue its deliberate focus on attracting and supporting bold ideas from women, young researchers and local people; and noted that opportunities may exist for GCC's initiatives to catalyze greater impact by:

- continuing our efforts to build innovators' capacity during the transition-to-scale period and considering the value and feasibility of providing additional support during seed funding to improve readiness to scale, and
- investing in learning, partnerships, and networks, including synthesizing and translating learnings to influence more broadly.

Moving forward, the Scientific Advisory Board encouraged GCC to seek greater clarity about what success looks like for its funded innovations, how that success is best indicated in the short term, and whether or not there is the ability to be more patient and creative in order to realize the longer-term outcomes GCC is currently set up to track.





MANAGEMENT DISCUSSION AND ANALYSIS



Overall, management is pleased with the performance of the organization and our ability to meet the demands of implementing the Reproductive, Maternal, Newborn and Child Health (RMNCH) Contribution Agreement. It is this agreement that funds our programs in the Development pillar, while ramping up and delivering programs under other funding agreements (which fund our Development Humanitarian and Indigenous pillars), as listed in our financial statements.

We would like to acknowledge the contributions of the entire Grand Challenges Canada team for their continued diligence and flexibility in designing, implementing and managing programs to achieve the highest level of impact. In particular, we are grateful to Mr. Claude Briand, Director of Finance, who retired at the end of June 2019. Mr. Briand is succeeded in his role as leader of our financial team by Ms. Thanh Tran, Acting Director of Finance, and, to help with the transition, Claude will continue to provide support on a part-time basis for the next year. Over the coming year, we anticipate several additional transitions in our team as the secondment of Mr. Joe Torres, Director General of Operations & Administration, to GCC from the Bill & Melinda Gates Foundation comes to an end and as several members of our team embark on or return from maternity leaves.



FINANCIAL MANAGEMENT

Last year's total spending was \$25,631,434, with this year's total spending at \$44,298,025. We are pleased to see a spending capacity increase of \$18,666,591, as a result of our successful transition from ramping up under the RMNCH Contribution Agreement to a steady state of full execution. FY 2018-19 was the first full year of activities under the RMNCH agreement, resulting in an increased number of projects being funded and managed. This is in comparison to only one quarter of full activities under RMNCH in FY 2017-18.

Grand Challenges Canada continues to make progress in diversifying revenue sources. By the end of the 2018-19 fiscal year, non-Government-of-Canada funding increased from 21% to 26% of total committed funds. We continue to work to maintain a diversity of funding sources, to allow for greater scale and reach across our programs and initiatives, particularly in our newer pillars: the Humanitarian Innovation program and the Indigenous Innovation Initiative.

Last year, the board authorized the creation of an operational reserve made up mostly of amounts repaid to Grand Challenges Canada from repayable loans and grants that are unrestricted from our funders. This year, the reserve (surplus) has increased as a result of further returns from innovators and from the Global Health Investment Fund. To date, the reserve is funded at \$3,975,099. This operational reserve will be used in operations to help cover unfunded expenses and, to the extent possible, reduce potential future cash-flow constraints. The Board of Directors must approve in advance all spending from the reserve.

In FY 2018-19, Grand Challenges Canada converted two loans to innovators into shares, to enable the innovators' next round of financing, which is an important objective of our Transition to Scale program. The shares have been valued at \$2,537,209 and this amount is reflected in our net assets along with our operational reserve.



LEVERAGE

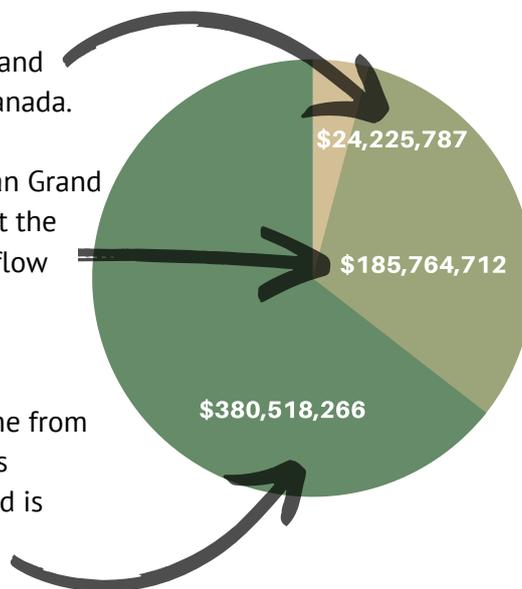


An important element of the Grand Challenges Canada innovation platform is the ability to leverage funding from investors and partners. Over the past nine years, up to and including FY 2018-19, for every \$1.00 of Government of Canada funding deployed, \$2.00 has been leveraged from investors and partners. We track and report leverage at three levels: organization, programs and projects.

Organization leverage is funding that has been provided to and spent by GCC from funders other than the Government of Canada.

Programs leverage is funding provided by funders, other than Grand Challenges Canada or the Government of Canada, to support the achievement of our program outcomes; these funds do not flow through Grand Challenges Canada.

Projects leverage is funding that has been provided to our innovators in support of their innovations that does not come from Grand Challenges Canada or the Government of Canada; this funding does not flow through Grand Challenges Canada and is often also called “project match funding”.



RISK MANAGEMENT AND RISK APPETITE

In FY 2018-19, three new risk occurrences were reported to, and discussed with, the Audit & Finance Committee, which has been renamed the Audit, Finance & Risk Committee to reflect the attention Grand Challenges Canada directs to risk mitigation and risk management.

Two incidents related to information technology, and one incident concerned ineligible innovator expenses discovered as a result of a spot-check audit of an innovator. The information technology incidents have been resolved without any material negative consequences to the organization. The organization has taken additional security measures to mitigate future issues related to information technology.

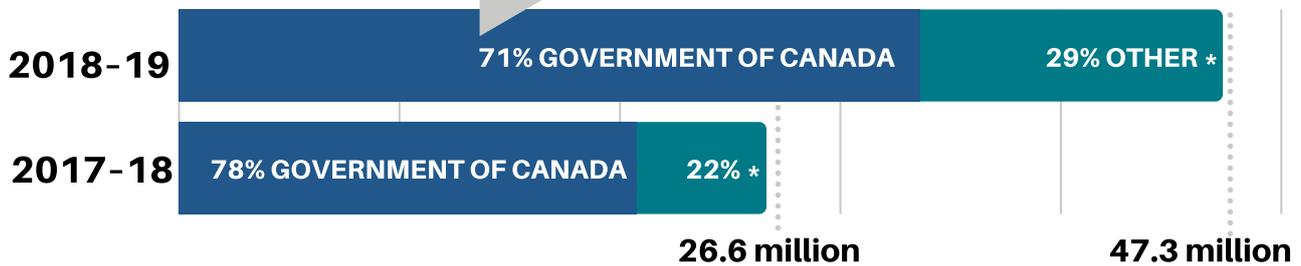
The risk of innovators incurring ineligible expenses and charging them to their project remains an issue management will continue to work to address. Based on guidance from the Audit, Finance & Risk Committee and the Board of Directors, our internal processes have been adjusted, where appropriate and possible, to further mitigate the likelihood of future risk events of this kind. That said, management acknowledges that, despite increased due diligence and the implementation of additional mitigation measures, the risk of innovators incurring ineligible expenses that they cannot repay will never be fully eliminated.

The organization continues to work to refine our Risk Appetite Statement and is currently engaging in related consultations with Global Affairs Canada on a draft. Management is working to operationalize the statement within our processes so that we can report to the Board of Directors and our funders, to enable ongoing learning.



FINANCIAL HIGHLIGHTS

Revenue



* Non-GC funding includes contributions from the Bill & Melinda Gates Foundation, Department for International Development – UK, Dutch Government Department for Stabilisation and Humanitarian Aid, Department of Foreign Affairs and Trade – Australia, ELMA Foundation, Johnson & Johnson, J.W. McConnell Family Foundation, Norwegian Agency for Development Corporation, PIVOTAL, Rotman Family Foundation, Union de Banques Suisses Optimus Foundation, United Nations Foundation, and United States Agency for International Development

Expenditures

How our resources were used



PROGRAM EXPENDITURES

From the percentage dedicated to programs in the 2018/2019 period, this is how funding was distributed



To read our full audited financial statement for fiscal year 2018-2019, [click here](#).