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Grand Challenges Canada[®]
Grands Défis Canada

BOLD IDEAS WITH BIG IMPACT[®]

Evidence-based Innovation

ANNUAL REPORT

April 2015 to March 2016



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A Message from the Chair of the Board



This has been an exciting year for Grand Challenges Canada. We signed a Contribution Agreement with Global Affairs Canada to support our work over the next decade as an innovation platform for Canada's Reproductive, Maternal, Newborn and Child Health commitments. We renewed and revitalized our Strategic Plan to 2022. Perhaps most importantly, we have begun to deepen our understanding of our comparative advantage in development innovation, and have begun to shift our programs and investments to better leverage this advantage.

The concept of Integrated Innovation® – bringing together social, business and scientific/technological innovation to maximize impact – has always been at the core of what we do. Although this concept is important at all stages of the innovation process, we are increasingly seeing that it plays a particularly important role in the middle stage, what we call "Transition To Scale". Over the past few years, we have come to realize that our deepest area of comparative advantage is in this critical middle stage of the innovation process. We have learned that the innovations that we fund can only make a transformative impact if they can cross what is called in the investing world the "valley of death". It is important to emphasize, as well, that this "valley of death" is just as much a problem for innovators in Canada as it is for innovators in low- and middle-income countries. We work with our most promising innovators to build the right team with the right 'smart' partners and the right resources, to enable their innovations to succeed in a manner that is sustainable. Going forward, we will put an increasing focus in this critical area.

I am very excited to continue our work in Reproductive, Maternal, Newborn and Child Health, to help the Government of Canada to achieve its ambitious mandate in this area. I also look forward to working with the government to ensure the continuation of our non-Reproductive, Maternal, Newborn and Child Health portfolios, in particular, our work in global mental health, with adolescent girls and with our Stars in Global Health program.

As always, I would like to thank the Board of Directors for their invaluable contributions to our work. In particular, I would like to thank our departing Board Members, Dr. Allan Gottlieb, Mr. Charles Field-Marsham and Dr. Allan Ronald, for their invaluable service on our Board. I welcome Dr. Cédric Bisson, Ms. Johanne Charbonneau and Dr. Mwelecele Malecela, who have joined the Board and look forward to working with you in the coming years. I would also like to thank all of the members of our Scientific Advisory Board, chaired by Dr. Abdallah Daar, for their time and insight into our work. Finally, I would like to thank Dr. Peter Singer and the entire leadership team, management and staff of Grand Challenges Canada for their hard work and dedication.



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

A Message from the Chief Executive Officer



When Grand Challenges Canada was launched in 2010, we were an experiment to test a new approach to support development innovation and to deliver outcomes through Canada's Official Development Assistance envelope. It is very gratifying to me that our experiment has been successful and that our work will continue in the coming years. In 2015, a Summative Evaluation of the Development Innovation Fund in Health (for which Grand Challenges Canada is the delivery vehicle, in a consortium with Canada's International Development Research Centre and the Canadian Institutes of Health Research) found that *"It is our independent assessment that the Government of Canada (by action of IDRC, CIHR, and GCC) has demonstrated international leadership in the use of science and human creativity to improve the health of those who need it most."*

Our Board of Directors also commissioned an independent International Expert Panel Review, chaired by Marie-Lucie Morin, which found that *"Grand Challenges Canada is making tangible, measurable differences in some of the greatest areas of inequity in the world, especially in the maternal and child health space, and also in mental health."*

More broadly, I have come to realize that the Grand Challenges model has the potential to help address the more fundamental problem of how to support and deliver innovation – in other sectors and in Canada – by supporting and supercharging evidence-based innovation.

I appreciate the continued commitment of the Government of Canada to our work (through our Contribution Agreement with Global Affairs Canada) to serve as an innovation platform for Canada's Reproductive, Maternal, Newborn and Child Health commitments. In the coming year, I look forward to working with the Government of Canada to expand our work on Global Mental Health, developing innovations focused on adolescent girls, and continuing to build and transition to scale a strong pipeline of transformative global health innovations.

I would like to express my gratitude to the entire Grand Challenges Canada team, led by our Vice Presidents **Karlee Silver** (Programs), **Andrew Taylor** (Investments) and **Jocelyn Mackie** (Operations & General Counsel). I would also like to thank and recognize the continued contribution of our Board of Directors, led by **Guylaine Saucier**, our Investment Committee, led by **Gerhard Pries**, and our Scientific Advisory Board, chaired by **Abdallah Daar**. Finally, I want to thank our partners in the Government of Canada, including Global Affairs Canada, Canada's International Development Research Centre and the Canadian Institutes of Health Research.



Peter A. Singer, OC, MD, MPH, FRSC
Chief Executive Officer

Highlights 2015–2016

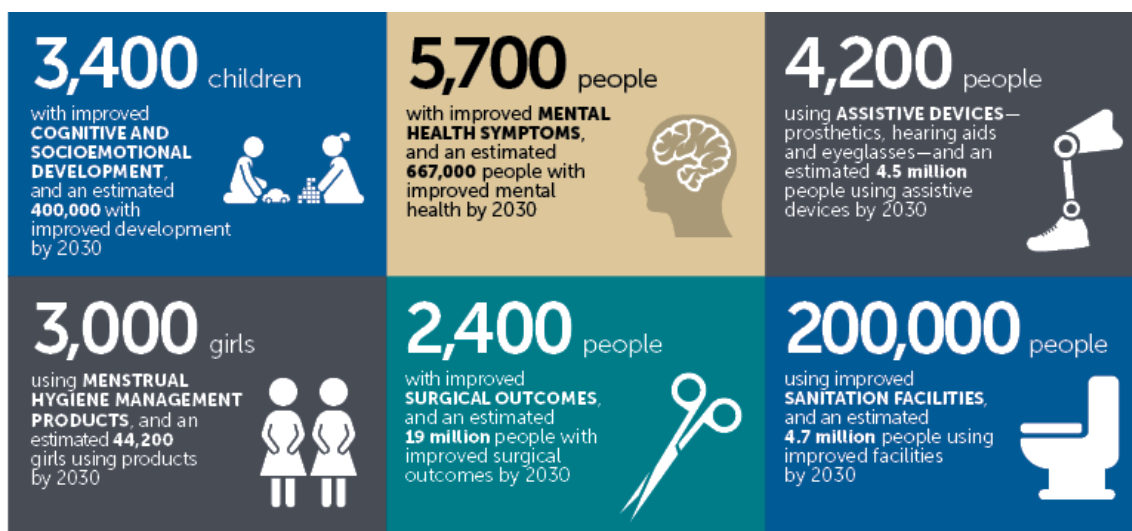
The following section offers highlights of Grand Challenges Canada's activities outputs and outcomes in 2015–16.

LIVES SAVED AND IMPROVED

Saving and Improving lives are Grand Challenges Canada's primary indicators of success. As of March 2016, the innovations Grand Challenges Canada has funded have contributed to **almost 290,000 lives improved and over 9,300 lives saved** (see Annex 1). A significant portion of our current investments conclude this year and these numbers are expected to increase. The majority of these outcomes are from approximately 70 innovations that are currently transitioning to scale. Even more meaningful, these same innovations have the potential to save between 500,000 and 1.5 million

lives and improve between 14 and 30 million lives by 2030.¹

Life can be improved in a variety of ways. The common factor among innovations that improve lives is that they increase the use of evidence-based interventions. As the existing projects all report in 2016, we will get a better picture of how we are improving lives. Please see the graphic below which highlights some of the more significant areas in which lives have improved.



POLICIES INFLUENCED

Change in policy is a strong route to sustainable impact. To date, Grand Challenges Canada projects have influenced **over 60 policies** to improve health all over the world. For example:

¹Based on 51 impact models completed to date, as of March 31, 2016

Policies Influenced (continued)

	A Global Mental Health project led by Stanley Kutcher at Farm Radio International and Teen Mental Health, Canada, raised awareness and understanding of adolescent depression and how it can be identified and treated in Malawi and Tanzania. This has directly contributed to revision of treatment guidelines for adolescent depression in Malawi, to assure procurement of fluoxetine and addition of fluoxetine to the essential medicines list in Tanzania.
	A Stars in Global Health project led by Aliya Naheed at the International Centre for Diarrheal Disease Research in Bangladesh found that more than 50% of street food in Bangladesh was contaminated with coliform bacteria, while more than one-third of street food was contaminated with fecal pathogens (<i>E. coli</i>). A food safety education program was implemented that significantly improved hand hygiene practices and reduced bacterial contamination. Results were widely disseminated and this contributed to the implementation of the 'Safe Food Act 2013' to fight adulteration and protect public health. Subsequently, the 'Formalin Control Act, 2015' was passed by Parliament.
	A Point-of-Care Diagnostics project led by David Goldfarb (University of British Columbia) and Jeffrey Pernica (McMaster University) collected evidence on the cause of diarrhea in children in Botswana that contributed to the accelerated roll-out of rotavirus vaccine by the Government of Botswana.

KNOWLEDGE GENERATED

Publications are an indicator of new knowledge that can accelerate progress against pressing global health challenges. To date, Grand Challenges Canada projects have resulted in **almost 300 articles published in peer-reviewed journals**, including:

<p>Model for Service Delivery for Development Disorders in Low-Income Countries, Syed Usman Hamdani et al (HDRF, Pakistan): Showed the demand and efficacy of a model to deliver care for children with development disorders, whereby volunteer family members of affected individuals could be organized and trained to form an active, empowered group within the community. <i>Pediatrics</i> 2015, 136(6): p1167.</p>
<p>Group support psychotherapy for depression treatment in people with HIV/AIDS in northern Uganda: a single-centre controlled trial, Etheldreda Nakimuli-Mpungu et al (Makerere University, Uganda): This was the first randomized controlled trial in Africa to compare Group Support Psychotherapy with an active control intervention in treatment of clinical depression. <i>The Lancet HIV</i> 2015, 2(190): p199.</p>
<p>Bioavailability of enteric-coated microencapsulated calcium during pregnancy: a randomized crossover trial in Bangladesh, Dan Roth et al (Sick Kids, Canada): Aimed to establish in vivo evidence that enteric-coated calcium is bioavailable in pregnant women and to explore the dose-responsiveness of fractional calcium absorption in pregnancy. <i>American Journal of Clinical Nutrition</i> 2014, 100(6): p1587.</p>

NEXT GENERATION OF INNOVATORS SUPPORTED

Grand Challenges Canada set out to fund innovations and has ended up supporting people.

For example, Grand Challenges Africa launched in 2015, with the mandate to support African innovation for African challenges. Grand Challenges Africa will initially support existing Grand Challenges grantees in Africa and, over time, will launch their own calls for innovations.

Grand Challenges partners together invested

\$120 million in 380 projects in Africa from 2010–2015. **Grand Challenges Canada alone invested \$54.3 million in 211 projects**, forming a solid foundation for Grand Challenges Africa.

Twelve other countries have adopted a Grand Challenges model, driving domestic resource mobilization for pressing global health challenges and a growing network of partners able to partner at both program (Grand Challenges) and project levels to further accelerate progress.

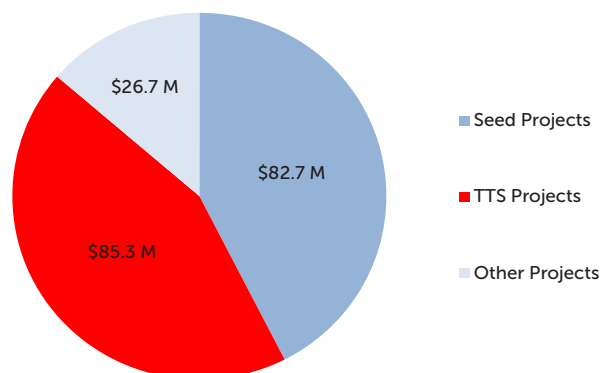


Meet a Star in Global Health: Etheldreda Nakimuli-Mpungu initially trained as a physician and wanted to be a doctor that made a difference in peoples' lives. She identified an opportunity to address the enormous – and untreated – mental health burden among people living with HIV/AIDS in Kampala. She received a Stars in Global Health award in 2012 to develop and test a Group Support Psychotherapy model for depression treatment in people living with HIV, the results of which were published in *The Lancet HIV* in May 2015. In the past year, she has been awarded an Elsevier Foundation Award for Women in Science, a Presidential Medal for contribution to Uganda's development, and the MQ Fellows Award (the first recipient in a developing country). With the support of Grand Challenges Canada and MQ, her project is now being scaled-up in three districts in northern Uganda to train 90 professional health workers and 180 lay health workers to recognize symptoms of depression and deliver Group Support Psychotherapy for depression.

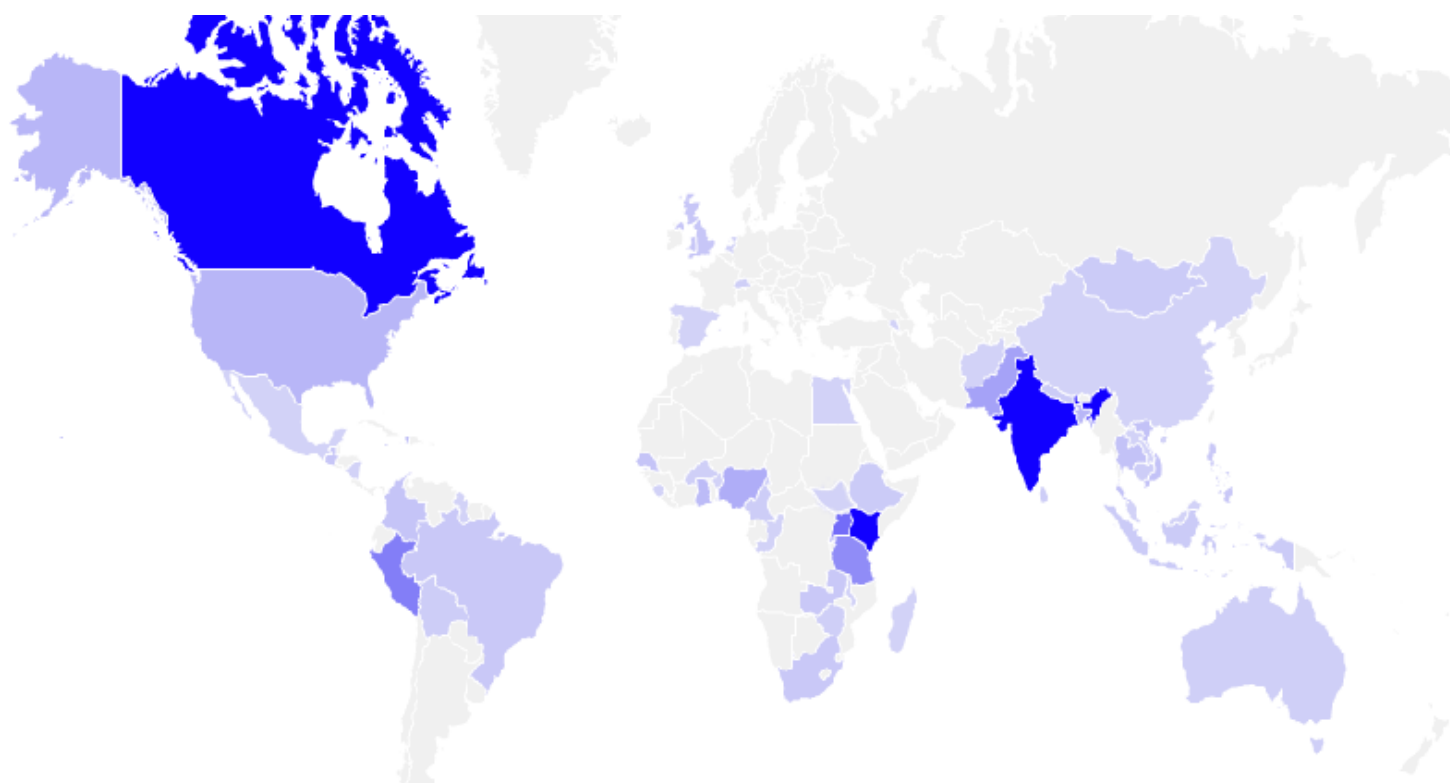
ACTIVITIES AND INPUTS

Grand Challenges Canada has funded approximately 700 innovations in more than 80 countries, as illustrated on the following page. Funding has been approximately split between supporting innovations at the seed stage (to prove the concept) and at transition-to-scale (to catalyze the scale and sustainability of the innovation). Over \$325 million has been leveraged as a result of Grand Challenges Canada investments. Our total operations, including both general and administrative expenses and program support, has run at 12.7%. See Annex 4 for our current logic model.

**Grand Challenges Canada
 Program Funds Committed**



DISTRIBUTION OF INNOVATIONS SUPPORTED BY GRAND CHALLENGES CANADA



LEGEND

- 0 Projects
- 1-31 Projects
- 32-62 Projects
- 63+ Projects

Our Programs

STRATEGIC PRIORITIES AND PORTFOLIO

Grand Challenges Canada’s strategic priorities are set out in the **Strategic Plan to 2022** that was approved by the Board of Directors in December 2015. Our strategic priorities are:

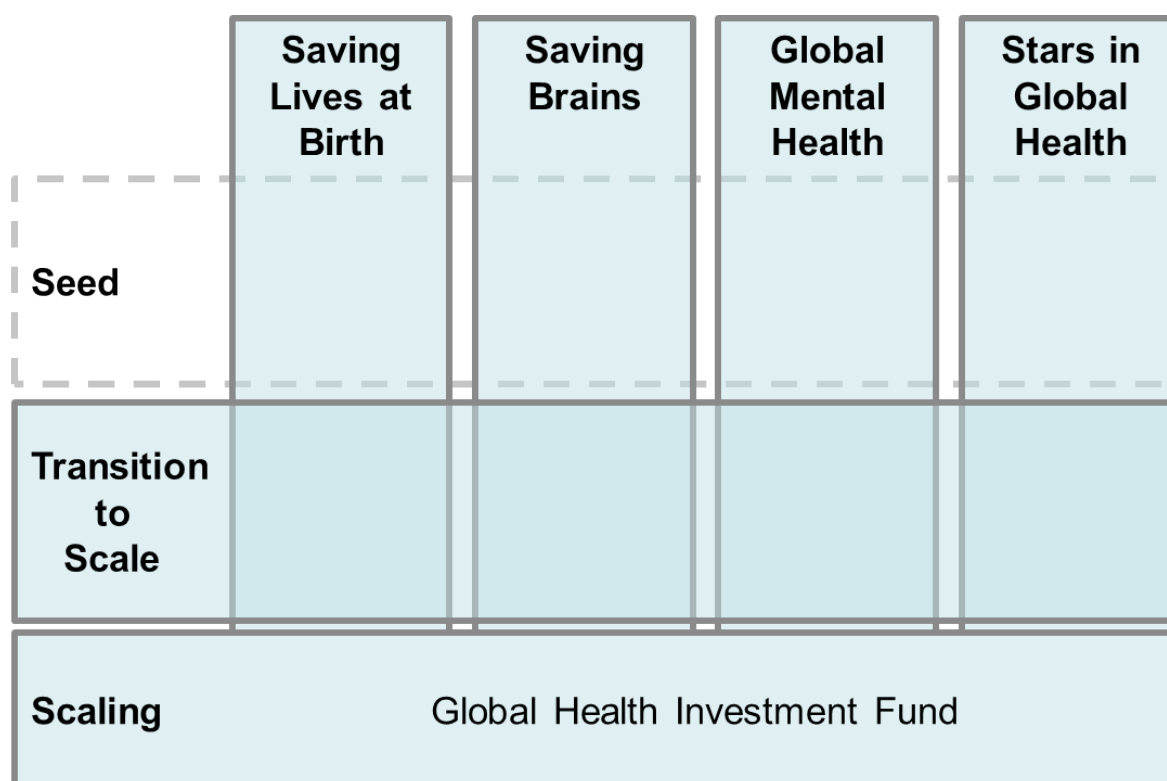
Primary:

- Maternal, Newborn and Child Health (Saving Lives at Birth and Saving Brains)
- Global Mental Health
- Other global health challenges arising from the Stars in Global Health program (such as water and sanitation; menstrual hygiene management; hearing, vision and disability).

Secondary:

- Develop and implement new models of innovation diplomacy, impact investing and social finance, and reverse innovation.

We source innovations through open calls for proposals and fund the best with **seed** grants. We enable the most promising of these innovations to amplify their impact by focusing on critical scale and sustainability elements with **transition-to-scale** funding. We are also the anchor investor in the Global Health Investment Fund, with a focus on **scaling**.



TRANSITION TO SCALE



ZanaAfrica – Safe, quality and affordable sanitary pads for women and girls in East Africa

Program Overview

Our Transition To Scale program launched in 2013 and is at the core of our comparative advantage, both as an innovation and as a global health organization. The goal of Transition To Scale funding is to catalyze the scale and sustainability of innovations with a proven impact on health. Transition To Scale is the primary channel through which innovations achieve outcomes and it is the common pathway through which Grand Challenges Canada's seed investments transition to scale. The International Expert Review Panel expressed the view that the Transition To Scale program will be **critical to Grand Challenges Canada's success over the next five years.**

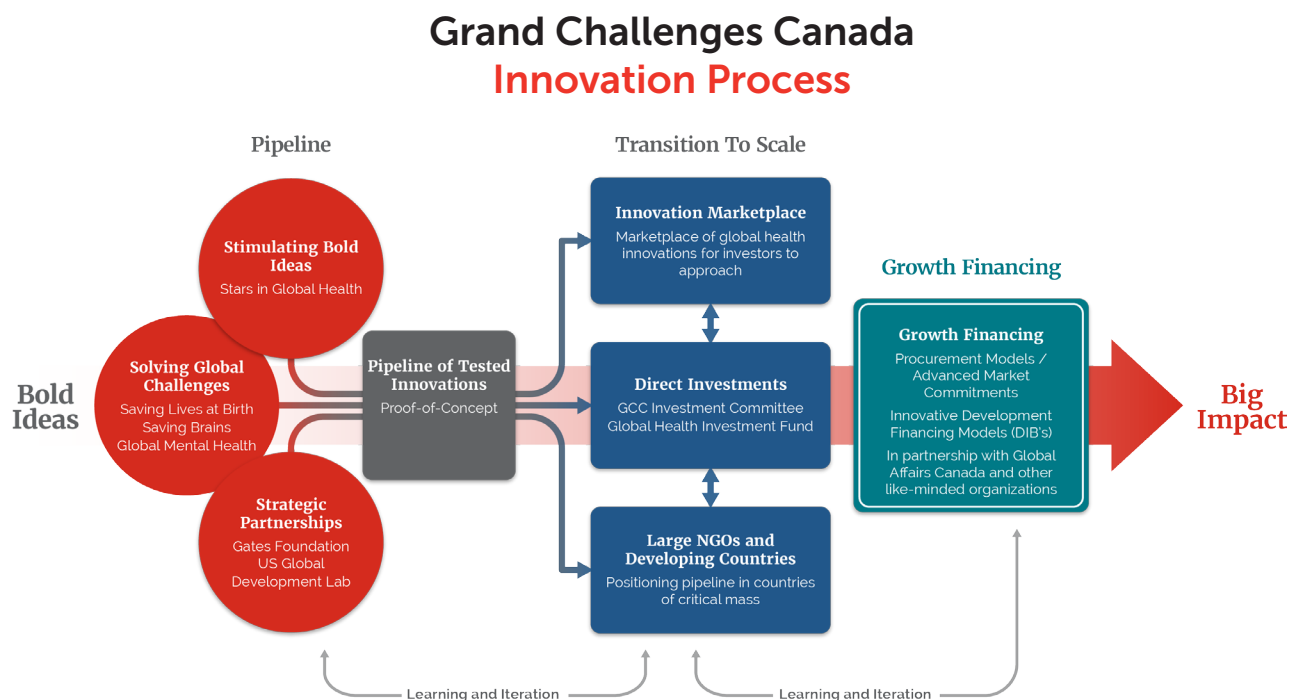
Grand Challenges Canada is uniquely structured to

support and enable the scale-up of global health innovations via both private and public channels: social enterprises through commercial markets and public health models through government integration and/or uptake by non-profit players. Grand Challenges Canada seeks innovations that optimize science, social and business innovation that have the potential to sustainably scale in low- and middle-income countries.

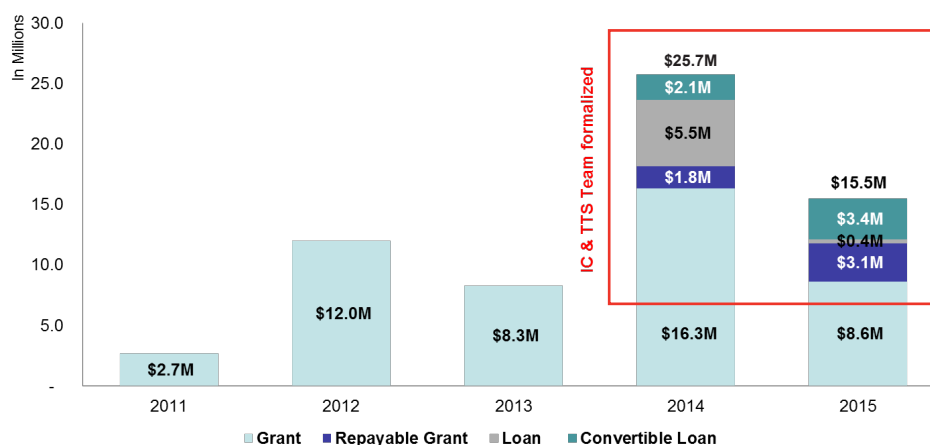
The goal is to maximize the number of lives saved and improved of those most in need in low- and middle-income countries. As such, we increasingly model potential outcomes of innovations at transition-to-scale and we always track actual outcomes throughout the investment period.

Transition To Scale (continued)

Our approach to the Transition To Scale program is summarized in the following diagram:



The Investment Committee has helped influence a shift towards a more diversified Transition To Scale portfolio that now includes an array of risk capital, in addition to grants. Grand Challenges Canada has committed \$64.2 million to 78 transition-to-scale projects,² with the following financial tools:



The dollar amounts represent the amount of funds committed.

²These 78 projects do not include the following types of projects: closed Point-of-Care Diagnostics or Hypertension, and open Saving Lives at Birth (administered by USAID). When these projects are included, there are a total of 111 Transition To Scale projects at \$85.5M committed.

Transition To Scale (continued)

Portfolio Results to Date

Among the potentially transformative innovations currently receiving transition-to-scale funding are a point-of-care Ebola diagnostic and an improved diagnostic approach for better treatment of diarrhea. Each of these innovations is discussed in more detail below.

Ebola Rapid Diagnostic Test

Makerere University

Problem

Ebola is a severe viral disease and often a fatal illness in humans. There is currently no point-of-care diagnostic to help contain Ebola outbreaks by diagnosing carriers where they are.

Innovation

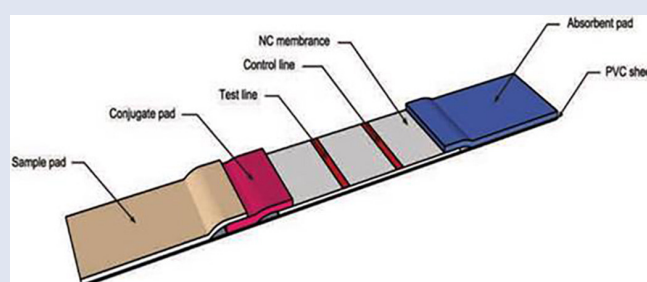
A rapid, paper-strip diagnostic test for Ebola virus, based on antibodies raised against conserved parts of the virus.

What's Next

The most promising permutations of sandwich assays will be tested on plasma from the previous Ebola outbreak at the National Institute for Communicable Disease, South Africa, in partnership with LifeAssays.

Potential for Transformation

If successful, this **point-of-care** diagnostic could be used in future Ebola outbreaks in the **village setting** to identify infection, enable efficient **containment of the virus** and save many lives, especially in communities where quarantine criteria are poor.



Progress to Date

- Identified epitopes conserved across Ebola strains.
- Raised monoclonal antibodies against the conserved epitopes.
- Identified three pairs of capture/detection antibodies that provide the strongest signal against recombinant peptides and whole protein; another two pairs with moderate signal.

GCC Investment: \$820K grant	Potential Exit: Government/ INGO
Co-Investment: None	Employees: 5

Transition To Scale (continued)

Optimizing the Management of Acute Diarrheal Disease

McMaster University

Problem

Diarrheal disease is the second-leading cause of death for children under five. It is a major contributor to stunting, malnutrition, cognitive dysfunction, and reduced adult human capital and economic productivity.

Innovation

A novel paradigm for the management of acute diarrheal disease in children, involving the integration of point-of-need rapid diagnostic testing and prompt, targeted antimicrobial therapy in low-resource settings.

What's Next

Randomized controlled trial to generate evidence to: (a) influence changes in policy (e.g., World Health Organization guidelines), and (b) catalyze the development of future diagnostics in childhood diarrhea applicable for low-resource settings.

Potential for Transformation

Childhood diarrhea will be better managed in low-resource settings.

Progress to Date

- Demonstrated use of flocked swab resulted in higher yield of sample than bulk stool.
- Demonstrated etiology of diarrheal disease in Botswana; contributed to expedited roll-out of rotavirus vaccine.



- Demonstrated that rapid testing and targeted antimicrobial therapy, in addition to probiotics, increased child height-for-age at 60 days (0.63 SD, 95%CI 0.12 to 1.13) and statistically decreased odds of recurrent diarrhea (OR 0.07, 95%CI 0.01 to 0.61) in the follow-up period.

GCC Investment: \$475K grant	Potential Exit: Government/ WHO and Multinational Corporations
Co-Investment: bioMérieux – ~\$193K Botswana MOH – ~\$155K BioGaia – ~\$32K Copan Italia – ~\$20K Botswana-UPenn – ~\$52K McMaster Dept. of Pediatrics – ~\$20K UBC Dept. of Pathology and Lab Medicine – ~\$25K	Employees: 2 Principal Investigators, field team in Botswana

Transition To Scale (continued)

Summary of Transition To Scale Investments in 2015–2016

The following is a list of Transition To Scale projects undertaken in different sectors:

Innovator	Innovation
Maternal, Newborn and Child Health	
Kangaroo Foundation	Kangaroo Mother Care for Infants
Jacaranda Health Ltd.	Quality Improvement in Clinics
Access Afya	Affordable Care Clinics
McMaster University	Detection of Enteric Pathogens Using Flocked Swabs
Socios en Salud	Community-based Intervention for Infants with or at Risk of Neurodevelopmental Delay
Fondation Kole Zepol	Micro-franchise Approach to Health
AIR Device	Augmented Infant Resuscitator
ChARM	Children's Automated Respiration Monitor
Global Mental Health	
Africa Mental Health Foundation	Multi-sectoral Mental Health Intervention
University of Zimbabwe	Cognitive Behavioural Therapy via Friendship Bench Model
Makerere University	Group Support Therapy
HDRF	Family Networks to Improve Outcomes in Children with Development Disorders
SFU/CARMHA	Low-cost Psychosocial Interventions for People Living with Mental Illness
Zanmi Lasante	Rural Mental Health Model
Women and Girls / Menstrual Hygiene Management	
ZanaAfrica Group Limited	Sanitary Pads
Water and Sanitation	
iDE	Household Ceramic Water Filter
SOIL Haiti	Household Toilets
Samagra Sanitation Pvt. Ltd.	Toilet Blocks in Urban Slums
Svadha	Toilet Supply Chain and Entrepreneur Training

Transition To Scale (continued)

Hearing	
Clearwater Clinical	Hearing Diagnostic
Diagnostics	
Biosense Pvt Ltd.	Anemia
McGill University/Sympact-x	HIV Self-test Diagnostic
Other	
Espoir Pour La Santé	Schistosomiasis Control
Arbutus	Drill Cover
KA Imaging	Low-cost Digital X-Ray
OneBreath	Mechanical Ventilator
Nia Technologies	3D Printed Prosthetics
Wema	Cervical Cancer Detection

Feedback from the Scientific Advisory Board

Portfolio-specific subcommittees of our Scientific Advisory Board, comprised of international experts, review the outcomes from each of our portfolios on an annual basis. The Scientific Advisory Board offered the following feedback on the Transition To Scale portfolio and its progress in 2015–16:

- *Grand Challenges Canada is able to work with investors, government entities, etc., and has both flexibility and emphasis on a wide range of partners, which is very valuable.*
- *The Transition To Scale program (which is probably leading the world) applies a bit of a business lens, and applicants are expanding how they view their work with regard to sustainability, which is a good thing.*
- *The work being done to evaluate the impact is much more sophisticated than others are able to do; others are learning from this – nice work!*

SAVING LIVES AT BIRTH

The Problem

More than 40% of maternal and newborn deaths and stillbirths occur on the day of birth. Although gains have been made in child survival, newborn mortality rates have proven persistent, now accounting for 44% of all under-five child deaths. Almost all of the annual 303,000 maternal deaths, 2.7 million

newborn deaths and 2.6 million stillbirths occur in low- and middle-income countries, where access to quality care is the most limited. To reach the Sustainable Development Goals, a joint focus on maternal and newborn health is crucial.

Saving Lives at Birth (continued)



Jacaranda Health – Building a new model for maternal and newborn health



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GATES foundation



The Approach

Saving Lives at Birth seeks innovative solutions that are affordable, accessible, sustainable and of high quality across three focus areas: science and technology, service delivery and demand creation.

The Saving Lives at Birth Partnership

Saving Lives at Birth is a partnership with: USAID, the Government of Norway, the Bill & Melinda Gates Foundation, Grand Challenges Canada, the UK's Department For International Development (DFID) and the Korea International Cooperation Agency (KOICA).

Progress Against the Challenge

The leadership of Saving Lives at Birth has contributed significantly to developing a pipeline of innovations for maternal and newborn health that did not exist prior in 2010. To date, the innovations supported through Saving Lives at Birth have contributed to more than 1.5 million pregnant women, newborns and mothers using innovations and over 8,000 maternal and newborn lives saved and stillbirths averted. These innovations are also attracting the investment of private-sector partners that are necessary for scale and sustainability.

Saving Lives at Birth (continued)

Inhaled oxytocin is an example of a potentially transformative innovation in the Saving Lives at Birth portfolio.

Inhaled Oxytocin

Monash University, Australia

Problem

Oxytocin, the gold standard for protection against postpartum hemorrhage, is only currently available as an intravenous or intramuscular injection, requiring a skilled provider and robust cold chain.

Innovation

A heat-stable, inhaled dry powder formulation of oxytocin would disrupt the need for skilled provision of the medication and cold chain.

What's Next

Development of a commercial scale manufacturing process for global supply, continuation of a streamlined clinical and regulatory pathway to minimise time to market, and further in-country engagement to understand efficient implementation strategies to maximise access and uptake in countries of high need.

Potential for Transformation

If successful, this heat stable formulation, will broaden access to a quality oxytocin product into settings that lack consistent cold chain infrastructure and allow safe administration by all levels of healthcare worker.



Progress to Date

- A collaborative agreement with GSK to co-develop, register and distribute the product in regions of high maternal mortality.
- Completion of first in-human clinical study. (Results scheduled to be published in Q1'17)
- Early messages from in-country stakeholder engagement and landscape analysis appear to validate benefits of an inhaled product.

GCC Investment: \$1M grant	Exit: GSK
Co-Investment: McCall MacBain Fdn - ~\$1.5M Helen Macpherson Smith Trust - ~\$750K Planet Wheeler Fdn - ~\$500K GSK - ~\$14.4M	Employees: 6 + 6 temporary employees

Feedback from the Scientific Advisory Board

The Scientific Advisory Board offered the following feedback on the Saving Lives at Birth portfolio and its progress in 2015–16:

- *Six million deaths around time of birth and a total dearth of innovation targeting this and [there is] a total shift now [with Saving Lives at Birth].*
- *[Value comes from] the shift of focus onto a critical time period, which was more important than dividing mother or baby or stillbirth.*
- *The view of Integrated Innovation® is important,*

and the need to emphasize the social and economic perspectives in order to understand the contexts in which the innovations were being used.

- *One-third of the innovators receiving [Saving Lives at Birth] grants are women, which is very, very high in the field.*
- *Progress of Saving Lives at Birth against the challenge, if you take it literally as saving lives... looks promising.*

SAVING BRAINS

The Problem

As many as 200 million children fail to reach their full potential, and children in poverty have a higher chance of adversity that could risk disrupting brain development. This is a devastating waste of human

capital that leaves the next generation ill-equipped to solve the enormous challenges that lock individuals, communities and societies in poverty.



Aga Khan University – School Transition and Readiness: STAR Project



A partnership of:



BILL & MELINDA
GATES foundation



UBS Optimus Foundation



For Children. For Change. For Life.

Grand
Challenges
Ethiopia



The Saving Brains Partnership

Saving Brains is a partnership of Grand Challenges Canada, Aga Khan Foundation Canada, the Bernard van Leer Foundation, the Bill & Melinda Gates Foundation, The ELMA Foundation, Grand Challenges Ethiopia, the Maria Cecilia Souto Vidigal Foundation, the Palix Foundation, UBS Optimus Foundation and World Vision Canada.

Our Approach

Saving Brains seeks bold ideas to promote health and nutrition, provide enrichment and nurturing and protect against maltreatment – the three components of healthy development that every child needs to thrive. Of great importance to Saving Brains is how to effectively integrate these needs and deliver them to the highest number of children in a sustainable manner.

Saving Brains (continued)

Progress Against the Challenge

Saving Brains has catalyzed a global movement, at the centre of which is a pipeline of “thrival” innovations aligned with the updated *Global Strategy for Women’s, Children’s and Adolescents’ Health*. To date, tens of thousands of children have been exposed to innovations to protect and nurture healthy development. The scale-up of Kangaroo Mother Care is a potentially transformational innovation funded through this portfolio.



Kangaroo Mother Care

Kangaroo Foundation

Problem

Despite the evidence for Kangaroo Mother Care (KMC), access remains low globally. The Every Newborn Action Plan set a target to increase the reach of KMC to >50% of low-birth-weight (LBW) infants globally by 2020; however, there are no proven models for scale.

Innovation

A KMC scaling strategy, based on a culturally sensitive train-the-trainer model supported by an e-learning and data tracking platform.

What’s Next

Cameroon’s 2015–2016 action plan for improving newborn health identifies KMC as a priority intervention for scale-up. Grand Challenges Canada is developing a Development Impact Bond, an outcomes-based financial instrument, to fund the scale-up of KMC in Cameroon beyond 2016.

Potential for Transformation

If successful, this will be the first demonstration of country-wide scale of the life-saving and brain-saving KMC practice for LBW infants beyond Colombia.

Progress to Date

- 57 medical personnel have been trained on KMC in the Centers of Excellence of Mali and Cameroon.
- 831 LBW babies have accessed KMC in Centers of Excellence.



GCC Investment: \$1M grant	Potential Exit: Development Impact Bond (government)
Co-Investment: CrossKnowledge Fdn – ~\$420K Kangaroo Foundation – ~\$152K ISF-Uniminutos – ~\$115K Senate of France – ~\$20K IDB Prize – ~\$7K	Employees: 21

Saving Brains (continued)

Feedback from the Scientific Advisory Board

The Scientific Advisory Board offered the following feedback on the Saving Brains portfolio and its progress in 2015–16:

- *The value of Saving Brains is that you have put Early Childhood Development on the map. You have created a lot of information, interest and excitement around the topic.*
- *There are many who are very grateful for this work. I always liked that the portfolio is not just focused on one aspect, such as nutrition or mental health; instead, there was diversity, which encouraged integration and communication across the field.*
- *Saving Brains provides a unique opportunity on a global level to develop a deeper understanding of the features of early interventions that produce better outcomes for children facing adversity.*
- *[The value of] Saving Brains is your global movement...The capacity-building you have done to think about child development throughout the world is just incredible.*

GLOBAL MENTAL HEALTH

The Problem

Mental disorders contribute to 14% of the global burden of disease worldwide; 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.



© Jacquie Labatt

Zanmi Lasante – Promoting a community-based mental health model in rural Haiti and building a national scale-up plan



Global Mental Health (continued)

Our Approach

Grand Challenges Canada supports bold ideas to improve treatments and expand the access to care for people living with mental disorders, by focusing on six areas of focus.

Grand Challenges Canada's Global Mental Health Program goals are aligned with the Mental Health Action Plan global targets for 2020 and the United Nation's 2030 Sustainable Development Goals.

Progress Against the Challenge

Innovations in the Global Mental Health portfolio have contributed to **tens of thousands of people receiving mental health care**. The innovations funded at transition-to-scale alone have the potential to improve an additional 1.5 million lives by 2030. A number of innovations have resulted in changes to essential medicines lists, health worker training curricula and other **policy influences that are removing structural barriers to mental health care**, meaning the impact will be even more widespread. Finally, through several transition-to-scale investments, we have demonstrated that **local governments are willing to invest in evidence-based mental health innovations** that can be implemented at scale, which strengthens our model of investment going forward.

Grand Challenges Canada is proud to be helping to build the capacity of current and future leaders



in global mental health and increasing the global visibility of mental health challenges.

The Friendship Bench is an example of a potentially transformational innovation funded through this portfolio.

The Friendship Bench

University of Zimbabwe

Problem

Forty percent of primary care users in Zimbabwe suffer from common mental disorders, many of whom are also living with HIV/AIDS. The current treatment gap for HIV/AIDS-related mental health interventions in Zimbabwe is ~90%.

Innovation

A brief (6 x 45-minute) task-shifted cognitive behavioural therapy intervention to address common mental disorders, delivered by supervised lay health workers on a wooden bench within the grounds of municipal clinics.



Global Mental Health (continued)

What's Next

Scale-up the delivery of the intervention to 72 new clinics in the cities of Harare, Gweru and Chitungwiza, and integrate into a Médecins Sans Frontières (MSF)-operated tertiary facility-based mental health program to treat 14,000 people by the end of 2016.

Potential for Transformation

If successful, this innovation will **flip the gap** to 10% and demonstrate how **mental health care can be delivered through primary care centres**, even where there is a dearth of mental health specialists.

Progress to Date

- 2,960 people screened for depression across 24 public clinics in Harare.
- Randomized controlled trial demonstrated clinically and statistically significant improvements in depression, anxiety, quality of life and functioning among the 246



participants (40% HIV+) in intervention arm six months after engaging in therapy, as compared to the control group.

GCC Investment: \$1M grant	Potential Exit: Philips / Country government
Co-Investment: Médecins Sans Frontières	Employees: 10

Feedback from the Scientific Advisory Board

The Scientific Advisory Board offered the following feedback on the Global Mental Health portfolio and its progress in 2015–16:

- *This program has funded a new range of innovations, which other funders are not funding. This is very innovative work that would not have gained access to funding elsewhere – really a great achievement, so congratulations to the team.*
- *This is a remarkable portfolio, with some of the most impressive initiatives that had been undertaken over the last few years, with very good innovations and also good results.*
- *Several innovations are addressing a ~97% treatment gap. Without that innovation, there would be nothing else, so that would represent a huge value-add that would warrant kudos to the Government of Canada.*
- *The greatest value is that it's creating hope, confidence that we can do something.*

STARS IN GLOBAL HEALTH

The Problem

Intolerable inequities in health between high- and lower-income areas in the world persist, as highlighted in the United Nation's Sustainable Development Goals. Innovation will be crucial for the achievement of the Sustainable Development Goals. Promising innovations are often limited in

their ability to achieve scale and sustainability. The goal is to solve complex global health challenges – like those targeted in the Sustainable Development Goals – by supporting bold ideas with the potential for big impact, resulting in lives saved or improved in low- and middle-income countries.



Nia Technologies Inc. – Leveraging 3D printing technology for prosthetics production

Our Approach

The Stars in Global Health program supports Bold Ideas with Big Impact® from the best and brightest scientists and innovators, both in low- and middle-income countries and in Canada, to address some of the most pressing global health challenges. It provides funding to explore transformative ideas at proof-of-concept that apply Integrated Innovation® – the coordinated application of scientific/ technological, social and business innovation – in order to sustainably bring solutions to scale.

To date, 473 seed projects have been funded, and are being implemented in 81 low- and middle-

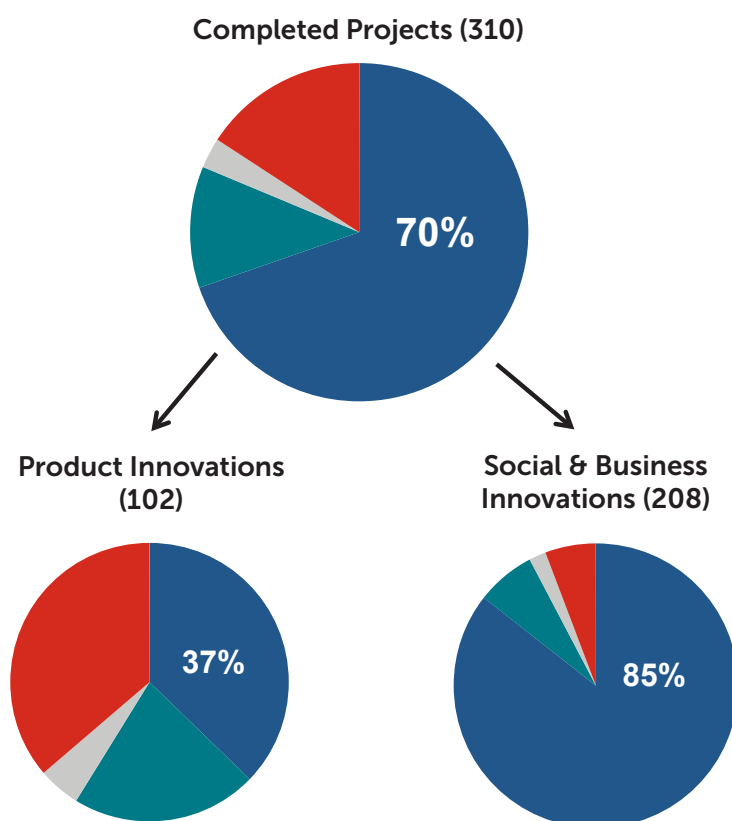
income countries by institutions in 37 low- and middle-income countries and Canada.

The ultimate objective of the Stars in Global Health program is to develop a pipeline of innovations to feed – and thereby increase the impact and value for money of – the Transition To Scale portfolio. Most of the impact will be realized by innovations transitioning to scale; Stars projects' initial results are used as signals for greater due diligence and consideration for funding to catalyze scale and sustainability.





Stars in Global Health (continued)

Portfolio Results To Date

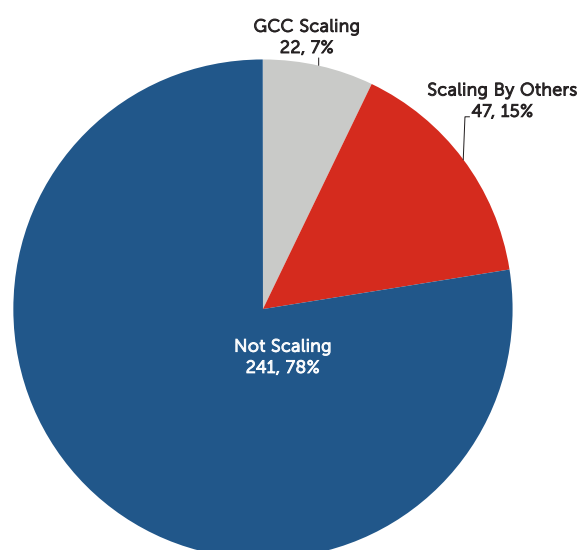
As our portfolio of projects in this program has matured, completed projects have been classified based on the innovator's defined proof-of-concept:



Proof-of-Concept Categories:

-  **Achieved:** Project met its intended goal or milestones, as outlined in the original proposal.
-  **Disconfirmed:** Project was well executed, yet demonstrated that the idea didn't work as planned.
-  **Not Achieved:** Project did not meet the intended goal(s) as outlined in the original proposal.
-  **Promising:** Project did not meet the goal(s) as outlined in the original proposal but have made significant progress towards that goal, and may achieve it with more time, resources.

To date, about 22% of Grand Challenges Canada's Stars in Global Health projects have transitioned to scale, with about 7% being supported by Grand Challenges Canada and 15% supported by other scaling partners and channels, as illustrated in the chart to the right. Given the nature of the Stars in Global Health portfolio, there is a broad range of projects focused on a myriad of different challenges. Some of the more promising innovations that are transitioning to scale by us or by others are illustrated on the following page.



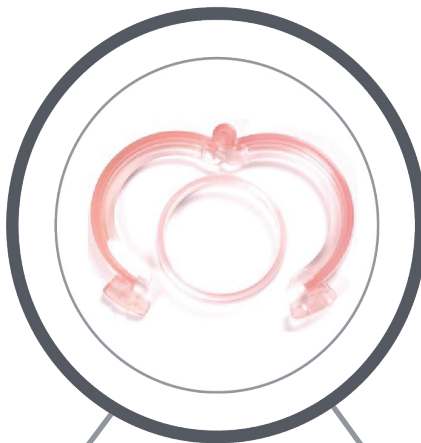


Stars in Global Health (continued)

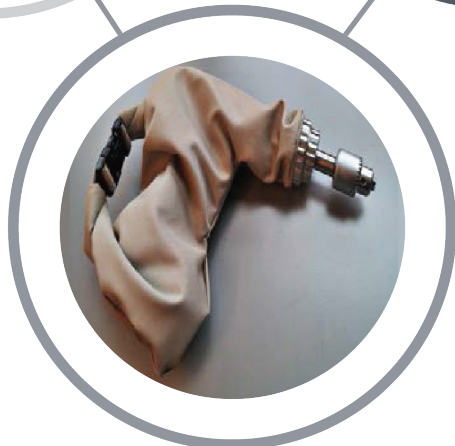
Cost-effective mechanical ventilation for emerging markets (OneBreath)



Shang ring, a novel male circumcision device across all age groups (Engender Health)



A low-cost, low-dose, high-resolution digital x-ray imager (KA Imaging)



Sterile drill covers for low-cost orthopedic trauma surgery (Arbutus Medical)



3D printing technology, leveraged for prosthetics production (Nia Technologies Inc.)

Feedback from the Scientific Advisory Board

The Scientific Advisory Board offered the following feedback on the Stars in Global Health portfolio and its progress in 2015–16:

- *Grand Challenges Canada [through Stars in Global Health] has distinguished Canada as an innovative, edgy leader, willing to take on projects that no others would support, and is providing leadership in this domain.*
- *Results [of the Stars in Global Health portfolio] might be understated; suggest taking some credit*

for the rise of entrepreneurship globally.

- *The Stars program has been a tremendous success. Very positive aspects include the diversity of projects and impact, and where some of the challenges for implementation are coming from.*
- *There is tremendous value from the Stars funding and the [continuation of the program] is totally appropriate.*



GLOBAL HEALTH INVESTMENT FUND



The Global Health Investment Fund is a \$108 million impact investment fund. Through a pioneering group of investors – including a \$10 million anchor investment from Grand Challenges Canada (funded by the Government of Canada) – the Global Health Investment Fund will help advance promising interventions to fight public health challenges in low-income countries, such as malaria, tuberculosis, HIV/AIDS, and maternal and infant mortality. The fund was created to overcome a critical market failure: the lack of availability of investment capital to take promising global health innovations to scale

in low-income countries. The target for this fund is innovations that may struggle to meet traditional risk/return standards for purely commercial investment, but that offer potentially transformative global health outcomes. The Bill & Melinda Gates Foundation and the Swedish International Development Cooperation Agency have provided a first-loss provision to attract investors to the fund.

As of Q1 2016, six investments have been announced and a strong pipeline of opportunities is progressing. Current investments include:

	<p>Access Bio</p> <p>Diagnostics platform <i>Investment:</i> \$8 million <i>Potential Impact:</i> 85 million additional malaria screenings by 2030</p>
	<p>Atomo Diagnostic</p> <p>Diagnostic platform <i>Investment:</i> \$6 million <i>Potential Impact:</i> 20 million additional diagnoses by 2030 (HIV, HCV, malaria)</p>
	<p>BD</p> <p>Preeclampsia/gestational diabetes screening <i>Investment:</i> \$10 million <i>Potential Impact:</i> 1.1 million preeclampsia cases triaged to higher care by 2030</p>
	<p>Epistem</p> <p>Tuberculosis diagnosis <i>Investment:</i> \$8 million <i>Potential Impact:</i> 600 thousand lives saved by 2030</p>

Global Health Investment Fund (continued)

	EuBiologics Cholera vaccine <i>Investment:</i> \$5 million <i>Potential Impact:</i> 100 thousand deaths averted by 2030
	Medicines Dev for Global Health River blindness treatment <i>Investment:</i> \$10M million <i>Potential Impact:</i> Disease eradication accelerated by six to eight years

Lessons Learned

Grand Challenges Canada is a learning organization. In his Annual Letter for 2016, Dr. Peter Singer describes six lessons that have emerged over the past six years, as follows:

1. Focus investment on a Grand Challenge
2. Energize the next generation of innovators and social entrepreneurs
3. Source widely and scale selectively
4. Emphasize outcomes and choose smart partners
5. Mobilize new resources for scale
6. Foster reverse innovation.

Just as we ask this of the innovators we support, we are continuously learning from what we do and how we do it, to increase our effectiveness. The following are several examples of important learnings from the past year.

Innovators greatly benefit from a validation round prior to receiving full transition-to-scale financing: a transition-to-scale investment at the validation stage provides innovators with a smaller amount

of capital allocated to one or two select areas (limited scope of funds), as compared to a typical full transition-to-scale investment. This enables innovators to stay focused on further development of their innovation, and on key aspects of their business and implementation plans, as they prepare for transition-to-scale.

Validation rounds appear to be particularly effective for public health models that require more clinical evidence and for social enterprises still needing to develop their business model.

Two examples of the importance of validation round funding are seen with a small social enterprise and a larger, international, non-governmental organization. The innovator who created the social enterprise is a highly regarded academic who lacks business experience or a partner that can help fill this gap. As a result, the social enterprise faced immediate execution challenges that could best be addressed with a small amount of financing directed towards business planning and securing appropriate smart partners.

Lessons Learned (continued)

With the larger, international, non-governmental organization, validation funding is being used to generate evidence of its innovative health delivery model at scale. This larger trial was financed via a validation round, to enhance the non-governmental organization's ability to attract funding from other investors, including the local government.

This year has also demonstrated the power of curation to identify promising Transition To Scale projects. For every transition-to-scale investment made, there are roughly ten times that number of opportunities in the pipeline that are rejected. To expand the pipeline of promising investment opportunities at transition-to-scale, Grand Challenges Canada recognizes the need to expand its deal flow beyond innovations maturing from Grand Challenges Canada's seed programs, which

will be accomplished through a curation process – a comparative analysis of early-stage innovations in a given sector that are both internal and external to Grand Challenges Canada's current pipeline.

To date, Grand Challenges Canada has engaged industry experts to conduct curations in the areas of sanitation, maternal and newborn health, and menstrual hygiene management, to identify the innovations that are most promising, irrespective of the source of seed funding. Going forward, the Every Woman Every Child Innovation Marketplace platform, which is hosted at Grand Challenges Canada, will provide additional funders with a means of comparing deal opportunities across multiple pipelines, in support of the global women's, children's and adolescents' health agenda.

FAST FAILURES

Failure is an inherent risk of the innovation process. At Grand Challenges Canada, we embrace the risk of failure but work hard to ensure that failures occur early in the innovation process (where they are comparatively inexpensive) and that we learn from them and publicly share those learnings. The following are two examples of projects that we funded that failed to demonstrate proof-of-concept:

- One project attempted to make a low-cost, non-invasive test for a visceral leishmaniasis antigen that required monoclonal antibodies against a specific part of the *Leishmania* parasite to detect the parasite in blood cells (macrophages) of people infected with visceral leishmaniasis.

After rigorous testing, the innovator found that the parasite stage of the disease did not have sufficient antigen expressed for this approach to be viable.

- A project attempted to use plasmodium lactate dehydrogenase in the saliva of patients being treated for malaria to monitor disease progression. The project found that there was no correlation between levels of the enzyme in the saliva and the number of parasites in the blood.

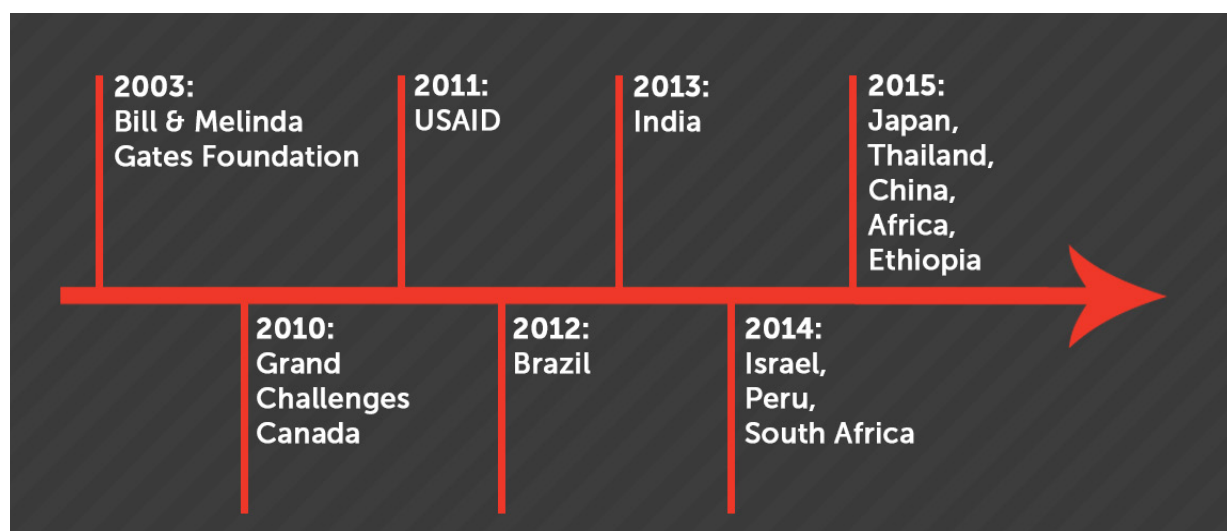
Although these projects did not end up validating the chosen approaches, they both produced new knowledge that will help to advance the detection and treatment of the relevant disease.

THE GRAND CHALLENGES NETWORK

In 2015–16, the network of global Grand Challenges initiatives continued to grow to include Japan, Thailand, China and Ethiopia, as illustrated in the chart below. The pan-continent Grand Challenges Africa was also launched in September 2015. As a significant contribution to Grand Challenges Africa's work in accelerating African science to solve African challenges, Grand Challenges Canada has funded more than 200 of the 380 African innovators who have received funding from Grand Challenges partners and make up the initial Grand Challenges Africa community.

An important aspect of this maturation process is the commitment to work together in ways that are both more efficient and effective, including:

1. Sharing data and learnings between organizations
2. Sharing strategy and tactics
3. Building an innovation marketplace.



Network Promoting Global Health Innovation through a Grand Challenges Approach

Corporate Profile

Grand Challenges Canada is a federally incorporated, not-for-profit organization. We are focused on managing the risks associated with funding innovation in development, with a particular focus on global health. We work closely with our partners, Canada's **International Development Research Centre (IDRC)**, the **Canadian Institutes of Health Research (CIHR)** and **Global Affairs Canada**.

We receive the majority of our funding from the Government of Canada through the Development Innovation Fund in Health, which is administered by the **International Development Research Centre**, as well as through a scaling partnership and the newly signed Reproductive, Maternal, Newborn and Child Health Contribution Agreement with Global Affairs Canada.

GOVERNANCE

Grand Challenges Canada is governed by an independent Board of Directors, chaired by **Mme Guylaine Saucier**. For a complete list of members of the Board of Directors, please see **Annex 2**. The Board's responsibilities are:

- To oversee the development of and approve the strategic framework and the multi-year business plan
- To approve major policy changes and changes to the strategic framework
- To approve new program or organizational partnerships
- To review and approve the framework for each program's Request for Proposals
- To review and approve the organization's annual budget
- To monitor corporate performance.

Please see **Annex 6** for the revised Terms of Reference of the Board of Directors, which was approved earlier this year.

There are three sub-committees of the Board of Directors:

- **Audit & Finance Committee**, chaired by

Morris Rosenberg; as of April 2016, chaired by Johanne Charbonneau

- **Governance & Human Resources Committee**, as of April 2016 chaired by Morris Rosenberg
- **Investment Committee**, chaired by Gerhard Pries; the Investment Committee's mandate is included at **Annex 8**.

The Scientific Advisory Board continues to provide advice and mentorship to management to enable the success of Grand Challenges Canada, with special attention to ensuring scientific integrity of its programs. The Scientific Advisory Board also reviews and provides specific advice on annual reports, portfolio reviews (in sub-committees) and the performance measurement system, as well as acting as ambassadors and champions of Grand Challenges Canada. For a complete list of members of the Scientific Advisory Board, please see **Annex 3**.

In 2015, the Board approved a revised **Strategic Plan to 2022**, which is summarized in the chart in **Annex 7**.

ACCOUNTABILITY

We continue to focus on two primary areas of accountability: **Results** and **Risk Management**.

Results

Our reporting on results is based on our Organizational Logic Model (included in **Annex 4**). A summary of our outcomes and outputs for the year can be found in the **Highlights 2015–2016** section of this report.

In 2015, a Summative Evaluation of the Development Innovation Fund in Health was completed, which found that:

"It is our independent assessment, that the Government of Canada (by action of IDRC, CIHR, and GCC) has demonstrated international leadership in the use of science and human creativity to improve the health of those who need it most."

The Summative Evaluation included five recommendations that have been and/or are being addressed in the coming fiscal year.

Accountability (continued)

The Board of Directors also commissioned an independent International Expert Panel Review, chaired by Mme. Marie-Lucie Morin, to provide advice and guidance to Grand Challenges Canada looking forward to 2020, which found that:

“Grand Challenges Canada is making tangible, measurable differences in some of the greatest areas of inequity in the world, especially in the maternal and child health space, and also in mental health.”

The review included a number of insights and findings that will help to shape the delivery of the strategic plan.

Risk Management

A second element of Grand Challenges Canada’s approach to accountability is **risk management**. Grand Challenges Canada has robust control systems in place to identify and mitigate the risks associated with innovation in general, and, in particular, our programs and operations. The control systems that we use in our risk management

processes include monitoring project progress through milestones, project visits and stringent commitments to proper use of funds, coupled with spot-check audits.

We also take a conservative approach to financial risk management, with various processes that are overseen by the Audit & Finance Committee of our Board of Directors. Any material risk occurrences that come to the attention of the organization are reported to, and discussed with, the Audit & Finance Committee on a quarterly basis (or more frequently, if needed). The Corporate Risk Profile is also updated so that recurring risks can be monitored and appropriate proactive mitigation measures implemented.

In FY 2015–2016, 11 risk occurrences were reported to, and discussed with, the Audit & Finance Committee; 8 out of the 11 risk occurrences have been resolved without any known negative consequences to the organization to date and the remaining 3 risks are still in the process of resolution. Based on guidance from the Audit & Finance Committee, internal processes have been adjusted to mitigate risk occurrences, where possible.

OPERATIONS

As the organization matures, Grand Challenges Canada has continued to refine and streamline operations, to ensure that they enable us to deliver on our strategic priorities.

Our three core areas of operations are:

1. Human Resources
2. Communications
3. Administration.

Human Resources

In July 2015, the Programs Team was joined by Ms. Kristin Neudorf in the new role of Knowledge Manager. A critical addition to enhance Grand

Challenges Canada’s performance measurement, her responsibilities include developing, refining and/or implementing approaches to the capture, analysis, synthesis and validation of the health outcomes and other impacts generated by the innovators and programs funded by Grand Challenges Canada.

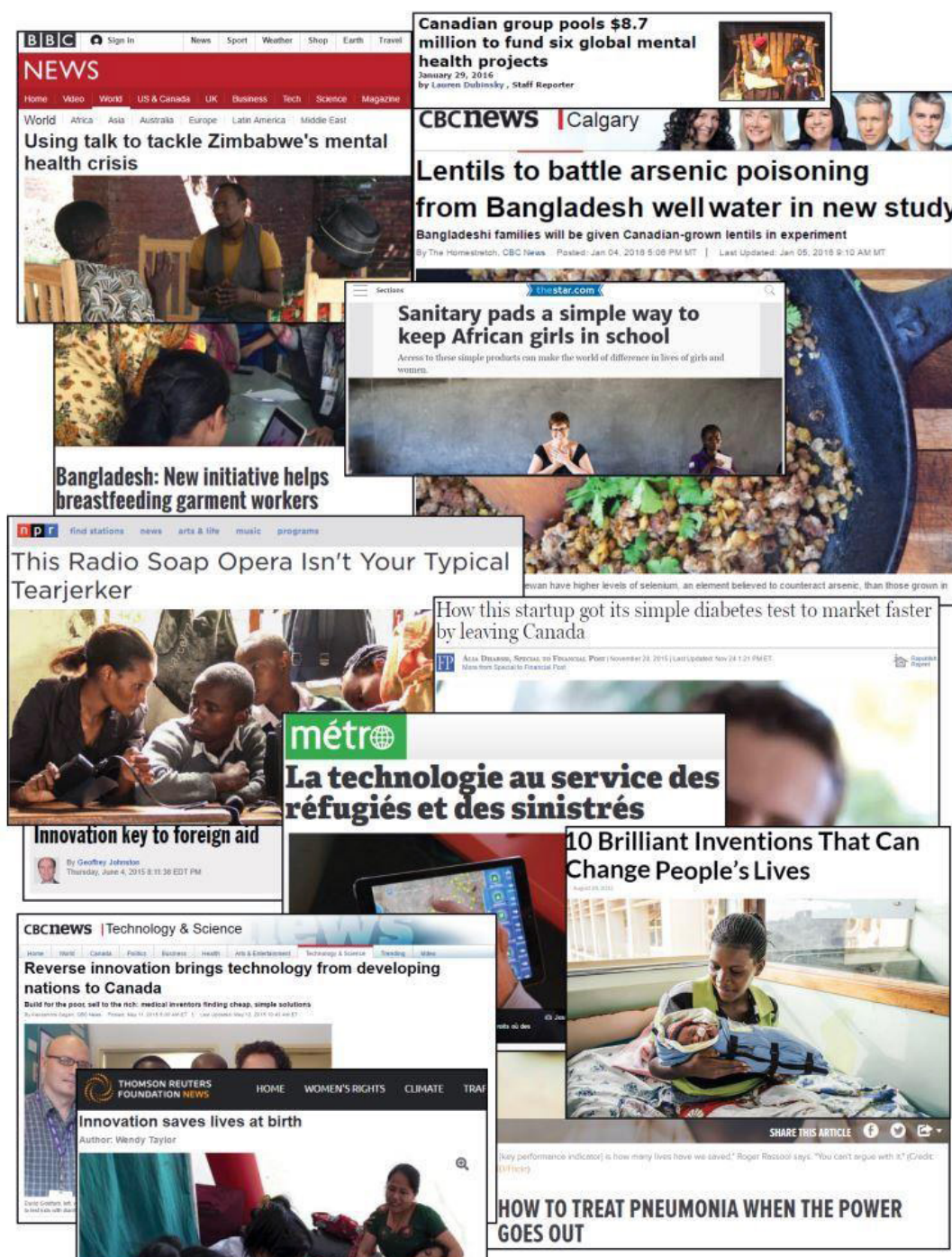
We continue to refine our core team of dedicated management and staff. An up-to-date organization chart can be found in **Annex 5**. In FY 2015–2016, Grand Challenges Canada had 33.98 full-time equivalent staff.



Communications

In FY 2015–2016, Grand Challenges Canada was featured in over 300 original media stories and issued 11 press releases. Some of the highlights of

this media coverage are captured in the following collage.



Administration

Grand Challenges Canada aims to maintain operating expenses (General Administration and Program Support) at around 12% of total expenditures. For FY 2015–2016, absolute

expenditures on operations remained constant; however, because of a decrease in annual funding, operating expenses were 12.7% of total expenditures.

GENDER, ENVIRONMENT AND GOVERNANCE

Grand Challenges Canada is committed to recognizing and supporting Global Affairs Canada's three cross-cutting development themes: Gender Equality, Environmental Sustainability and Good Governance (GEG/EG²). As part of our commitment, in FY 2015–16, we:

- Committed dedicated internal resources to focus on cross-cutting themes across Grand Challenges Canada
- Reviewed all Transition To Scale deals, in collaboration with the assistance of EG² technical experts, to ensure adequate attention was paid to these themes and suggestions for improvements identified
- Launched our EG² Policy
- Started to require collection and reporting of gender-disaggregated data
- Made Grand Challenges Canada's "Gender Analysis Brief" available online, as a reference tool for innovators to think through the effects of gender and other related considerations in their Grand Challenges Canada-funded work
- Introduced gender equality markers, in line with Global Affairs Canada, to provide a baseline to quantify the extent to which Grand Challenges Canada's portfolio supports gender equality outcomes, with an aim to improve on the outcomes.

An Environmental Handbook was drafted and presented to Grand Challenges Canada staff and management in 2015. Each project considered for funding at the transition-to-scale phase was reviewed by an Environmental Advisor to identify

potential positive and negative environmental impacts and to ensure projects are compliant with the Canadian Environmental Assessment Act 2012.

In 2016, updates to environmental management and reporting will be undertaken, including updates to the Institutional Strategic Environmental Assessment, revised screening processes, and ongoing monitoring and reporting on environmental management.

A revised screening process will be developed, including a new screening tool process for proof-of-concept phase projects and a revised screening tool for transition-to-scale projects. Process updates will ensure integration with the Reproductive, Maternal, Newborn and Child Health Logic Model and Contribution Agreement, and will include updates to Grand Challenges Canada's Environmental Handbook. Overall environmental management will be reviewed and updated with Grand Challenges Canada staff and management, in collaboration with the Environmental Advisor, in a way that reflects our commitment to integration of this cross-cutting theme with our work across programs and across other cross-cutting themes (gender and governance).

All transition-to-scale investments are required to complete a cross-cutting themes questionnaire, to ensure that considerations regarding gender equality, environmental sustainability and good governance are included in project design.

Financial Summary

On an annual basis, Grand Challenges Canada reports on two components of finances:

Leverage and Repayables – summarizes the total funding that we have leveraged as an organization and our current portfolio of projects funded by non-

grants or repayables.

Audited Financial Statements – the audited financial statements for FY 2015–16, with FY 2014–15 as a comparator.

LEVERAGE AND REPAYABLES

To date, Grand Challenges Canada has leveraged a total of \$328,285,124 CAD from funding sources other than the Government of Canada. This leverage is in the form of:

Program leverage – funding provided by other funders in the programs Grand Challenges Canada supports. Examples include funding from our partners in the Saving Lives at Birth Program.

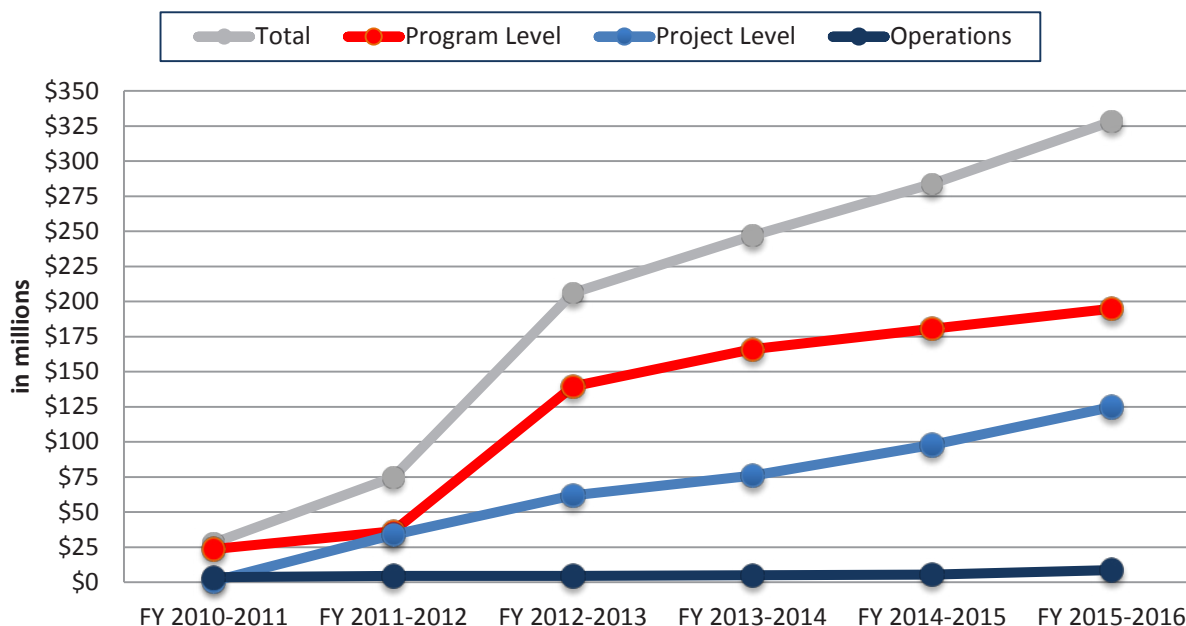
Grand Challenges Canada. These funders include individual angel investors, venture capital impact investors, private foundations, local governments, corporate entities (including multi-national corporations) and non-governmental organizations.

Operations leverage – primarily, this is funding provided to Grand Challenges Canada from the Rotman Family Foundation.

Project leverage – funding that projects are able to leverage as a result of the funding provided by

The following chart summarizes the funding we have leveraged to-date.

Cumulative Funding Leveraged to Date



Leverages and Repayables (continued)

A portion of the leveraged funding set out above flows through Grand Challenges Canada. A summary of this funding, or funding that is expected

to flow through Grand Challenges Canada in the near term, is summarized in the chart below:

	Type	Program	Amount (CAD)	Status
Rotman Family Foundation	Operations	N/A	\$5,626,084	Funds Received and Ongoing
Department for International Development (DFID)	Program/ Operations	Saving Lives at Birth	\$13,434,782	Funds Received and Ongoing
Bernard van Leer Foundation	Program	Saving Brains	\$61,275	Funds Received
UBS Optimus Foundation	Program	Saving Brains	\$2,339,490	Funds Received and Ongoing
Bill & Melinda Gates Foundation	Program/ Operations	Innovation Marketplace	\$3,351,200	Funds Received and Ongoing

Finally, we have a portfolio of \$26,768,768 CAD in non-grant investments (repayables) to support innovations as they transition to scale. This means

that these investments have the potential to be returned to Grand Challenges Canada.

AUDITED FINANCIAL STATEMENTS

The financial statements for Grand Challenges Canada for fiscal year 2015–2016 follow, with comparative figures for fiscal year 2014–2015.

INDEPENDENT AUDITORS' REPORT

To the Board of Directors of
Grand Challenges Canada

We have audited the accompanying financial statements of **Grand Challenges Canada**, which comprise the statement of financial position as at March 31, 2016, and the statements of operations and changes in net assets and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



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Audited Financial Statements (continued)

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of **Grand Challenges Canada** as at March 31, 2016, and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

Toronto, Canada
June 16, 2016

Ernst + Young LLP

Chartered Professional Accountants
Licensed Public Accountants



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Audited Financial Statements (continued)

STATEMENT OF FINANCIAL POSITION

As at March 31

	2016 \$	2015 \$
ASSETS		
Current assets		
Cash	16,637,328	7,682,349
Accounts receivable	609,552	308,265
Contributions receivable	2,806,469	—
Prepaid expenses and deposits	81,248	54,820
Total current assets	20,134,597	8,045,434
Capital assets, net <i>[note 3]</i>	318,316	187,624
	20,452,913	8,233,058
LIABILITIES AND NET ASSETS		
Current liabilities		
Accounts payable and accrued liabilities	13,371,127	5,581,923
Due to University Health Network <i>[note 4]</i>	127,742	112,531
Deferred contributions <i>[note 5]</i>	6,954,044	2,538,604
Total current liabilities	20,452,913	8,233,058
Net assets	—	—
	20,452,913	8,233,058

See accompanying notes

On behalf of the Board:

Director

Director



Audited Financial Statements (continued)

**STATEMENT OF OPERATIONS AND
 CHANGES IN NET ASSETS**

Year ended March 31

	2016 \$	2015 \$
REVENUE		
Grant [notes 5 and 6]	46,275,311	50,419,560
Interest [notes 5 and 6]	67,380	121,376
	46,342,691	50,540,936
EXPENSES		
General administration		
Personnel	1,160,740	963,654
Materials and supplies	69,710	71,531
Equipment and infrastructure	101,787	132,593
Business development	250,462	289,536
	1,582,699	1,457,314
Program support		
Personnel	2,842,433	2,538,481
Materials and supplies	81,993	64,856
Equipment and infrastructure	303,167	262,490
Business development	1,074,038	887,250
	4,301,631	3,753,077
Programs		
Issued grants	28,251,670	40,111,416
Non-grant projects [note 7]	6,869,768	3,071,000
Research support activities	5,336,923	2,148,129
	40,458,361	45,330,545
	46,342,691	50,540,936
Excess of revenue over expenses for the year	—	—
Net assets, beginning of year	—	—
Net assets, end of year	—	—

See accompanying notes



Audited Financial Statements (continued)

STATEMENT OF CASH FLOWS

Year ended March 31

	2016 \$	2015 \$
OPERATING ACTIVITIES		
Excess of revenue over expenses for the year	—	—
Add non-cash item		
Amortization of capital assets	36,566	38,580
Changes in non-cash operating working capital balances		
Increase in accounts receivable	(301,287)	(225,684)
Increase in contributions receivable	(2,806,469)	—
(Increase) decrease in prepaid expenses and deposits	(26,428)	13,215
Increase (decrease) in accounts payable and accrued liabilities	7,789,204	(2,059,870)
Increase due to University Health Network	15,211	96,491
Increase (decrease) in deferred contributions	4,415,440	(760,227)
Cash provided by (used in) operating activities	9,122,237	(2,897,495)
INVESTING ACTIVITIES		
Additions to capital assets	(167,258)	(164,966)
Cash used in investing activities	(167,258)	(164,966)
Net increase (decrease) in cash during the year	8,954,979	(3,062,461)
Cash, beginning of year	7,682,349	10,744,810
Cash, end of year	16,637,328	7,682,349

See accompanying notes



Audited Financial Statements (continued)

NOTES TO FINANCIAL STATEMENTS

March 31, 2016

1. PURPOSE OF THE ORGANIZATION

Grand Challenges Canada (the “Organization”) is dedicated to supporting **Bold Ideas with Big Impact**® in global health. The Organization is funded primarily by the Government of Canada and it funds innovators in low- and middle-income countries and Canada. The bold ideas that are supported integrate science and technology, social and business innovation – called **Integrated Innovation**®. The Organization focuses on bringing successful innovation to scale, catalyzing sustainability and impact. The Organization has a determined focus on results, and saving and improving lives.

The Organization works closely with Canada’s International Development Research Centre (“IDRC”), the Canadian Institutes of Health Research (“CIHR”) and Global Affairs Canada (“GAC”), formerly the Department of Foreign Affairs, Trade and Development Canada, to catalyze scale, sustainability and impact. The Organization also works with other Global Health foundations and organizations. The Organization is hosted at the Sandra Rotman Centre.

The Organization was incorporated as Grand Challenges Canada on March 19, 2008 under the *Canada Corporations Act* as a corporation without share capital. The Organization continued its incorporation under the *Canada Not-for-profit Corporations Act* on January 29, 2014. The Organization is a not-for-profit organization within the meaning of the *Income Tax Act* (Canada).

2. SIGNIFICANT ACCOUNTING POLICIES

These financial statements are prepared in accordance with Part III of the Chartered Professional Accountants of Canada Handbook – Accounting, which sets out generally accepted accounting principles for not-for-profit organizations in Canada and includes the significant accounting policies summarized below.

Revenue recognition

The Organization follows the deferral method of accounting for contributions, which include grants. Contributions are recognized in the accounts when received or receivable if the amount to be received can be reasonably estimated

Audited Financial Statements (continued)

NOTES TO FINANCIAL STATEMENTS

March 31, 2016

2. SIGNIFICANT ACCOUNTING POLICIES (continued)

and collection is reasonably assured. Restricted contributions are deferred when initially recorded in the accounts and recognized as revenue in the year in which the related expenses are recognized.

Grant payments

All contractual grant payments are subject to the provision of funds by donor partners. They are recorded as an expense when approved and when grantees meet all terms and conditions of the agreements. Refunds on previously disbursed grant agreements are credited against the current year expenses when the project is active or to other income when the project is closed.

Allocation of expenses

Personnel costs are allocated between general administration and program support based on the time spent by personnel.

Capital assets

Capital assets are recorded at cost and amortized over their estimated useful lives on a straight-line basis. The estimated useful life of each asset class is as follows:

Tangible

Leasehold improvements	Lesser of remaining term of lease or useful life
------------------------	--

Intangible

Software	5 years
Website	3 years

Financial instruments

Financial instruments, including accounts and loans receivable and accounts payable and accrued liabilities, are initially recorded at fair value and subsequently measured at amortized cost, net of any provision for impairment.



Audited Financial Statements (continued)

NOTES TO FINANCIAL STATEMENTS

March 31, 2016

3. CAPITAL ASSETS

	2016		
	Cost	Accumulated amortization	Net book value
	\$	\$	\$
Tangible			
Leasehold improvements	36,197	36,197	—
Intangible			
Software	106,591	106,591	—
Work in progress – software	257,948	—	257,948
Website	99,218	83,544	15,674
Work in progress – website	44,694	—	44,694
	544,648	226,332	318,316

	2015		
	Cost	Accumulated amortization	Net book value
	\$	\$	\$
Tangible			
Leasehold improvements	36,197	36,197	—
Intangible			
Software	106,591	79,591	27,000
Work in progress – software	138,916	—	138,916
Website	95,686	73,978	21,708
	377,390	189,766	187,624



Audited Financial Statements (continued)

NOTES TO FINANCIAL STATEMENTS

March 31, 2016

4. DUE TO UNIVERSITY HEALTH NETWORK

The Organization has entered into an agreement with the University Health Network for the following: [a] occupation of offices and work space at the University Health Network's premises; and [b] personnel, human resources, and other administrative services and resources provided by the University Health Network. The settlement of accounts between the University Health Network and the Organization is done on a regular and timely fashion. Amounts are non-interest bearing.

5. DEFERRED CONTRIBUTIONS

Deferred contributions represent unspent resources externally restricted for expenses in future years. Changes in the deferred contributions balance are as follows:

	2016 \$	2015 \$
Balance, beginning of year	2,538,604	3,298,831
Amounts received during the year	47,884,282	49,659,333
Contributions receivable	2,806,469	—
Interest earned on funds received in advance	67,380	121,376
Amounts recognized as revenue during the year		
Grant revenue	(46,275,311)	(50,419,560)
Interest	(67,380)	(121,376)
Balance, end of year	6,954,044	2,538,604



Audited Financial Statements (continued)

NOTES TO FINANCIAL STATEMENTS

March 31, 2016

6. GRANT REVENUE

In the 2008 federal budget, the Government of Canada announced the creation of the Development Innovation Fund (“DIF”). The Government of Canada initially committed \$225 million over five years to the DIF.

The terms of the DIF were reviewed by the Organization working with the IDRC and the CIHR. As a result of this review, a second amended grant agreement with the IDRC for \$220,141,134 was signed on January 28, 2014 covering the period from January 10, 2010 to March 31, 2017. The Organization is depending on this funding to carry out its mandate.

In fiscal year 2013-2014, GAC entered into a contribution agreement with the Organization for a maximum of \$9,975,000 for the Scaling Health Initiative. The agreement was effective from October 2, 2013 to October 2, 2015. The Organization received a one-year no-cost extension of the contribution agreement with GAC on October 1, 2015, with the end date of the contribution agreement extended to October 2, 2016.

In fiscal year 2013-2014, the Department for International Development – UK (“DFID”) committed to grant the Organization with a maximum of £2,000,000 for the Saving Lives at Birth portfolio. The grant is effective from April 1, 2013 to March 31, 2017. The terms of the agreement were reviewed by the Organization and the DFID. As a result of this review, a first amended grant agreement with the DFID was signed on May 20, 2014, for an additional amount of £500,000, and a second amended grant agreement was signed on June 25, 2014, to extend the effective period to March 31, 2018. In fiscal year 2015-2016, a third amended grant agreement with DFID was signed on September 18, 2015, for an additional amount of £4,600,000 to extend the effective period to November 30, 2019.

In fiscal year 2014-2015, the Bernard van Leer Foundation (“BVL”) committed to grant the Organization with a maximum of US\$50,000 for the Saving Brains (“SB”) platform. The agreement is effective from September 17, 2014 to May 17, 2015.

Audited Financial Statements (continued)

NOTES TO FINANCIAL STATEMENTS

March 31, 2016

6. GRANT REVENUE (continued)

In fiscal year 2014-2015, the Union de Banques Suisses Optimus Foundation (“UBSOF”) entered into a contribution agreement with the Organization for a maximum of CHF1,750,000 for the SB portfolio. The agreement is effective from February 10, 2015 to February 10, 2018. Initial funds were received from UBSOF in fiscal year 2015-2016.

In fiscal year 2015-2016, the Bill and Melinda Gates Foundation (“BMGF”) committed to grant the Organization with a maximum of US\$2,506,978 for the Innovation Marketplace Initiative. The grant is effective from November 30, 2015 to November 30, 2020.

In fiscal year 2015-2016, GAC entered into a contribution agreement with the Organization for a maximum of \$158,730,672 for the Maternal, Newborn and Child Health (“MNCH”) Innovation Platform. The agreement is effective from March 3, 2016 to March 3, 2025. No funds have been received for the MNCH Contribution Agreement in fiscal year 2015-2016.

Grant and interest earned on funds received in advance that is recognized as revenue in the year is from the following sources:

<i>[note 5]</i>	2016 \$	2015 \$
DIF	39,712,267	44,363,533
GAC	3,538,784	4,961,593
DFID	2,815,680	1,154,535
BVLF	—	61,275
UBSOF	271,855	—
BMGF	4,105	—
	46,342,691	50,540,936

Audited Financial Statements (continued)

NOTES TO FINANCIAL STATEMENTS

March 31, 2016

7. NON-GRANT PROJECTS

In addition to issuing grants, the Organization provides funding for projects in the form of loans receivable. Loans are advanced to borrowers in tranches, subject to the satisfaction of certain terms and conditions, including milestone events. Loans are repayable at maturity or over a repayment period, and may bear interest.

For interest-bearing loans, interest is only payable to an interest beneficiary, and not to the Organization.

Certain loan agreements include a provision that permits the Organization to convert the outstanding principal amount of the loan into authorized equities of the borrower, at the Organization's sole discretion. The Organization has not yet exercised any of these conversion rights.

Due to the start-up nature of the projects being funded and long duration of repayment terms, it is difficult to place a fair valuation on the Organization's loans and potential equity instruments. As a result, and in consultation with its auditors, the Organization has expensed these investments notwithstanding the fact that some revenue is expected to be returned to the Organization eventually.

In addition to these non-grant projects, in 2013 the Organization made an investment contribution to the Global Health Investment Fund, a partially guaranteed fund designed to catalyze investment activity that can deliver new technologies to address urgent global health challenges and improve livelihoods around the world. Since there is no certainty about the timing of the return on invested capital, no value was attributed to the investment when made in 2013 and the contribution was expensed.

Audited Financial Statements (continued)

NOTES TO FINANCIAL STATEMENTS

March 31, 2016

8. FUNDING COMMITMENTS

The Organization is committed to making payments, subject to funding being provided by the Government of Canada and other donor partners and to compliance by recipients with the terms and conditions of funding agreements.

Funding agreements are payable to various organizations in the fiscal years ending March 31 as follows:

	\$
2017	3,854,000
2018	587,000
2019	33,000
	<u>4,474,000</u>

9. LEASE COMMITMENTS

The future minimum annual lease payment for operating leases is as follows:

	\$
2017	<u>100,000</u>

Management Discussion and Analysis

Management is pleased with the outcomes to date from the portfolio of innovations that we support. In particular, we are excited by some of the success stories highlighted throughout this report, including Inhaled Oxytocin, Kangaroo Mother Care, the Friendship Bench, and many others. These projects are having or will have a significant impact on the lives of the poorest of the poor in low- and middle-income countries, and their impact will continue to grow in a sustainable manner after the last dollar of Grand Challenges Canada's funding has been spent. For us, that is the true measure of success; not simply that a project delivers outcomes in the short term but also that it can continue to sustainably do so in the future.

Over the course of 2015–16, working with the Results for Development Institute (a leading global consultancy with a focus on measuring outcomes), we have continued to develop and refine our approach to modeling the potential outcomes of our most promising innovations. Through this modeling process we are better able to identify and support those innovations with the greatest potential for impact. By the end of 2016–17, we will have developed outcomes models for our entire portfolio of transition-to-scale innovations.

We continue to have a focus on maintaining the highest standards of accountability for the investment of public funds in development innovation, in particular, through:

- Oversight and approval of expenditures by an experienced and independent Board of Directors
- A strong scientific peer review process conducted or certified by the Canadian Institutes of Health Research, to ensure scientific excellence
- Input from and oversight by an international Scientific Advisory Board of subject matter experts
- At transition-to-scale, recommendations from an Investment Committee of experienced impact

investors and social entrepreneurs

- A robust project management process that includes provisions for both bench and on-site audits.

Looking forward, there are two elements of our work that management would like to highlight. First is the ongoing importance of the Stars in Global Health program. Not only does this program provide a conduit through which to build and renew our pipeline of seed innovations in global health, it also provides an important entry point for young innovators across Canada and in low- and middle-income countries to grow and develop their bold ideas to address significant global challenges. As Grand Challenges Canada continues to mature, more of our focus has shifted to transition-to-scale, an area where we have a unique process and a comparative advantage. The Stars in Global Health program, however, will always have an important role to play in catalyzing and growing a culture of innovation and entrepreneurship in low- and middle-income countries.

Second, management continues to see the impact of Grand Challenges Canada's work in building new and expanding existing global innovation networks—in expanding existing and in building new global innovation networks. Through Grand Challenges Canada, Canada is supporting innovative projects in more than 80 countries. These projects provide an entry point for a different kind of bilateral engagement, one that is focused on innovation and learning. Grand Challenges Canada is also one of three anchor partners, along with USAID and the Bill & Melinda Gates Foundation, in the growing network of global Grand Challenge organizations. We will continue to explore how best to leverage Grand Challenges Canada's innovation platform to build Canada's brand as an international innovation partner of choice.

Annex 1: Lives Saved and Improved

Indicator	Impact to Date	Expected until end of 2016	Potential* by end of 2030
Lives Saved	9,377	25,146	
TTS	7,982	23,751	500,000 – 1.5 million
Seed ⁺	1,395	1,395	
Lives Improved	289,628	1,772,853	
TTS	222,638	1,705,863	14 million – 30 million
Seed ⁺	66,990	66,990	

*Grand Challenges Canada's impact modeling work is currently underway, and potential figures have not been finalized across the entire Transition To Scale portfolio.

+ Expected are equivalent to actual outcomes for seed projects.

Annex 2: Board of Directors

GRAND CHALLENGES CANADA Members of the Board of Directors ³	
Name	Affiliations
Alain Beaudet	<ul style="list-style-type: none"> • President, Canadian Institutes of Health Research
Cédric Bisson ⁴	<ul style="list-style-type: none"> • Partner, Teralys Capital
Daniel J. Carucci	<ul style="list-style-type: none"> • President, Global Health Consulting Inc. • Former Vice President for Global Health, United Nations Foundation • Former Director, Grand Challenges in Global Health Initiative, Foundation for the National Institutes of Health • Former Director, Malaria Program, Naval Medical Research Center
Charles Field-Marsham ⁵	<ul style="list-style-type: none"> • President, Kestrel Capital Management Corp. • Founder and Executive Chairman, Panafrican Group • Chairman, Kenya Fluorspar Company • Member of the Board, Healthy Kids International
Mohamed H.A. Hassan	<ul style="list-style-type: none"> • Co-Chair of IAP, the global network of science academies • Chairman, Council of the United Nations University • Past President, African Academy of Sciences • Past Executive Director, Academy of Sciences for the Developing World (TWAS)
Jean Lebel	<ul style="list-style-type: none"> • President, International Development Research Centre
Mwelecele Malecela ⁶	<ul style="list-style-type: none"> • Director General, National Institute for Medical Research, Tanzania
Gerhard Pries	<ul style="list-style-type: none"> • Management Partner and CEO, Sarona Asset Management
Allan Ronald ⁷	<ul style="list-style-type: none"> • Distinguished Professor Emeritus, University of Manitoba • Visiting lecturer, Makerere University, Uganda, Africa • Founding member, University of Manitoba/University of Nairobi/WHO Research and Training Program on Sexually Transmitted Diseases
Morris Rosenberg	<ul style="list-style-type: none"> • Former Deputy Minister, Department of Foreign Affairs, Trade and Development (now called Global Affairs Canada) • President and Chief Executive Officer, The Pierre Elliott Trudeau Foundation
Guyline Saucier	<ul style="list-style-type: none"> • Chair of the Board of Directors, Grand Challenges Canada • Former Chair of the Board of Directors, Canadian Broadcasting Corporation • Former Director, Bank of Canada • Former Chair, Canadian Institute of Chartered Accountants
Peter Singer	<ul style="list-style-type: none"> • Chief Executive Officer, Grand Challenges Canada

³Johanne Charbonneau joined the Board in April 2016

⁴Joined the Board in January 2016

⁵Term expired in December 2015

⁶Joined the Board in January 2016

⁷Stepped down in May 2016

Annex 3: Scientific Advisory Board

Name	Affiliations	Sub-Committee Participation
Abdallah Daar, Chair	<ul style="list-style-type: none"> • Professor of Clinical Public Health and Global Health, Dalla Lana School of Public Health • Professor of Surgery, University of Toronto • Member of the United Nations Secretary-General's Scientific Advisory Board 	Global Mental Health
Jane Aubin	<ul style="list-style-type: none"> • Chief Scientific Officer/Vice President of Research, Knowledge Translation and Ethics, Canadian Institutes of Health Research 	Stars in Global Health
Lorne Babiuk	<ul style="list-style-type: none"> • Vice President (Research), University of Alberta • Grand Challenge in Global Health Initiative Grantee 	Stars in Global Health
John Bell	<ul style="list-style-type: none"> • Regius Professor of Medicine, University of Oxford 	Stars in Global Health
Michel Bergeron	<ul style="list-style-type: none"> • Professor, Founder and Director, Centre de Recherche en Infectiologie, Université Laval, Quebec City 	Stars in Global Health
Zulfiqar Bhutta	<ul style="list-style-type: none"> • Co-director and Director of Research, Centre for Global Child Health, SickKids • Founding Director, Centre of Excellence in Women and Child Health • Professor, Department of Nutritional Sciences, University of Toronto • Professor, Division of Epidemiology, Dalla Lana School of Public Health 	Women and Children's Health
Cédric Bisson	<ul style="list-style-type: none"> • Partner, Teralys Capital 	Investment Committee
Jane Cardosa	<ul style="list-style-type: none"> • CSO, Sentinext Therapeutics • Former Director, Institute of Health and Community Medicine, Universiti Malaysia 	Stars in Global Health
Pamela Collins	<ul style="list-style-type: none"> • Director, Office for Research on Disparities and Global Mental Health • Director, Office of Rural Mental Health Research, U.S. National Institute of Mental Health 	Global Mental Health

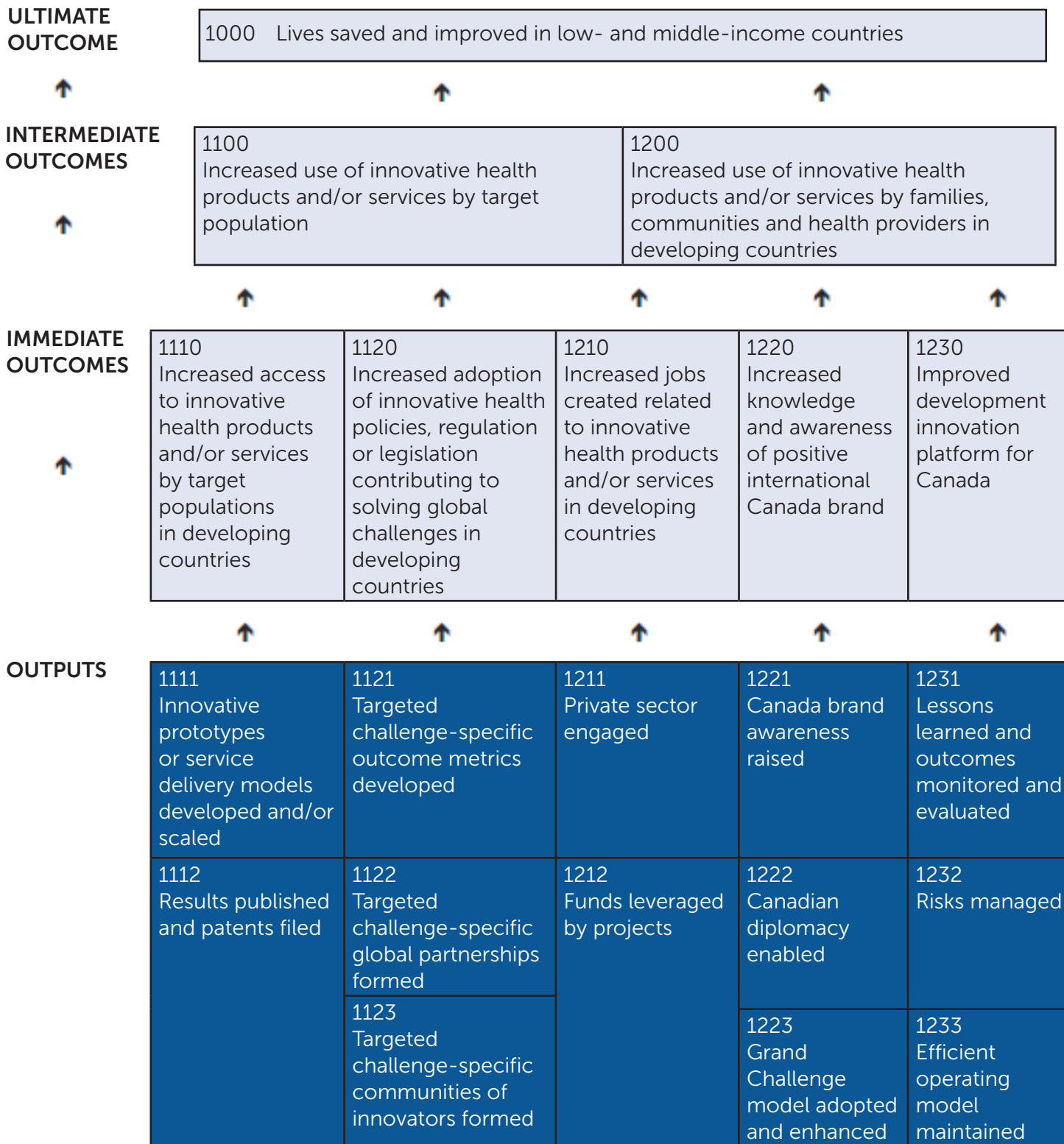
Annex 3: Scientific Advisory Board (continued)

Name	Affiliations	Sub-Committee Participation
Christine Debouck	<ul style="list-style-type: none"> President of Ardennes Biosciences LLC; Former Senior VP, Genetics Research Division, GlaxoSmithKline 	Stars in Global Health
Tim Draimin	<ul style="list-style-type: none"> Executive Director, Social Innovation Generation 	Stars in Global Health
Paul Dufour	<ul style="list-style-type: none"> Fellow/Adjunct Professor, Institute for Science, Society and Policy, University of Ottawa Principal, PaulicyWorks 	Investment Committee
Darrell Elliott	<ul style="list-style-type: none"> CEO, Isuma Strategies Inc. 	Investment Committee
Nirmal Ganguly	<ul style="list-style-type: none"> Advisor, Translational Health Science and Technology Institute (India) President, Jawaharlal Institute of Postgraduate Medical Education and Research (India) Past Director General, Indian Council of Medical Research 	Stars in Global Health
Kiyoshi Kurokawa	<ul style="list-style-type: none"> Chairman, Health and Global Policy Institute Professor Emeritus, University of Tokyo Former Science Advisor to the Cabinet of Japan 	Stars in Global Health
Charles Larson	<ul style="list-style-type: none"> Director, Centre for International Child Health Clinical Professor, Department of Pediatrics, University of British Columbia Senior Associate Clinician Scientist, Child & Family Research Institute 	Investment Committee
Joy Lawn	<ul style="list-style-type: none"> Director, Maternal, Reproductive and Child Health Centre, London School of Hygiene & Tropical Medicine 	Women and Children's Health
Crick Lund	<ul style="list-style-type: none"> Director, Alan J Flisher Centre for Public Mental Health Professor, Department of Psychiatry and Mental Health, University of Cape Town 	Global Mental Health
Mwelecele Malecela	<ul style="list-style-type: none"> Director General, National Institute for Medical Research, Tanzania 	Women and Children's Health

Annex 3: Scientific Advisory Board (continued)

Name	Affiliations	Sub-Committee Participation
Anita McGahan	<ul style="list-style-type: none"> Professor of Strategic Management, Rotman School of Management, University of Toronto 	Stars in Global Health, Investment Committee
Stephen McGurk	<ul style="list-style-type: none"> Acting Vice President of Programs, International Development Research Centre 	Investment Committee
Hassan Mshinda	<ul style="list-style-type: none"> Director General, Tanzania Commission for Science and Technology (COSTECH) 	Stars in Global Health
Vikram Patel	<ul style="list-style-type: none"> Professor, International Mental Health and Wellcome Trust Senior Research Fellow in Clinical Science, London School of Hygiene & Tropical Medicine 	Global Mental Health
Frank Plummer	<ul style="list-style-type: none"> Special Advisor, Public Health Agency of Canada Former Professor of Medicine and Medical Microbiology, University of Manitoba 	Stars in Global Health
Gerhard Pries	<ul style="list-style-type: none"> Founder, Managing Partner and CEO, Sarona Asset Management Inc. Founding Director and Vice Chairman, MicroVest General Partner Holdings 	Investment Committee
Shekhar Saxena	<ul style="list-style-type: none"> Director of the Department of Mental Health and Substance Abuse, World Health Organization 	Global Mental Health
Jack Shonkoff	<ul style="list-style-type: none"> Julius B. Richmond FAMRI Professor of Child Health and Development, Harvard School of Public Health and the Harvard Graduate School of Education Professor of Pediatrics, Harvard Medical School and Boston Children's Hospital Director, Center on the Developing Child, Harvard University 	Women and Children's Health
Kishor Wasan	<ul style="list-style-type: none"> Professor and Dean, College of Pharmacy and Nutrition, University of Saskatchewan Adjunct Professor and Director, Neglected Global Diseases Initiative, Faculty of Pharmaceutical Sciences, University of British Columbia 	Stars in Global Health
Yongyuth Yuthavong	<ul style="list-style-type: none"> Former Minister of Science and Technology, Thailand 	Stars in Global Health

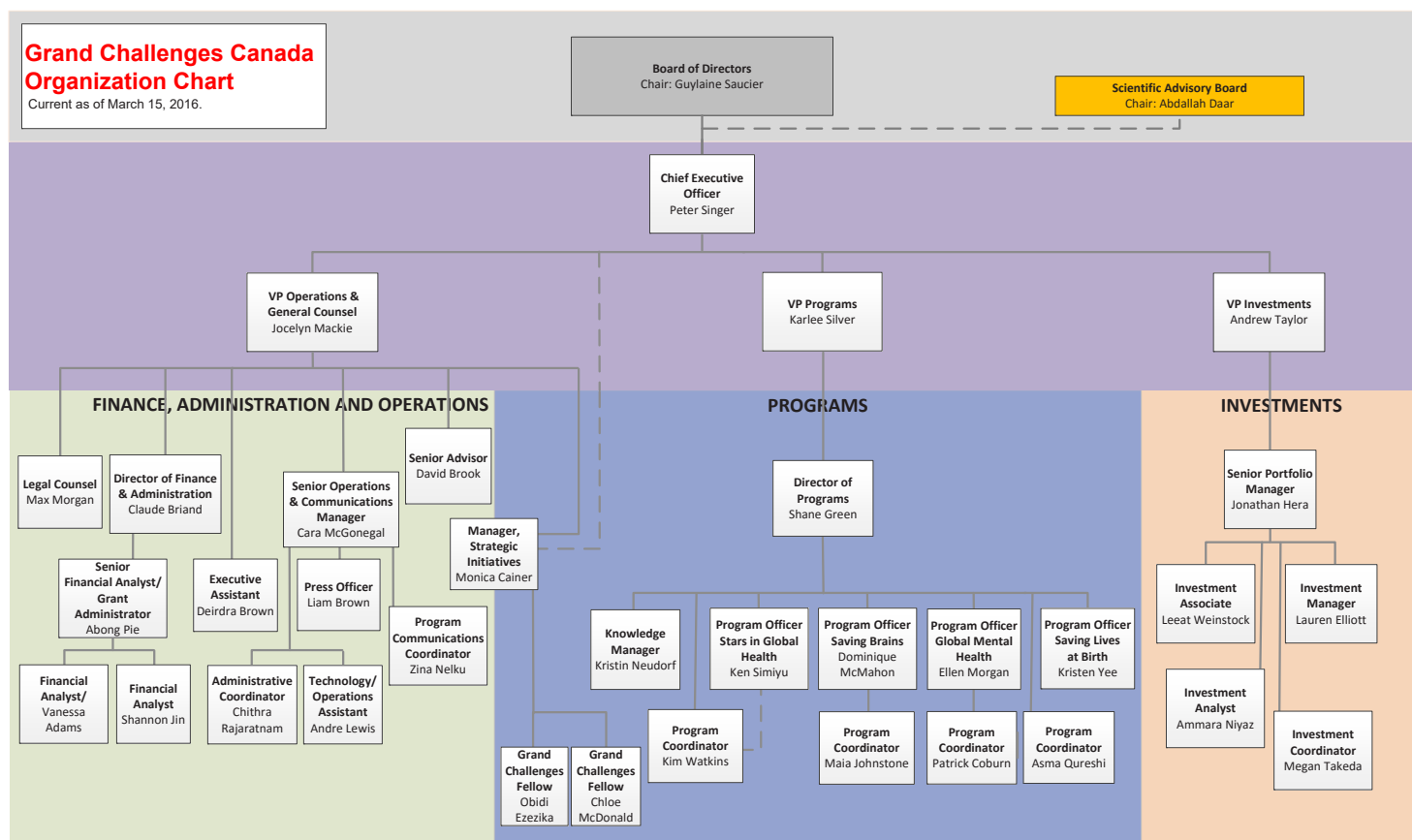
Annex 4: Organizational Logic Model



Annex 4: Organizational Logic Model (continued)

	↑	↑	↑	↑	↑	↑
ACTIVITIES	1111 Support innovative projects	1121 Support platforms to develop logic models and performance management frameworks for targeted challenges and knowledge management for all programs	1211 Engage private sector	1221 Communicate projects supported and results	1223 Work with countries to adopt and enhance Grand Challenges model	
	1112 Monitor and validate project outputs and outcomes	1122 Engage partners around targeted challenges	1212 Engage smart partners on specific deals	1222 Engage with Canadian diplomats	1232 Conduct risk management with Board Audit & Finance Committee	
		1123 Support communities of innovators around targeted challenges				
				1223 Work with countries to adopt and enhance Grand Challenges model	1233 Maintain high-performing team	

Annex 5: Organization Chart



Annex 6: Terms of Reference of the Board of Directors

Introduction

The Terms of Reference for the Board of Directors define the role of Grand Challenges Canada's (the Organization) Board. The Board's key responsibilities are described below.

Strategic Direction

Management is responsible for the development of an overall Strategic Framework and a Multi-year Business Plan to be presented to the Board. The Board's role is to ensure that there is a strategic planning process that endeavours to take into account the opportunities and risks facing the Organization and the priorities of the Government of Canada, and then to review, question, validate and approve the final Strategic Framework and Plan. In addition, management presents to the Board new program Requests for Proposals periodically throughout the year, along with the annual Budget at the March Board meeting.

The Board's responsibilities are:

- To oversee the development of and approve the Strategic Framework and the Multi-year Business Plan
- To approve major policy changes and changes to the Strategic Framework
- To review and approve the framework for each program's Request for Proposals
- To review and approve the Organization's annual budget
- To monitor corporate performance.

Human Resources

The Board plays an important role in human resources, including reviewing and approving a strategy developed by management to attract, retain and develop talent. As part of this role, the Board considers succession planning and performance assessment to be an ongoing process, including the establishment of objectives and the monitoring of performance against those objectives.

The Board's responsibilities are:

- To assess the performance and set the remuneration of the Chief Executive Officer on an annual basis, and to set both short- and longer-term performance objectives
- To review and approve management's process for annual staff appraisals and annual salary adjustments
- To plan for the succession of the Chief Executive Officer and to select any new Chief Executive Officer
- To work with the Chief Executive Officer to put into place policies to attract, develop and retain the Organization's human resource talents.

Risk Management

The Board should have a continuing understanding of the principal risks associated with the Organization's activities; it is the responsibility of management to identify risks and to ensure that the Board is kept well informed of changing risks. The Board is responsible to assure itself that management has appropriate systems in place to manage risks.

Consequently, the Board is responsible for:

- Articulating the Board's appetite for risk
- Working with management to identify the principal risks to the organization
- Assuring itself that systems are in place to manage those risks.

Control Systems

The existence of control systems is integral to the effective discharge of the Board's overall responsibilities. The confidence of the Board in the abilities and integrity of management is the paramount control mechanism. The Board is responsible to:

- Assure itself of the integrity of the Organization's internal control and management information systems

Annex 6: Terms of Reference of the Board of Directors (continued)

- Review and/or approve all financial commitments undertaken by the organization; some of this can be delegated to management by resolution
- Review and approve the Organization's annual audited financial statements
- Endeavour to ensure that there is high scientific integrity in the projects supported by the Organization, including to take advice from the Organization's Scientific Advisory Board (the Scientific Advisory Board reports to and provides advice to the Board of Directors)
- Assure itself that the Organization is compliant with legal and regulatory requirements and that reporting, monitoring and accountability obligations are met
- Review and update, as required, guidelines governing ethical conduct, conflict of interest, personal and public safety, equity and similar concerns
- Ensure there is an appropriate mechanism for the reporting of wrongdoing and the protection of employees.

Governance

The Board is responsible for maintaining effective board governance. As part of this responsibility, the Board will review the Board Terms of Reference at least every five years, so that it reflects best governance practices. In addition, the Board will:

- Assess its own effectiveness in fulfilling its responsibilities as a Board
- Identify the required competencies and personal attributes required on the Board and endeavour to ensure there is orderly succession of Board members.

Communications

The Board should be satisfied that management has developed a communications strategy that supports the strategic directions and priorities of the Organization. The Board will review the strategy on a regular basis.

Included in the Chairperson and/or the Chief Executive Officer's responsibilities is the requirement to represent the Organization to Ministers, the Prime Minister, the Parliament of Canada, foreign governments and donor organizations from time to time.

Directors may be requested by the Chief Executive Officer and/or Chair of the Board to assist with communications or to speak publicly about the Organization. In all other cases, Directors are asked to advise the Chief Executive Officer and the Chair of the Board of any request to speak about the Organization, so that communication activities can be properly coordinated, and so that Directors can be provided with full assistance in preparing and making any public statements or presentations related to the Organization.

Director Expectations and Ethics

Directors shall carry out their responsibilities objectively, honestly and in good faith, with a view to the best interests of the Organization. They shall exercise the care, diligence and skill of a reasonably prudent person.

Directors are expected to demonstrate high ethical standards, personal and professional integrity, and to be accountable for and be bound by Board decisions.

Directors are also expected to set the standard for ethical conduct Organization-wide, and to put into place appropriate mechanisms to encourage ethical behaviour and compliance with laws and regulations.

Addendum: Fundraising

The Board of Directors has an important role to play in fundraising. Management will develop a fundraising strategy that will be reviewed and approved by the Board of Directors. The Board of Director's role in fundraising will be clarified and formalized at that time.



Annex 7: Summary of Strategic Plan to 2022

VISION	Bold Ideas with Big Impact®	
MISSION	Saving and improving lives in low- and lower-middle-income countries through Integrated Innovation.®	
STRATEGIC PRIORITIES	<p>Primary: Maternal, Newborn and Child Health (MNCH), Global Mental Health, other global health challenges arising from the Stars in Global Health program (such as water and sanitation; menstrual hygiene; hearing, vision and disability).</p> <p>Secondary: Develop and implement new models of innovation diplomacy, impact investing and social finance, and reverse innovation.</p>	
TYPE OF INVESTMENT	Proof-of-concept	Transition-to-scale
PROGRAMS	<ol style="list-style-type: none"> Targeted Challenges <ol style="list-style-type: none"> Saving Lives at Birth Saving Brains Global Mental Health Innovator-Defined <ol style="list-style-type: none"> Stars in Global Health MNCH Stars 	<ol style="list-style-type: none"> Transition To Scale <ol style="list-style-type: none"> MNCH Non-MNCH Global Health Investment Fund
AMOUNTS AND FORMS OF INVESTMENT	<ol style="list-style-type: none"> Targeted Challenges <ol style="list-style-type: none"> Grant, \$250K Innovator-Defined <ol style="list-style-type: none"> Grant, \$100K 	<ol style="list-style-type: none"> Transition To Scale (MNCH and Non-MNCH) <ol style="list-style-type: none"> Grant + Investment, \$1–2M Global Health Investment Fund <ol style="list-style-type: none"> Investment, \$2–10M
HUMAN RESOURCES	VP Programs + Program Team	VP Investments and VP Programs + Program and Investment Teams
	VP Operations, Finance, Communications, Stakeholder Relations, Legal, IT, HR, Events	
GOVERNMENT OF CANADA FUNDING SOURCES	Development Innovation Fund in Health \$225M (2010–2017)	
		Global Affairs Canada Scaling Partnership \$10M (2014–15)
	Global Affairs Canada Muskoka Funding \$159M (2015–2025) Federal Budget 2015 (2016–2017) DIF-H Renewal (2017–2022)	
IMPACT MEASUREMENT	<ol style="list-style-type: none"> Outcomes (Lives saved and improved) <ul style="list-style-type: none"> Actuals, estimated, projected (Grand Challenges Canada Impact Dashboard) Performance Measurement Frameworks (Outcomes, Outputs and Activities) <ul style="list-style-type: none"> GAC MNCH Performance Measurement Framework Grand Challenges Canada Learning, Monitoring and Evaluation Framework Theories of Change and Metrics <ul style="list-style-type: none"> For each targeted challenge Qualitative Measures <ul style="list-style-type: none"> Success stories 	

Annex 8: Investment Committee Mandate

Provide recommendations to Grand Challenges Canada's Board of Directors to make investments that optimize impact at scale in a sustainable manner

1. Source of pipeline

- Proof-of-concept projects funded in the Stars in Global Health (Stars) and targeted challenges programs
- Pre-qualified partners, including through the Every Woman Every Child Innovation Marketplace.

2. Sectoral focus

- Maternal, newborn and child health (MNCH), including Saving Lives at Birth and Saving Brains
- Non-MNCH innovations in Stars and Global Mental Health pipelines.

3. Geographic focus

- Target beneficiaries in low- and middle-income countries, as allowed by Grand Challenges Canada's funders, primarily the Government of Canada
- Sourcing globally but with emphasis on Canada and low- and middle-income countries
- Others by exception, if well justified.

4. Investment niche

- Social enterprises
 - For-profit or not-for-profit
 - Purpose: to catalyze scale and sustainability; to transition promising enterprises through the "valley of death"
 - To be leveraged at least 1:1 from smart partners
 - Instruments: variety of grants, loans and, eventually, equity
- Public health models
 - Purpose: to catalyze scale and sustainability; ultimate sustainability is likely found in long-term funding by public and private donors
 - Where possible, leveraged by 1:1 from smart partners.

5. Investment Criteria

- Alignment of values with Grand Challenges Canada's mission and vision
- The primary criterion (contained in the mandate above): impact at scale in a sustainable manner
- Sectoral and geographic criteria, and investment niche, as described above
- In addition, the Investment Committee will also apply the following criteria:
 - Smart partners and leveraged funds
 - Entrepreneurial, leadership and management capabilities of applicant and team
 - Promising results at proof-of-concept
 - Grand Challenges Canada value-add and management time
 - Scientific peer reviews conducted by CIHR
 - Potential health outcomes at end of funding cycle and by 2030
 - Potential financial return.

6. Investment level

- The Investment Committee can recommend to the Board of Directors a total lifetime investment (including proof-of-concept and transition-to-scale) per innovation project up to \$3 million, subject to constraints imposed by Grand Challenges Canada's funding agreements. The Board of Directors may increase this maximum on a case-by-case basis.
- For funding decisions up to \$500,000 per innovation project for the first transition-to-scale investment, management will provide a one-page summary to the Investment Committee and the Board of Directors for expedited approval. Primary responsibility for the decision rests with management, subject to constraints imposed by Grand Challenges Canada's funding agreements.
- For funding decisions between \$500,000 and \$1 million for a first transition-to-scale investment, or a second transition-to-scale investment where the lifetime transition-to-scale investment is under \$1 million, management will prepare an investment memo for a

Annex 8: Investment Committee Mandate (continued)

comprehensive review by the Investment Committee, and then table the Investment Committee's recommendation for the approval of the Board of Directors. Primary responsibility for the decision rests with the Investment Committee, subject to constraints imposed by Grand Challenges Canada's funding agreements.

- For a funding decision for a follow-on transition-to-scale investment where the total lifetime transition-to-scale investment is over \$1 million, management will prepare an investment memo for a comprehensive review by the Investment Committee, and a fulsome discussion by the Board of Directors. Primary responsibility for the decision rests with the Board of Directors, subject to constraints imposed by Grand Challenges Canada's funding agreements.

7. Metrics of success

- Grand Challenges Canada is an impact-first investor. The primary metric of success is lives saved and improved. The secondary metric is financial (including leverage of Grand Challenges Canada's investment and financial returns to Grand Challenges Canada).
- Return of capital is constrained by:
 - Authorities provided by Global Affairs Canada to do non-grant finance
 - Grand Challenges Canada's balance between proof-of-concept and transition-to-scale funding (currently 55:45)
 - Mix of grant versus investments in Transition To Scale portfolio
 - Capping of investments at return of capital (to mitigate risk).

8. Post-Deal Execution

- Grand Challenges Canada recognizes that the investment decision is only the beginning of a process towards impact. Management will conduct and be accountable for post-deal

execution.

- The goal of post-deal execution is the same as the goal of the Investment Committee mandate above: to optimize impact at scale in a sustainable manner. The following principles will guide post-deal execution:
 - Grand Challenges Canada's post-deal execution will focus on its value-add: optimizing social impact in low- and middle-income countries. Grand Challenges Canada will identify and address relevant gaps and focus on monitoring and evaluation, partnerships, financing, and global access, and will provide related organizational development support, where appropriate.
 - Projects will be rated as 'most promising', 'potentially promising' and 'major challenges to be resolved', and Grand Challenges Canada will focus the most time on the most promising projects.
 - In addition to traditional project management, Grand Challenges Canada will, where appropriate, take a board seat, usually as an observer, to enable the contribution of Grand Challenges Canada's value-add.

9. Governance and Membership of the Investment Committee

- The Investment Committee, which is a committee of Grand Challenges Canada's Board, will be chaired by a Grand Challenges Canada Board member. The membership will consist of experts in social entrepreneurship and public health scaling models, reflecting the investment niche, and the Committee will also have expertise in Maternal, Newborn and Child Health and mental health, reflecting the sectoral focus. Observers from Government of Canada partners will be welcome.