



Grand Challenges Canada®  
Grands Défis Canada

BOLD IDEAS WITH BIG IMPACT®

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Integrated Innovation to Impact

## ANNUAL REPORT

April 2013 to March 2014

## Table of Contents

<b>A MESSAGE FROM THE CHAIRMAN OF THE BOARD .....</b>	<b>1</b>
<b>A MESSAGE FROM THE CHIEF EXECUTIVE OFFICER .....</b>	<b>2</b>
<b>HIGHLIGHTS 2013–2014 .....</b>	<b>4</b>
<b>OUR PRIORITIES AND PROGRAMS .....</b>	<b>10</b>
<b>OUR RESULTS .....</b>	<b>12</b>
Saving Brains .....	16
Global Mental Health .....	19
Stars in Global Health .....	23
Transition to Scale .....	27
Global Health Investment Fund .....	31
<b>CORPORATE PROFILE .....</b>	<b>32</b>
Governance .....	32
Accountability .....	32
Operations .....	36
Human Resources .....	37
Communications .....	37
Administration .....	38
<b>FINANCIAL SUMMARY .....</b>	<b>38</b>
Financial Statements .....	39
<b>ANNEX 1: BOARD OF DIRECTORS .....</b>	<b>51</b>
<b>ANNEX 2: SCIENTIFIC ADVISORY BOARD .....</b>	<b>53</b>
<b>ANNEX 3: ORGANIZATION CHART .....</b>	<b>56</b>

## A Message from the Chairman of the Board



As I look back on the first four years of Grand Challenges Canada, it is with a great sense of satisfaction. I truly believe that our results, as highlighted throughout this report, have been outstanding and meaningful. We are well on our way to achieving our original vision: harnessing technological, business and social innovation in Canada and in low- and middle-income countries to save and improve lives. In fact, our potential now exceeds my original expectations.

Our achievements to date would not be possible without the foresight of the Government of Canada. I am grateful for the government's continued support through the Development Innovation Fund in Health. I am very pleased that our interests (and focus) and the efforts of Grand Challenges Canada are helping to deliver on Canada's commitment to maternal, newborn and child health through the Muskoka Initiative. We work in partnership with the International Development Research Centre and the Canadian Institutes of Health Research to deliver the DIF. As well, we are supported by the Department of Foreign Affairs, Trade and Development. Both have enabled us to support innovators as they move from proof-of-concept to transition to scale.

When we first started working to make Grand Challenges Canada a reality, we had ambitious dreams. We recognized the great challenges that face so many families in low- and middle-income countries and thought that Canada could be a world leader in helping to overcome them. Over my career, I have had the rare privilege of working with – and helping to nurture and grow – innovators in Canada and around the world, and I knew that given the opportunity, our strategy could make a real difference in global health, and lead to saving and improving lives. I am humbled and gratified that our innovators have not only exceeded our expectations but in such a short time are already having an impact in making a healthier and more prosperous world. They are doing so in a manner that is also having a positive economic impact through collaboration with the private sector.

What we have accomplished is just the beginning. I take pride in the foundation that we have built and look forward to a future in which Canada is the world leader in global health innovation. This leadership, in turn, creates future opportunity – a world where our innovators create jobs, enable communities and build a healthier future in Canada as well as in the poorest and most remote parts of the world.

Over the next year, I look forward to working with our colleagues in the Government of Canada, and our partners around the world to continue to deliver an effective and efficient platform for global health innovation.

A handwritten signature in dark ink, reading "Joseph L. Rotman".

**Joseph L. Rotman**  
Chairman

## A Message from the Chief Executive Officer



**Grand Challenges Canada** was created by the Government of Canada as a nimble and accountable vehicle, outside of government, to **manage the risks** associated with innovation in international development, and to **efficiently deliver results**. Over our first four years of operation, Grand Challenges Canada has delivered significant early results that validate the government's approach to development innovation.

To date, we have signed agreements totaling **\$148M** to fund **538 projects** in more than **70 countries** and have **leveraged \$189.8M** in additional funding from outside the Government of Canada, including **significant private sector investment**.

Our investments are producing results: **1.2M beneficiaries have already accessed our innovative products or services (based on less than 20% of our funded projects reporting to date)**. **Thousands of lives have been saved and tens of thousands of lives have been improved**, as shown in the examples later in this report. I anticipate even more impressive outcomes as these innovations move from proof-of-concept to scale.

We have **engaged the private sector**, including 74 for-profit companies (21 in Canada) to deliver innovations that save and improve lives and **create jobs**. For example, our support of **LionsGate Technologies** in Vancouver enabled the company to raise \$2M to test and market their smartphone pulse oximeter, a critical diagnostic tool that can help to save the lives of pregnant women in developing countries, while creating new jobs in Canada. We are also at the **vanguard of social finance**: Grand Challenges Canada is the anchor investor in the \$108M Global Health Investment Fund.

We have helped to **promote Canada's brand** domestically and internationally, and we are providing mentorship and guidance to new and emerging grand challenge organizations, such as **Grand Challenges Israel** and **Grand Challenges ASEAN**. We have built partnerships with a number of private foundations, including the **Bill & Melinda Gates Foundation**, the **Skoll Foundation**, several impact investors and multinational corporations. Grand Challenges Canada is catalyzing results by forging strong partnerships, to leverage additional funds and expertise. This is critical for solving global challenges; the challenges are too great to be solved alone.

The results outlined in this report reinforce our deeply held view that Integrated Innovation, combined with strong partnerships, is what will save and improve the most lives. This is the catalytic effect Grand Challenges Canada is striving for.

Although we are just four years old, I feel strongly that we are helping to cement Canada as a global leader in development innovation and in global health. About half of our innovations are in the area of Maternal, Newborn and Child Health (MNCH), Canada's flagship development priority.

These results would not be possible without the dedication and support of our partners: **Canada's International Development Research Centre**, the **Canadian Institutes of Health Research** and the **Department of Foreign Affairs, Trade and Development**. We look forward to continuing our collaboration with these partners in the years ahead.

I would also like to express my deep gratitude to the Grand Challenges Canada team. In particular, I would like to express my gratitude and appreciation to our Vice Presidents, **Karlee Silver** (Targeted Challenges), **Andrew Taylor** (Stars in Global Health and Transition to Scale) and **Jocelyn Mackie** (Operations and General Counsel). I would also like to express my profound appreciation for the continued support and guidance of our Scientific Advisory Board, chaired by **Abdallah Daar**, and especially to our Board of Directors, chaired by **Joseph L. Rotman**.



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

## Highlights 2013–2014

**Grand Challenges Canada** was created by the Government of Canada as a nimble and accountable vehicle, outside of government, to **manage the risks** associated with innovation in development, and to efficiently deliver results through the Canadian foreign aid envelope. We are funded by the Government of Canada through the Development Innovation Fund (DIF) announced in Budget 2008 and a scaling partnership with the Department of Foreign Affairs, Trade and Development (DFATD) signed in 2013. Over the past four years, we have successfully piloted the government's concept and are now moving to scale, in order to maximize the impact of the government's development innovation investments.

Our mandate is to deliver on the government's policy priorities in **global health** and **development innovation**. We deliver on this mandate by 1) catalyzing partnerships with government, the private sector and non-governmental organizations, and 2) through Integrated Innovation in our **Stars in Global Health** program, the venture-capital like component of our portfolio, and targeted challenges in **Saving Lives at Birth**, **Saving Brains** and **Global Mental Health**.

To date, we have signed agreements totaling **\$148M** to fund **538 projects** in more than **70 countries** and have **leveraged \$189.8M** in additional funding from outside the Government of Canada, including **significant private sector investment**.

Although the traditional timeframe of innovation is much longer than the four years Grand Challenges Canada has been in existence, we are starting to see significant results, demonstrating that through partnerships and Integrated Innovation Grand Challenges Canada is catalyzing impact. **To date, Grand Challenges Canada has provided access to a global health product or service for almost 1.2M individuals** in low- and middle-income countries, as highlighted in the table below. It is important to note that this number only captures data from 94 of the 538 total projects; extrapolating to all of the projects would result in over 6M people accessing global health products or services in low- and middle-income countries.

Outcome/ Output	Indicator	Saving Lives at Birth	Saving Brains	Global Mental Health	Stars	Transition to Scale	TOTAL
<b>Lives Touched – Beneficiaries who accessed a product and/or service</b>	# of Beneficiaries who accessed products and/or services	555,349	TBD	20,427	619,707	TBD	<b>1,195,483</b>
<b>Projects</b>	# of PROJECTS reporting	24	TBD	8	62	TBD	<b>94 of 538</b>



**Through our investments to-date, thousands of lives have been saved and tens of thousands of lives have been improved, as shown in the examples below.**

### **Saving Lives at Birth**

To date, 61 innovations have been supported through this program. With 24 of these projects reporting to-date and some not yet completed, **555,349 women and children have accessed innovative products and/or services. Many of these individuals received** significant health benefits. Also, to-date, 8,031,032 intermediaries have been engaged, including both family members and community health workers being trained, through whom end beneficiaries can be reached.

Some early successes include:

- **JSI** who introduced chlorhexidine for cord care in 45 districts in Nepal, and trained over 30,000 female health volunteers to deliver this life saving innovation to more than 730,000 women, who in turn applied chlorhexidine to approximately 540,000 newborns. We know from the research undertaken as part of this project that using chlorhexidine for cord care saves one newborn life for each 200 beneficiaries (for a total of ~2,700 newborn lives saved) who receive it. Each tube of chlorhexidine costs ~20 cents.
- The **Development Research Projects Centre** in Nigeria who engaged influential Islamic opinion leaders in northern Nigeria on maternal and newborn health practices and, in particular, with regard to the importance of vaccinations. In the communities influenced by these leaders, **41.8%** of infants were fully immunized, compared to **30.9%** in neighbouring communities.



### **Saving Brains**

Investing in child development is the foundation for improved health, economic, and social outcomes. Not getting the early years “right” is linked to violent behavior, depression, higher rates of non-communicable disease, and lower wages, and it negatively affects a nation’s gross domestic product. Unless early child development is addressed effectively, countries will be locked into poverty, and sustainable development will not be achieved.

This program has gained positive attention around the world for its holistic focus on risk factors that affect the early brain development of children and threaten a child’s opportunity to reach his/her full social and economic potential later in life. To date, 40 innovations have been supported and these innovators have already achieved important results. Through these investments, 43,470 children have been enrolled (99% of target) and 15,792 cognitive assessments have been completed. In the fall of 2014 and winter of 2015, we will be able to report an **informed estimate of the total costs of inaction on saving brains** that incorporates multiple risk factors and pathways to brain development, as well as the **long-term impact** of early life interventions on human capital formation.



Some early successes include:

- Hoddinott et al, 2013 who found that benefit-cost ratios for **nutrition programs to reduce stunting in the first 1,000 days of life** in 17 high-burden countries range between 3.6 (DRC) and 48 (Indonesia).
- The research team at the University of Bristol who assessed the impact of a policy reform to improve access to clean water in Mexico and found that not only did these



policies decrease diarrhea by up to 50%, but they also had a **positive effect on school achievement for girls.**

### Global Mental Health

Canada, through Grand Challenges Canada, has become known as one of the top three supporters of innovation in mental health in low- and middle-income countries. To date, this program has supported 49 innovations and, with only 14 projects reporting, **20,427 end beneficiaries have accessed the innovative projects and services developed.** Many of these people received significant health benefits because, like most patients with mental health conditions in the developing world, they were previously undiagnosed and untreated and received diagnostic or treatment services through these innovative projects. In addition, 18,453 intermediaries have been engaged, including both family members and community health workers being trained, through whom end beneficiaries can be reached.



Early successes include:

- **Zanmi Lasante** in Haiti, who are using the '5x5' model to treat and care for depression, adult psychosis and epilepsy, as well as child and adolescent disorders. As a result of this project so far, **2,866 individuals were screened for depression** and a further **3,408 patients were provided treatment for epilepsy and depression.** This project has also **leveraged \$1.1 million** in private investment.
- Researchers at **Makerere University** in Uganda aim to reduce the treatment gap among people with mental illness by creating a bridge between traditional healers and modern clinicians using 'wayos' and 'neros' (aunts and uncles). So far, **4,344 adults and 207 children have been referred to mental health services by wayos, neros and traditional healers.** As a result, **1,400 people living with mental disorders visited a health facility for the first time to seek treatment.**

### Stars in Global Health

To date, this program has supported 392 innovations from a total of 2,067 applications received through six rounds of requests for proposals. These projects have been awarded to innovators in more than 34 countries who are implementing their innovations in more than 81 countries. About 35% of this portfolio is focused on maternal, newborn and child health. To date, with 62 completed projects reporting results, **619,707 end beneficiaries have accessed the innovative projects and services developed.** Many of these beneficiaries received health benefits, since they are accessing products and services known to be effective through innovative service delivery models. In addition, 181,661 intermediaries have been trained, 17 policies and 327 prototypes have been developed, 89 papers have been submitted or published, and 13 patents have been filed. One of the surprises of the Stars in

Global Health program has been the results that are being achieved with \$100,000 proof-of-concept projects. Integrated Innovation has proven to be successful at enabling and supporting results in terms of saving and improving lives in the developing world, even at the proof-of-concept stage of a project.

Early successes include:

- The **University of Nairobi** in Kenya has developed and piloted a barcode vaccine card that can be redeemed for farming goods to incentivize and encourage mothers to complete a full immunization schedule for their children. Each time a child receives a vaccine, a barcode is updated with redeemable 'agro-credits'. Through their proof-of-concept pilot, **1,550 children and 358 expectant mothers received immunizations**. In participating villages, the uptake of **vaccination services rose from 55% to 95%** as a result of these incentives. Further, **7,632 family members benefited from increased agricultural productivity** that strengthened the household food supply for maize and beans.
- **Moi Teaching and Referral Hospital** and **AMPATH** in Kenya have implemented and scaled a Revolving Fund Pharmacy (RFP) model to provide essential medicines, including for maternal, newborn and child health, not readily available in government-run pharmacies. A total of **327,344 patients accessed essential medicine** as a result of this model.

### Transition to Scale

Most of the impact of innovation would be expected to accrue after a proof-of-concept project goes to scale in a sustainable manner. This portfolio is too new to have produced meaningful results. That being said, to date we have approved 14 Transition to Scale projects, of which 11 received full funding (up to \$1M) and 3 received smaller amounts of bridge funding to help them become investment ready.



We have also supported 18 Transition to Scale projects, in partnership with the Bill & Melinda Gates Foundation, under their Grand Challenges Explorations and Point-of-Care Diagnostics programs. This is one of the several ways in which Grand Challenges Canada has gratefully and successfully partnered with the Bill & Melinda Gates Foundation. In these projects, we know lives have been saved. For example, one of the funded projects has identified and treated patients with visceral leishmaniasis – a disease which is uniformly fatal if left untreated but survivable with treatment.

Finally, 29 of the projects under the targeted challenges are funded at transition to scale level. **In total, 61 of our projects are at the transition-to-scale** funding level. Promising transition to scale projects include:

- **LionsGate Technologies**, catalyzed by Grand Challenges Canada, who has secured its first major financial backers to scale up the development of the Phone Oximeter, an application and medical sensor that turns a smartphone, tablet or laptop into an affordable diagnostic tool that can be used to monitor a wide variety of chronic disease states. The \$40 target price will make the Phone Oximeter **80% less costly than any current device capable of delivering similar medical standards**.
- **Lucky Iron Fish** is a social enterprise dedicated to alleviating iron deficiency and iron deficiency anemia in Cambodia, where 6 in 10 women are anemic. The Lucky Iron Fish product is added to cooking pots as a dietary supplement and provides about **75% of daily iron requirements**. In a randomized controlled trial in Cambodia, there was shown to be a 34% reduction in the prevalence of anemia between intervention and control groups. The company is using Grand Challenges Canada funding to scale up production from small businesses across Cambodia, and intends to produce **10,000 fish in the first year of their transition-to-scale project**.

### **Global Health Investment Fund**

Grand Challenges Canada makes investments over \$2M through the Global Health Investment Fund, launched in September 2013.

## Our Priorities and Programs

Our primary strategic priority is **enabling innovators to solve critical and significant health challenges in low- and middle-income countries**, including:

1. **Innovator-Defined Challenges:** a broad range of global health challenges that are identified by the innovators who apply to the Stars in Global Health program
2. **Targeted Grand Challenges:** three global health challenges that were identified, validated and approved by Grand Challenges Canada's Board of Directors:
  - **Women's and children's survival**, which is addressed through the Saving Lives at Birth program
  - **Child development**, which is addressed through the Saving Brains program
  - **Global mental health**, which is addressed through the Global Mental Health program.

The total number of projects is 538, distributed by program as follows:

Program	# of Projects
Saving Lives at Birth	61 (18)*
Saving Brains	40
Global Mental Health	49
Stars in Global Health	392
Transition to Scale Program	11**
Point-of-Care Diagnostics	12***
Grand Challenges Explorations	6
Global Health Investment Fund	1
Hypertension	6
<b>Total</b>	<b>538</b>

\* Grand Challenges Canada manages 18 of the 61 projects for the Saving Lives at Birth Partnership

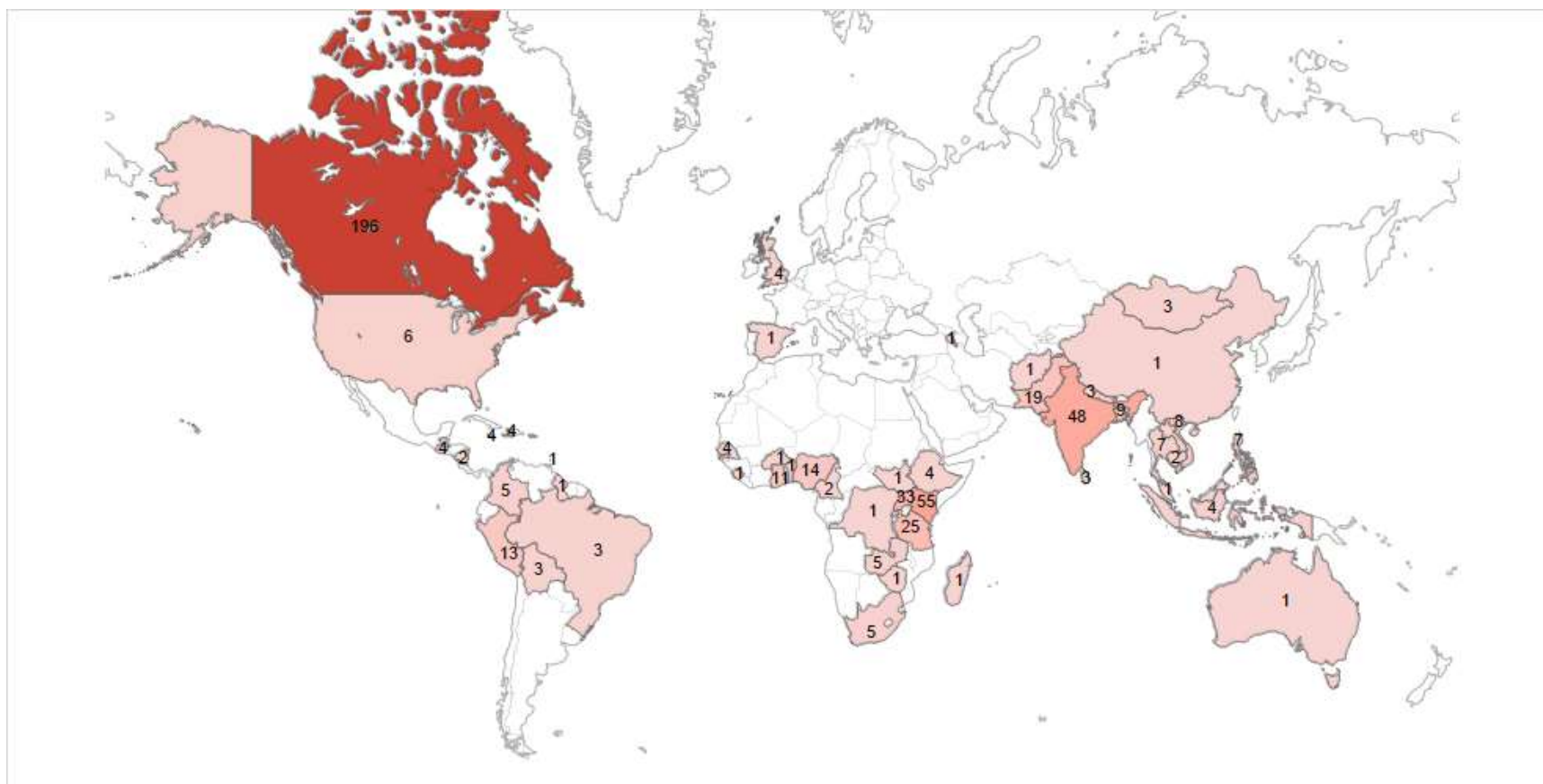
\*\* Includes 8 projects that received full funding and 3 that received smaller amounts

\*\*\* Includes one grant that was terminated

The location and distribution of Grand Challenges Canada's projects and Research Support Activities are illustrated in the figure on the following page.



**Location of Grand Challenges Canada Projects and Investments Worldwide<sup>1</sup>**



<sup>1</sup> This map represents the location of the innovator's institution, and not necessarily the country of implementation.



## Our Results

### Saving Lives at Birth

#### The Problem

Globally, each year there are:

- 2.6 million stillbirths
- 2.9 million neonatal deaths
- 287,000 maternal deaths.

The onset of labour marks the start of a high-risk period for both mother and baby that does not ease until at least 48 hours after birth. During this short period of time, approximately half of maternal and newborn deaths and stillbirths occur.

#### The Challenge

To develop and scale ground-breaking prevention and treatment approaches for pregnant women and newborns in poor, hard-to-reach communities, in order to accelerate substantial and sustainable progress against maternal and newborn deaths and stillbirths, with a focus on the following roadblocks:

- Science and Technology: lack of affordable and effective medical solutions appropriate for the community or clinic setting
- Service Delivery: lack of quality health services, including inadequate numbers of trained, motivated, equipped and properly located and supervised health staff and caregivers, or operating without adherence to up-to-date guidelines or evidence-based practices and limited by operational bottlenecks
- Demand: lack of opportunity, ability, motivation and empowerment to access healthcare or adopt healthy behaviours before, during and after pregnancy.

#### The Saving Lives at Birth Partnership

To overcome this challenge, USAID, the Government of Norway, the Bill & Melinda Gates Foundation, Grand Challenges Canada and the UK's Department For International Development (DFID) joined together to launch Saving Lives at Birth: A Grand Challenge for Development.

To date, the partnership has committed \$32.25M USD to fund **61 projects (51 proof of concept and 10 transition to scale)** over three rounds. Grand Challenges Canada manages a portion of these projects and has committed \$7.25M USD over three rounds. In total, it is anticipated that the partnership will commit **\$50M USD** over four rounds, with \$10M USD from Grand Challenges Canada. The fourth round of awards was announced on August 1, 2014, at the Development<sup>x</sup>Change held in Washington, DC. Among the 30 innovators nominated for 26 seed and 4 transition-to-scale awards are eight that were previously supported by Saving Lives at Birth; the follow-on funding will enable the innovations to progress towards scale and sustainability.

Grand Challenges Canada has also committed **\$2.8M CAD** to **24 proof-of-concept projects** and **1 transition to scale project** aligned with Saving Lives at Birth over six rounds of Stars in Global Health.

### Portfolio Results To Date

The following table captures the results from Round 1 projects, including 21 proof-of-concept and 3 transition to scale projects.

Outcome/Output	Indicator	Totals Over 24 Projects
<b>Lives Touched – BENEFICIARIES who accessed a product and/or service</b>	# of BENEFICIARIES who accessed products and/or services	555,349
<b>Lives Touched – INTERMEDIARIES who accessed a product and/or service, and improved their knowledge/attitudes/ behaviours</b>	# of INTERMEDIARIES who accessed products and/or services	8,031,032

### Early Successes

This portfolio has had a number of early successes, including:

- Changamka** in Kenya, a project that explored how maternal health vouchers, transport subsidies and informational SMS campaigns affect the utilization of maternal health services offered by health facilities. The goal of this project was to test what kind of financial incentives increase antenatal care visits and facility births, using a mobile-based system that would improve the quality of data collection. This project found that the provision of maternity vouchers increased hospital deliveries from 31% to about 84% (a 148% increase). When given in combination with transport vouchers, the total rate of hospital deliveries increased by 170%. The support of Saving Lives at Birth for this project helped Changamka catalyze a partnership with Safaricom and Britam.
- The Development Research Projects Centre** in Nigeria engaged influential Islamic opinion leaders in northern Nigeria on maternal and newborn health



practices and, in particular, with regard to the importance of vaccinations. Through this project, there was a **20% increase in conservative Islamic leaders' knowledge** about maternal and neonatal health. In the communities influenced by these leaders, **41.8%** of infants were fully immunized, compared to **30.9%** in neighbouring communities. It is estimated that this project reached **8 million people** in three northern Nigerian states, with supportive maternal and newborn messages and encouragement to participate in vaccine drives delivered in sermons and weekly radio programs. When asked about the impact of the project, one of the imams who was engaged stated that:

*"I have confidence in preaching the MNCH issues. I practice what I preach. I made it a law to any family and followers to emphasize MNCH issues. Initially many scholars don't talk about MNCH, but now we preach openly and, in this community, almost all women attend antenatal care, hospital delivery and immunization."*

- A team at **Rice University** in the United States developed an inexpensive bubble CPAP, a non-invasive respiratory support strategy for newborns with infant respiratory distress. They found that use of the bCPAP **increased survival among neonates in respiratory distress by 61%** (71% with bCPAP relative to 44% who received standard care). For the sickest newborns with respiratory distress syndrome, bCPAP **increased survival from 24% to 65%**. Since late 2012, bCPAP devices have been implemented in nineteen hospitals in Malawi using transition to scale funding, in partnership with the Government of Malawi. The longer-term goal is to implement them across all central and district hospitals in the country.
- 
- **JSI** has worked with the Government of Nepal and local community health workers to distribute chlorhexidine (CHX) for clean cord care. Applying CHX to the umbilical cord stump **reduces incidences of newborn death by 23%**. Through this project, CHX has been introduced in **45 districts**; approximately **540,000 babies** have received CHX and an estimated **2,700 lives** have been saved. CHX was selected as **one of top 13 commodities** by the UN Commission on Lifesaving Commodities.
- 

### Other Indicators of Success

In addition to the projects outlined above, there are some other strong early indicators of success, including:

- The **Odón Device** has been licensed to Becton Dickinson in a \$15M deal.
- **AMREF Uganda** has completed the pilot of a modified solar suitcase in nine clinic sites, ensuring the device can provide necessary power 24/7 in misty conditions found in rural southwestern Uganda.
- **D-Rev** has built, inspected and user-tested thirteen fully functional Comet prototypes to treat newborn jaundice in India, Nepal, and Kenya.

### Fast Failures

The nature of innovation is such that there is the ever-present risk of failure. Indeed, a lack of failure in a portfolio is an indication that a program is not enabling sufficiently transformative innovations. The key to managing the risk of failure is to quickly identify and take action to address failures, and to ensure lessons are captured to accelerate progress. Some examples of fast failures that we have learned from in the Saving Lives at Birth portfolio include:

- **Diagnostics for All's** paper-based anemia, protein in urine and blood glucose tests. Despite promising laboratory results for the blood glucose and protein in urine tests, the anemia test demonstrated unacceptable variability. Coupled with this result, the team found that there were likely other, more prominent roadblocks to be addressed in the quest to make anemia testing available at the point of care, leading the team to determine that their efforts would be better focused elsewhere.
- **Hospital for Sick Children's** microencapsulated calcium supplement showed promise in simulated lab conditions; however, in pregnant women in Bangladesh, the **coated calcium was absorbed significantly less than uncoated calcium** for all three doses evaluated.
- **The Partners for Development** privately owned transportation model showed a high level of usage in its pilot project in rural Cambodia; however, usage was less than optimum within the main target group, pregnant women. The emergency transport option proved successful through establishment of revolving village loan funds across all 26 villages targeted.



## **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 risks 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.

### **The Challenge**

The Saving Brains Grand Challenge is to unlock the potential of children by developing and scaling up products, services and policies that protect and nurture early brain development in an equitable and sustainable manner; thereby providing an exit strategy from poverty.

### **Our Approach**

The approach of the Saving Brains program is to support bold ideas to improve early child development in low- and middle-income countries, with a focus on three components of healthy development:

- Promoting good health (e.g., nutrition, healthy pregnancy and birth, infection prevention and management)
- Providing enrichment and nurturing (e.g., caregiver wellbeing, parenting practices, play and stimulation)
- Protecting against maltreatment (e.g., violence, exploitation and abuse prevention, and mitigation of impact).

### **The Saving Brains Partnership**

Saving Brains is supported by a growing partnership that includes Grand Challenges Canada and the Bill & Melinda Gates Foundation (as global partners), and the Maria Cecilia Souto Vidigal Foundation (as a regional partner in Brazil). Grand Challenges Canada continues to develop the partnership and expects to announce additional partners in the coming months that will support projects selected under this request for proposals, and will bring other resources and expertise to bear against the Saving Brains challenge.

### **Program Overview**

To date, Grand Challenges Canada has committed almost **\$29M** to support **40 projects**, including **11 re-enrollment**, **2 economic modelling**, **23 proof-of-concept** (13 of which are under negotiation) and **4 transition to scale** projects over four rounds of Saving Brains. Grand Challenges Canada has also committed **\$3.7M** to **34 proof-of-concept projects** aligned with Saving Brains over six rounds of Stars in Global Health.



### Portfolio Results To Date

Portfolio-level results will be collected in 2014–2015, as the first round of Saving Brains projects come to a close.

### Early Successes

The Saving Brains portfolio has had a number of early successes, including:

- Hoddinott et al, 2013 (<http://goo.gl/rsfLWj>) found that **nutrition programs to reduce stunting in the first 1,000 days of life provide clear financial returns**, with a benefit-cost ratio comparable to other public health investments, including schooling.
- Crookston et al, 2013 (<http://goo.gl/hYNBjR>) demonstrated that **improvements in child growth after early faltering might have significant benefits on development**, indicating that later is better than never when it comes to intervening on stunting.



- The research team at the University of Bristol (<http://goo.gl/e9OkZG>) assessed the impact of a large-scale, national clean water reform implemented in 1991 in Mexico. They found that not only did this policy decrease diarrhea among children by up to 50%, but girls who were born after the reform **exhibited higher school achievement as teenagers**. The team also showed that the clean water reform encouraged parents to invest more in girl's education, shifting time away from chores.



- The **Kangaroo Foundation** in Colombia is seeking to determine whether the protective effects of Kangaroo Mother Care (KMC) for low birth-weight infants last into adulthood. While the results of this blinded study are set to be available in 2014–2015, some positive outcomes of this project include the development of a cheaper method of integrating results of brain function analyses, and the development of an analysis tool to integrate brain imaging data with psychological, pediatric and cognitive test data.

#### **Other Indicators of Success**

In addition to the early successes outlined above, there are some other indicators of progress arising from the Saving Brains re-enrollment projects, including:

- **43,470 children from original interventions re-enrolled to date** allowing the same children to be re-assessed at a later age to determine progress against indicators. This represents a re-enrolment rate of 99% of original targets.
- **Re-enrolment is not introducing bias.** The studies that have completed data collection show re-enrolled children are representative of original study populations.
- **15,792 cognitive assessments have been completed.**



## Global Mental Health

### The Problem

Mental disorders contribute to 13% of the global burden of disease worldwide. Almost three quarters 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 and face widespread stigmatization.

### The Challenge

To improve treatments and expand access to care for mental disorders through transformational, affordable and cost-effective innovations that have the potential to be sustainable at scale, with a specific focus on:

- Integrating screening and services into primary care
- Reducing cost and improving supply of medication
- Improving children's access to evidence-based care
- Developing treatments for use by non-specialists
- Providing effective and affordable community-based care
- Developing mobile and IT technologies.

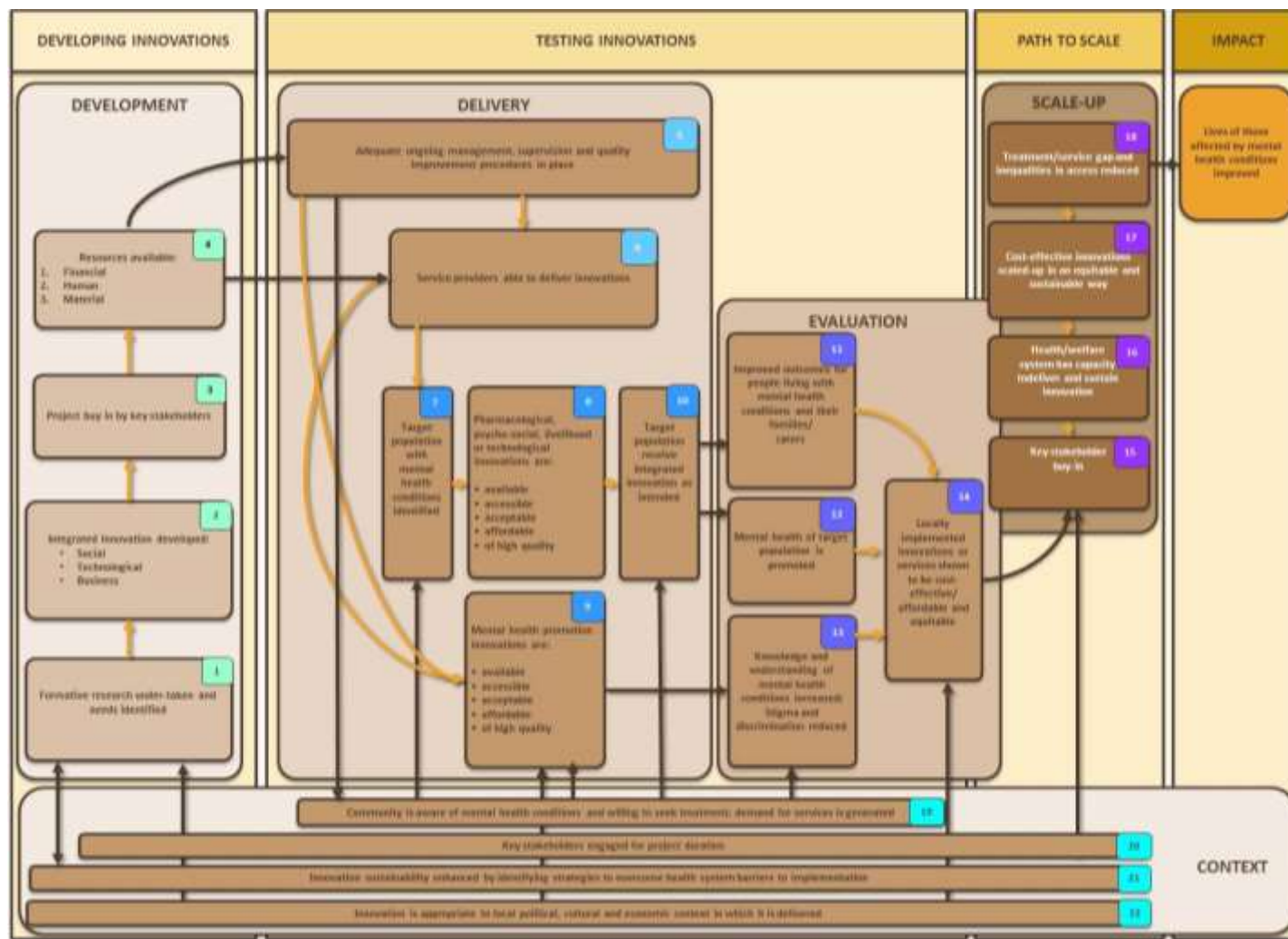
### Program Overview

To date, Grand Challenges Canada has committed **\$28.5M to 49 projects (34 proof-of-concept and 15 transition to scale projects)**. Grand Challenges Canada has also committed **\$1.4M to 12 proof-of-concept projects** aligned with Global Mental Health, over 6 rounds of Stars in Global Health, and supports the **Mental Health Innovation Network**, which launched its online presence in June 2014.

### Portfolio Results To Date

The first Global Mental Health projects are scheduled to be completed in late 2015. These 24 projects are collecting data against common metrics depicted in the Global Mental Health portfolio theory of change (see next page), including ultimate impact on health outcomes.

Grand Challenges Canada | Integrated Innovations in Global Mental Health | Program Level Theory of Change | May 2014





The following table summarizes high-level results from the Round 1 projects.

Outcome/Output	Indicator	Totals Over 14 Projects
<b>Lives Touched – BENEFICIARIES who accessed a product and/or service</b>	# of BENEFICIARIES who accessed products and/or services	20,427
<b>Lives Touched – INTERMEDIARIES who accessed a product and/or service and improved their knowledge/attitudes/ behaviours</b>	# of INTERMEDIARIES who accessed products and/or services	18,453
<b>Jobs created</b>	# of jobs created in Canada	72
	# of jobs created in low- and middle-income	246
<b>Changes in policy, legislation and/or regulation</b>	# of policies developed and/or adopted as a result of the projects	3

### Early Successes

The Global Mental Health portfolio has had a number of early successes, including:

- Zanmi Lasante** in Haiti, along with its partners, which aims to scale up a mental health service delivery implementation model known as the 5x5. The goal of this project is to provide a roadmap for a national plan to decentralize mental healthcare delivery in Haiti. Through skills building, mentoring and tools development, community health workers and mid-level healthcare professionals will provide treatment and care for depression, adult psychosis and epilepsy, as well as child and adolescent disorders. Through this project, **164 community health workers, mid-level providers, nurses and physicians were trained on depression care pathways, and 114 nurses and physicians were trained on psychopharmacology.** As a result of this project so far, **2,866 were screened for depression and a further 3,408 patients were provided treatment for epilepsy and depression.** Furthermore, this project has **leveraged \$1.1 million** in private investment.





- The **University of the West Indies** in Jamaica targets high-risk Grade 3 students in two inner-city communities through the **Dream-A-World Cultural Therapy** program, as well as wider youth and adult populations through **Community Engagement Cultural Therapy**. The Dream-A-World program facilitates group discussion of painful issues and uses drama, song and dance to translate and help express concerns; **100 eight-year-old children have participated in Dream-A-World** and there are early indications of behaviour improvements, such as the attention span of a group of children increasing from 17 seconds to 3 minutes after 3 weeks of the program.

*“Thirty children in Jamaica with a history of difficult behaviour and school failure, singing and dancing about life on an imaginary planet – is this really relevant to mental health care in the developed world? The answer from the judges of the Turning the World Upside Down Mental Health Challenge was a resounding YES” – Lancet blog, February 2014*

- **Makerere University** in Uganda aims to reduce the treatment gap among people with mental illness by creating a bridge between traditional healers and modern clinicians using ‘wayos’ and ‘neros’ (aunts and uncles) that will reduce the treatment gap for people living with mental illness by increasing access to effective care and reducing stigma. So far, this project has trained **421 wayos and neros** and **65 traditional healers** on anti-stigma, awareness of common mental disorders and referral pathways; **4,344 adults and 207 children have been referred to mental health services by wayos, neros and traditional healers**. As a result, **1,400 people living with mental disorders visited a health facility for the first time**. Finally, 30 community advisory board members are now working to advocate for improved drug management and staffing continuity.



### Other Indicators of Success

In addition to the projects outlined above, there are some other strong early indicators of success, including:

- The **Institute for Health Policy** has built an online platform (**mhpss.net**) that includes resources, forums, webinars and networks for psychosocial support in emergencies. The platform now has 2,685 members from 120 countries, with 149 online groups and 2,300 resources available online.

## Stars in Global Health

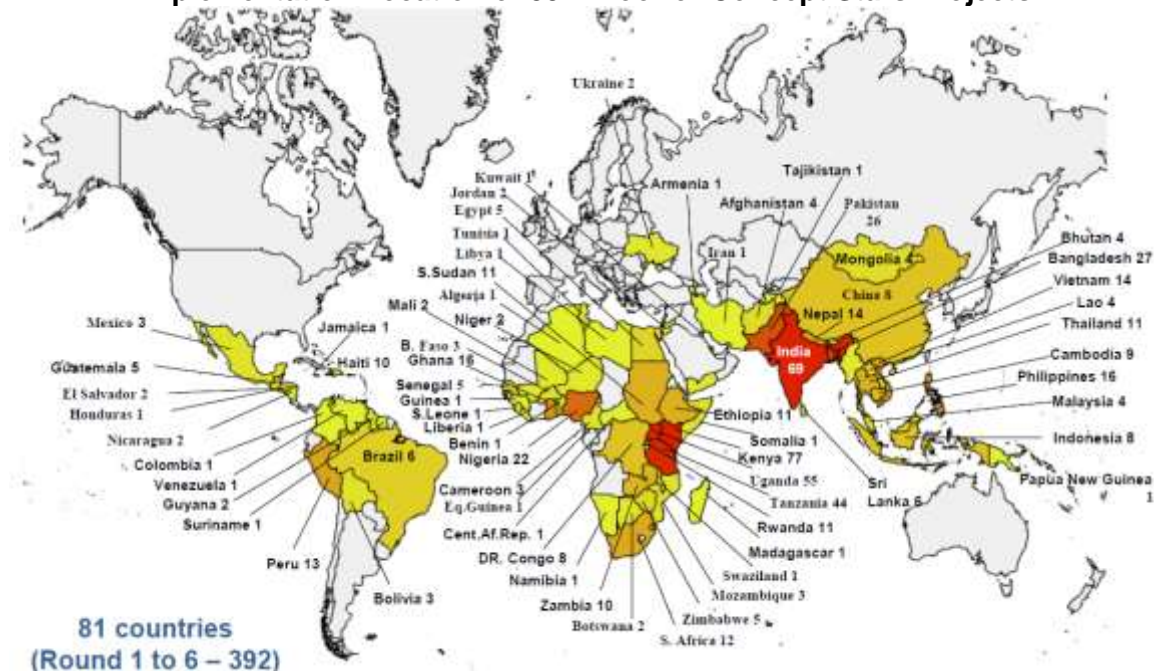
### Program Overview

Historically, some of the greatest impacts in global health have been from innovators with **bold ideas** who tested and refined their ideas in the belief that they could have a transformative impact. The discovery of vaccines over 200 years ago and of antibiotics in the last century are classic examples of unorthodox thinking that resulted from **bold ideas** that have had **big impact** and saved millions of lives.

Grand Challenges Canada, which is funded by the Government of Canada, has developed the Stars in Global Health program to support **Bold Ideas with Big Impact®** from the best and brightest talent, both in low- and middle-income countries and in Canada, to use scientific/technical, social and business innovation to address some of the most pressing global health challenges.

To date, Grand Challenges Canada has committed **\$42.7M to 392 proof-of-concept projects** over six rounds of Stars in Global Health. These projects have been made to institutions in 34 low- and middle-income countries and Canada. The proof of concept projects are being implemented in 81 low- and middle-income countries, as outlined on the map below.

### Implementation Location of 392 Proof-of-Concept Stars Projects



### Our Approach

The goal of the Stars in Global Health program is to support bold ideas to develop solutions to global health problems from innovators in Canada and in low- and middle-income countries. We seek novel, bold, innovative, transformational and 'outside-the-box' ideas that could be easily implemented in developing countries to save and improve lives. Innovations that are identified as bold ideas with big impact are awarded proof of concept projects, each at \$100,000 CAD, and innovators are given 12–18 months to demonstrate proof of concept.

Innovators who complete a minimum of nine months of their Grand Challenges Canada grant, complete their proof-of-concept projects (including a final report) and have solutions that are ready to transition to scale are invited to submit a **Transition to Scale** Letter of Intent.

### Portfolio Results To-Date

The following table captures the results from Round 1 projects, including 62 proof of concept projects that have been completed.

Outcome/Output	Indicator	Total Over 62 Projects
<b>Lives Touched – BENEFICIARIES who accessed a product and/or service</b>	# of BENEFICIARIES who accessed products and/or services	619,707
<b>Lives Touched – INTERMEDIARIES who accessed a product and/or service, and improved their knowledge/attitudes/ behaviours</b>	# of INTERMEDIARIES who accessed products and/or services	181,661
<b>Jobs created</b>	# of jobs created in Canada as a result of the projects	361
	# of jobs created in low- and middle-income countries as a result of the project	520
<b>Changes in policy, legislation and/or regulation</b>	# of policies developed and/or adopted as a result of the projects	17
<b>Building tools and capacity to execute</b>	# innovative prototypes and/or service delivery models developed	327



## Early Successes

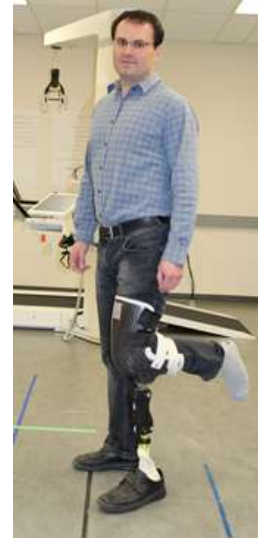
- The **University of Alberta**, working with the Aga Khan University Hospital in Kenya and Addis Ababa University in Ethiopia, sought to prevent and treat avoidable blindness from glaucoma in Sub-Saharan Africa through an evidence-based telemedicine approach. Over a 12-month period, a controlled screening trial that **engaged 1,610 people identified 77 new cases of glaucoma** that were treated through surgery and medical care. Another 448 cases of serious eye conditions (e.g., diabetic retinopathy) were also diagnosed and treated.
- **Moi Teaching and Referral Hospital and AMPATH** in Kenya, building on previous success with scaling HIV care to rural populations in Western Kenya, have implemented and scaled a Revolving Fund Pharmacy (RFP) model to provide essential medicines not readily available in government-run pharmacies. Within the project's catchment area (population of 500,000), a total of **327,344 patients accessed essential medicine** as a result of the RFP model. Another significant result was the **introduction of legislation** to enable the implementation of the RFP model in different counties.
- The **University of Nairobi** in Kenya have developed and piloted a barcode vaccine card that can be redeemed for farming goods to incentive and encourage mothers to complete a full immunization schedule for their children. Each time a child receives a vaccine, a barcode is updated with redeemable 'agro-credits'. Through their proof-of-concept pilot, **1,550 children and 358 expectant mothers received immunizations**. In participating villages, the uptake of **vaccination services rose from 55% to 95%** as a result of these incentives. Further, **7,632 family members benefited from increased agricultural productivity** that strengthened the household food supply for maize and beans.



### Other Indicators of Success

Other indications of success arising from the 62 proof-of-concept projects that have been completed are described below.

- **327 prototypes or service delivery models have been developed**, including:
  - Holland Bloorview Kids Rehabilitation Hospital in Toronto worked with Sociedad Pro Ayuda del Nino Lisiado/University of Chile to clinically test an artificial knee that would be more affordable and appropriate for low-income settings. This project produced an artificial knee that costs approximately \$100 and is comparable to other artificial knees on the market that cost ~\$5,000.
  - SickKids Hospital in Toronto worked with St. Francis Hospital in Uganda to develop a wind-up fetal heart monitor that can be used in environments where access to electricity is intermittent or unavailable, which allows for proper monitoring of the fetus in a low-resource setting.



- **361 jobs have been created in Canada and 520 jobs have been created in low- and middle-income countries**, including:
  - Sustainable Health Ventures in Rwanda implemented a women-led franchise model to manufacture and distribute affordable, high-quality and eco-friendly sanitary pads across Rwanda. They sought to tackle both the stigma and practical problems associated with a lack of access to sanitary pads, a primary reason why women and girls lose up to 50 days of work or school each year. This project improved the livelihood for 600 banana farmers and employed 7 part-time technicians and 13 full-time staff.



### Fast Failures

The nature of innovation is such that there is the ever-present risk of failure. Indeed, a lack of failure is an indication that a program is not enabling sufficiently transformative innovations. The key to managing the risk of failure is to quickly identify and take action to address failures, and to learn from them. An example of failure in the Stars in Global Health portfolio is:



- The project for **McGill University's** low-cost, multiplexed, point-of-care test for extra-pulmonary tuberculosis successfully developed a prototype test with an industry partner and achieved proof of concept in a lab setting, but failed at the clinical validation stage. Given the limited performance of the test after two rounds of research and development (R&D) and the anticipated difficulties with further R&D, a **no-go decision was made for further work on this product**. The project team published a paper describing their challenges in developing this technology, with lessons for future work in this field.



On a positive note, the Principal Innovator (Dr. Madhukar Pai) for this project submitted a different bold idea for assessing quality of TB care in India using mystery patients. The idea was funded by Grand Challenges Canada in Stars in Global Health Round 5, and achieved proof-of-concept in a pilot study in Delhi. It has now been picked up by the Bill & Melinda Gates Foundation, as part of their Private Provider Interface Agency (PPIA) project in India. This example demonstrates how Grand Challenges Canada helped to catalyze this innovation, leveraging in new funds from one of Grand Challenges Canada partners.

## Transition to Scale

The goal of this program is to support Grand Challenges Canada-funded innovators from Canada and from low- and middle-income countries who are positioned to take their bold ideas to big impact in the area of global health.

### Program Overview

The Transition to Scale program began with investments in point-of-care diagnostics in 2011 (in conjunction with the Bill & Melinda Gates Foundation), in Canadian and in low- and middle-income country innovators through the Grand Challenges Explorations program at the Bill & Melinda Gates Foundation. The Transition to Scale program for our own, internal proof-of-concept pipeline was launched in spring 2013. Since then, our Investment Management and Scaling Team has worked to develop a rigorous review process and scaling platform to enable results. Part of our work over the past year has been to develop a strong Investment Committee, composed of individuals with expertise in venture capital, impact investing, development and social innovation, who review transition-to-scale proposals and advise our Board of Directors on investments. In partnership with CIHR, the investment process also reviews the innovations from a scientific and results-based perspective.

Thus far, the **Investment Committee has convened five times** and has **reviewed 25 transition to scale proposals**. Relying upon the Investment Committee's recommendation, Grand Challenges Canada has thus far committed **\$8M to 14 transition to scale deals**. Grand Challenges Canada has also funded **4 transition to scale deals within the Saving Brains portfolio** and **15 transition to scale deals within the Global Mental Health program**. There are **10 transition to scale deals in the Saving Lives at Birth Partnership**.

### **Our Approach**

Grand Challenges Canada seeks **Integrated Innovations®** from proof-of-concept grantees and seed grantees across all of our programs. Innovators eligible for this program will have demonstrated a number of key milestones (completion of a minimum of nine months of their Grand Challenges Canada grant, completion of their proof-of-concept projects, submission of final technical and financial reports), and have solutions that are ready to transition to scale.

Innovators that are ready to transition to scale must also secure matching funds through smart partnerships. Given the complexity of the problems in global health and the low-resource settings that we are faced with, it is not feasible or desirable to expect that Grand Challenges Canada alone will be able to take its grantees from initial funding through to scale-up, and to eventual commercialization and dissemination of transformative innovations. In order to successfully scale up proven innovations from grantees, Grand Challenges Canada seeks to enable partnerships with a number of actors, including social angel investors, small and medium-sized companies, multinationals, foundations, philanthropists, not-for-profits, multilateral organizations and public sector entities, including departments and agencies.

Grand Challenges Canada is catalyzing results through this combination of Integrated Innovation with smart partnerships.

### **Expected Impact**

While it is too early for the transition to scale deals to be reporting early results, the following are two examples of expected impact:

- **LionsGate Technologies** has secured its first major financial backers to scale up the development of the Phone Oximeter, an application and medical sensor that turns a non-specialist, community-level health worker's smartphone, tablet or laptop into an affordable but sophisticated diagnostic tool that can be used to monitor a wide variety of chronic disease states. The \$40 target price will make the Phone Oximeter **80% less costly than any other current device capable of similar medical standards**, with the goal of preventing thousands of deaths and improving the lives of expectant mothers and newborns. The transition to scale project will include longer-term medical trials of the device that will involve 80,000 women in four countries.



- Lucky Iron Fish** is a socially driven business dedicated to alleviating iron deficiency and iron deficiency anemia around the world, primarily in Cambodia, where nearly half of the population are iron deficient. The Lucky Iron Fish is added to cooking pots as a dietary supplement and can provide about **75% of daily iron requirements**. A randomized controlled trial of the Lucky Iron Fish in Cambodia resulted in a significant increase in hemoglobin levels in a group of women who received a Lucky Iron Fish to use over 12 months that was not observed in the control group. Only 11% of women in the group who received the Lucky Iron Fish were anemic after 12 months compared to 45% of women in the control group over the same period. At \$5 per fish, the anemia decreasing product is an effective and culturally accepted innovation. The company is using Grand Challenges Canada funding to scale up production from small businesses across Cambodia, and intends to produce **10,000 fish in the first year of their transition to scale project**.



#### Investments to Date

The following is a list of the Transition to Scale projects to date:

Innovator/Enterprise	Project – Health Platform
Stars – Transition to Scale*	
ChipCare Corporation	Multiplex System
LionsGate Technologies Inc.	Phone Oximeter
Guyana Help the Kids Organization	Community Engagement
International Development Enterprises	WASH Market Development
Weltel	HIV Treatment
Saving Mothers	Misoprostol
Next Gen U	Free University
Mennonite Economic Development Associates of Canada	Bed nets
Lucky Iron Fish	Iron Fish Supplement – Anemia (forgivable loan)



Grand Challenges Explorations	
<b>ZanaAfrica Group Limited</b>	Women's access to safe, affordable sanitary pads
<b>Biofilcom Limited</b>	Scaling the Microflush-Biofil Toilet
<b>IWMI</b>	From Waste to Food (WaFo)
<b>ICGEB</b>	Electronic nose
<b>Ifakara Health Institute</b>	Outdoor mosquito control
<b>McGill University</b>	Drugs That Target Multiple Receptors for Anthelmintics
Point-of-Care Diagnostics**	
<b>Universidad Peruana Cayetano Heredia</b>	Brighter Futures
<b>Bigtec Private Limited</b>	Nucleic Acid Extraction
<b>Wits Health Consortium (Proprietary) Limited</b>	Feasibility of a multi-disciplinary point-of-care laboratory
<b>Achira Labs Private Limited</b>	Fabric Chips
<b>Ustar Biotechnologies (Hangzhou) Ltd.</b>	Nucleic acid extraction system (two projects)
<b>University of Pennsylvania</b>	Llocked swab transport systems
<b>National Hospital for Tropical Diseases</b>	Sample collection
<b>University of Cape Town</b>	Raman Scattering (SERS) biosensor
<b>London School of Hygiene &amp; Tropical Medicine</b>	Improving Regulatory Oversight
<b>Rajendra Memorial Research Institute</b>	Visceral leishmaniasis in India

\*Five additional investments are currently under negotiation

\*\*Includes one grant that was terminated early



## Global Health Investment Fund

Grand Challenges Canada is an anchor investor in the Global Health Investment Fund (GHIF), a US \$108M private investment fund structured by JP Morgan Chase & Co. and the Bill & Melinda Gates Foundation. The GHIF is a social impact investment fund designed to provide financing to advance the development of drugs, vaccines, diagnostics and other interventions against diseases that disproportionately burden low-income countries. The Fund provides a novel opportunity to help bring about significant improvements in the treatment and prevention of disease, and in family planning, and the reduction of maternal and child mortality, along with the prospect of a net financial return for investors.



*(Left to Right) Bill Gates, the Honourable Christian Paradis and Jamie Dimon at the launch of the Global Health Investment Fund*

## Corporate Profile

Grand Challenges Canada is a federally incorporated, not-for-profit organization. We work very closely with our partners Canada's International Development Research Centre (IDRC), the Canadian Institutes of Health Research (CIHR) and the Department of Foreign Affairs, Trade and Development. We receive funds from the Government of Canada, as part of a funding agreement with the International Development Research Centre (IDRC) and through a partnership with the Department of Foreign Affairs, Trade and Development. The funds from IDRC, in turn, are provided through the Development Innovation Fund (DIF) announced in Federal Budget 2008.

### GOVERNANCE

Grand Challenges Canada continues to be led by a thoughtful and engaged volunteer Board of Directors, chaired by **Joseph Rotman**. The Board and its Chair make a significant contribution to both the strategic and operational success of Grand Challenges Canada. In the past year, we were pleased to welcome as a Board member **Morris Rosenberg**, former Deputy Minister of Foreign Affairs and newly appointed President and CEO of the Pierre Elliott Trudeau Foundation. For a complete list of members of the Board of Directors, see **Annex 1**.

The sub-committees of the Board of Directors are:

- **Executive Committee**, chaired by Joseph Rotman
- **Audit & Finance Committee**, chaired by Guylaine Saucier
- **Nominating & Governance Committee**, chaired by Elizabeth Dowdeswell<sup>2</sup>
- **Compensation Committee**, chaired by Joseph Rotman.

This year, we have continued to develop and expand our Scientific Advisory Board. The most significant change was the development of sub-groups within the Scientific Advisory Board to analyze, review and provide feedback on the Portfolio Reviews before they are presented to the Board of Directors. Each of these sub-groups consists of leading experts in the subject area, both from Canada and abroad. For a complete list of members of the Scientific Advisory Board by sub-group, please see **Annex 2**.

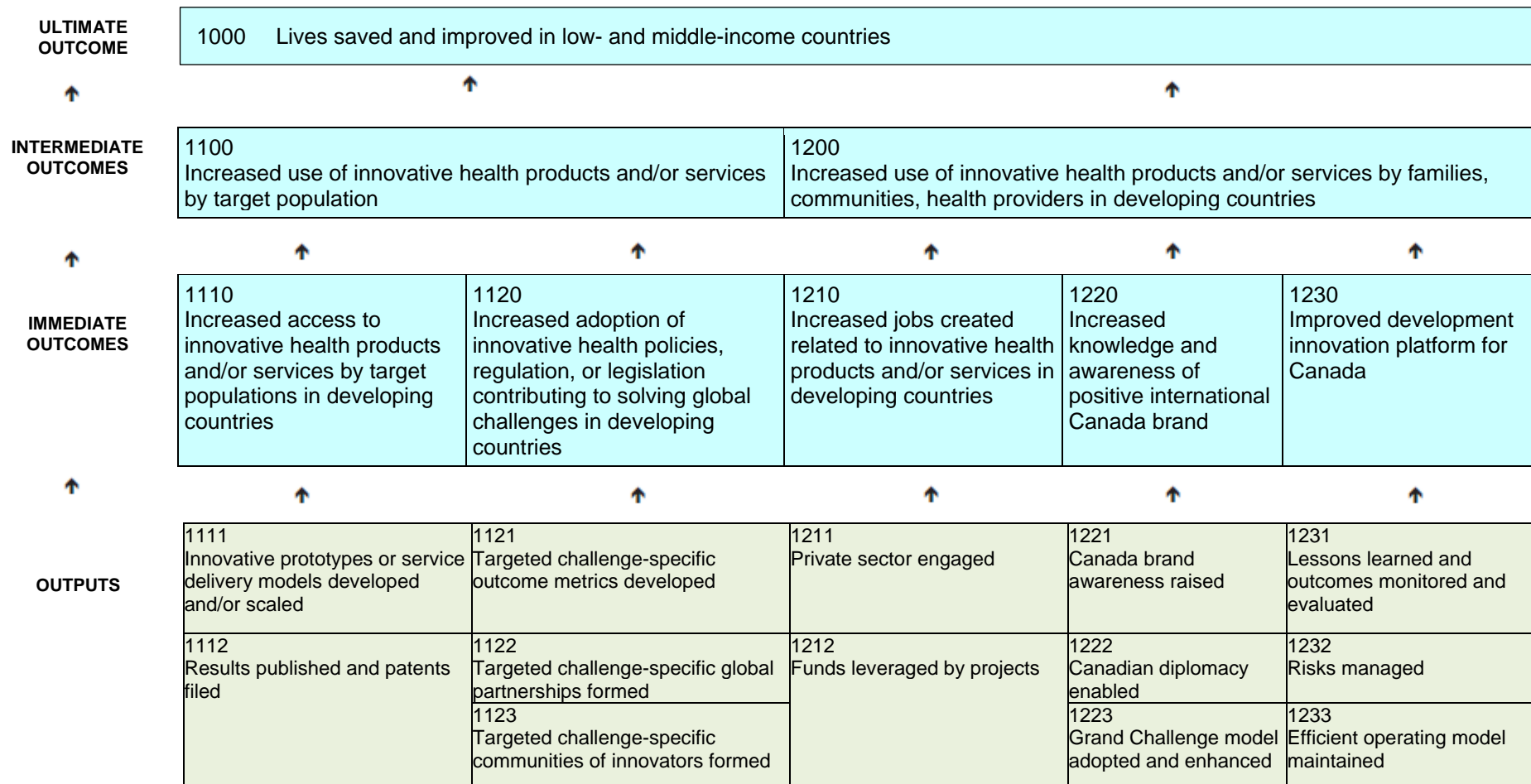
### ACCOUNTABILITY

At Grand Challenges Canada, we are focused on two primary areas of accountability.

First, we have a determined focus on **results**, as highlighted in the previous chapter of this report. This focus on results is also reflected in our 'organizational logic', as shown on the following page.

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<sup>2</sup> Resigned June 28, 2014, as a result of her appointment as Ontario's Lieutenant-Governor



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	1231 Conduct portfolio reviews and prepare annual reports for Scientific Advisory Board validation and Board approval + engage in joint learning with partners
	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 and 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



The following table summarizes the specific outputs that we track in relation to the activities outlined in the preceding logic model for the 2013–2014 fiscal year. Note that this is our first year tracking outputs in this manner; in future years, we will include the outputs from the previous fiscal year as a comparator.

Output	Metric	2013/2014
1111 Innovative prototypes or service delivery models developed &/or scaled	# innovative prototypes or service delivery models validated	346
1112 Results published and patents filed	# publications and # patents filed	Stars: 89 papers, 13 patents
1121 Targeted challenge-specific outcome metrics developed	# outcome metrics and knowledge management platforms developed	4
1122 Targeted challenge-specific global partnerships formed	\$ leveraged through programs	\$167.7M
1123 Targeted challenge-specific communities of innovators formed	# communities formed and engaged	3
1211 Private sector engaged	# companies supported	74
1212 Funds leveraged by projects	\$ leveraged through projects	\$17.4M
1221 Canada brand awareness raised	# media mentions	Over 140 original media stories*
1222 Canadian diplomacy enabled	Qualitative reports from ambassadors and other sources	Positive indications of impact in ASEAN, India, Peru and Israel
1223 Grand Challenges model adopted and enhanced	# countries adopting Grand Challenges model	5 (Israel, Peru, India, Brazil, United States)
1231 Lessons learned and outcomes monitored and evaluated	# portfolio reviews	4
1232 Risks managed	# Audit & Finance Committee meetings held and risk reports approved	4
1233 Efficient operating model maintained	Percentage of gross budget to operations (General & Administration, and Program Support)	8.4%

The second of our two primary areas of accountability is a focus on **risk management**, to identify and mitigate the risks associated with our programs and operations. We take a systematic and conservative approach to risk management. The tools and strategies we use to monitor, mitigate and report on risk are multi-faceted. They 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.

We take seriously any risks to our organization and programs, and we deal with risk occurrences systematically, involving our Board of Directors and, as needed, our Development Innovation Fund partners. We maintain and regularly update a corporate risk profile, to measure and report on the likelihood and impact of all internal and external risks to our organization and programs. This profile is reviewed by our Audit & Finance Committee, chaired by Guylaine Saucier; key risks and any changes to material risks are presented to and discussed with our Board of Directors, chaired by Joseph Rotman. The Board of Directors prioritizes risk mitigation and addresses any potential risks with discussion and in-depth assessment. Any changes in likelihood or impact of a risk are monitored closely and mitigation activities are implemented, as required. Because of the experience of our Board of Directors, this role has been extremely beneficial in guiding management to mitigate and address risks.

An independent Formative Evaluation of the Development Innovation Fund (DIF) was conducted in 2012 and reported in February 2013. The conclusions of the evaluation of Grand Challenges Canada (GCC) on the progress for the DIF were as follows:

*Overall, the implementation of DIF has been relatively smooth. The consortium concept has demonstrated progress, and GCC and its Board have been set up in a fairly short time. The grant approval process with CIHR has been successful in identifying promising research. Innovators and applicants have been generally positive about the selection process. All involved have been learning and adapting as experience has been gained. Relatively new approaches to scaling up involving the private sector are being developed and tested. Strategic partnerships have been forged with a wide variety of partners and GCC has become a known player in global health.*

## **OPERATIONS**

During its fourth year of operations, Grand Challenges Canada has maintained its focus on execution and results. As in years past, we have maintained our three core areas of operations:

1. Human Resources
2. Communications
3. Administration.



## Human Resources

An Organization Chart for Grand Challenges Canada can be found at **Annex 3**.

## Communications

In the fiscal year 2013–2014, Grand Challenges Canada was featured in over 140 original articles. Some of the highlights are captured below.



## Administration

Grand Challenges Canada aims to maintain our operating expenses (General Administration and Program Support) at around 10% of our total expenditures. For 2013–2014, we maintained operating expenses at 8.4% of total expenditures.

## Financial Summary

A core focus at Grand Challenges Canada is to leverage funding at the portfolio and project levels. To date, we have leveraged the following funding:

<b>Organization-level</b>	
Rotman Family Foundation <sup>3</sup>	\$4.7M
<b>Portfolio-level<sup>4</sup></b>	
Point-of-Care Diagnostics	\$36.8M
Saving Lives at Birth	\$30M
Saving Brains	\$0.5M
Hypertension	\$4M
Transition To Scale – Impact Investment Funds	\$96.4M
<b>Project-level<sup>5</sup></b>	
Stars in Global Health	\$3.6M
Transition to Scale	\$9.2M
Grand Challenges Explorations	\$3.4M
Global Mental Health	\$1.2M
<b>TOTAL</b>	<b>\$189.8M</b>

<sup>3</sup> This represents financial support from the Rotman Family Foundation for the Sandra Rotman Centre since 2004. The Sandra Rotman Centre currently houses, and originally incubated, Grand Challenges Canada.

<sup>4</sup> Portfolio-level leverage represents funding at a program level that was possible due to Grand Challenges Canada's contribution. For example, Grand Challenges Canada was an anchor investor in the Global Health Investment Fund providing the necessary momentum for the Fund to raise an additional \$96.4M CAD equivalent to close.

<sup>5</sup> Project-level leverage represents funds leveraged directly into projects supported by Grand Challenges Canada. Some of our programs require 1:1 matching at the project level. In other projects, innovators have reported that as a result of Grand Challenges Canada funding, they have been able to raise additional funds to support their work.



## **FINANCIAL STATEMENTS**

The Financial Statements for Grand Challenges Canada for fiscal year 2013–2014 follow, with comparative figures for fiscal year 2012–2013.



**GRAND CHALLENGES CANADA**

**STATEMENT OF FINANCIAL POSITION**

As at March 31

	2014 \$	2013 \$
<b>ASSETS</b>		
<b>Current assets</b>		
Cash	10,744,810	10,012,751
Accounts receivable	82,581	124,222
Prepaid expenses and deposits	68,035	81,341
<b>Total current assets</b>	<b>10,895,426</b>	<b>10,218,314</b>
Capital assets, net <i>[note 3]</i>	61,238	95,477
	<b>10,956,664</b>	<b>10,313,791</b>
<b>LIABILITIES AND NET ASSETS</b>		
<b>Current liabilities</b>		
Due to University Health Network <i>[note 4]</i>	16,040	698,559
Accounts payable and accrued liabilities	7,641,793	6,178,588
Deferred contributions <i>[note 5]</i>	3,298,831	3,436,644
<b>Total current liabilities</b>	<b>10,956,664</b>	<b>10,313,791</b>
<b>Net assets</b>	—	—
	<b>10,956,664</b>	<b>10,313,791</b>

*See accompanying notes*

On behalf of the Board:



Director



Director



GRAND CHALLENGES CANADA

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

Year ended March 31

	2014 \$	2013 \$
<b>REVENUE</b>		
Grant <i>[note 6]</i>	54,387,217	51,683,757
Interest	118,239	146,382
	<b>54,505,456</b>	<b>51,830,139</b>
<b>EXPENSES</b>		
General administration		
Personnel	1,213,451	1,554,180
Materials and supplies	77,665	98,505
Equipment and infrastructure	130,541	191,079
Business development	360,815	317,916
	<b>1,782,472</b>	<b>2,161,680</b>
Program support		
Personnel	1,709,018	1,343,141
Materials and supplies	66,312	48,940
Equipment and infrastructure	233,996	165,503
Business development	866,749	817,362
	<b>2,876,075</b>	<b>2,374,946</b>
Research program		
Issued grants	47,701,495	46,196,019
Research support activities	2,145,414	1,097,494
	<b>49,846,909</b>	<b>47,293,513</b>
	<b>54,505,456</b>	<b>51,830,139</b>
<b>Excess of revenue over expenses for the year</b>	<b>—</b>	<b>—</b>
<b>Net assets, beginning of year</b>	<b>—</b>	<b>—</b>
<b>Net assets, end of year</b>	<b>—</b>	<b>—</b>

*See accompanying notes*



GRAND CHALLENGES CANADA

STATEMENT OF CASH FLOWS

Year ended March 31

	2014 \$	2013 \$
<b>OPERATING ACTIVITIES</b>		
Excess of revenue over expenses for the year	—	—
Add non-cash items		
Amortization of capital assets	34,239	56,045
Change in non-cash operating working capital balances		
Decrease (increase) in accounts receivable	41,641	(72,619)
Decrease (increase) in prepaid expenses and deposits	13,306	(55,608)
Increase (decrease) due to University Health Network	(682,519)	525,641
Increase in accounts payable and accrued liabilities	1,463,205	5,656,403
Decrease in deferred contributions	(137,813)	(10,568,757)
<b>Cash provided by (used in) operating activities</b>	<b>732,059</b>	<b>(4,458,895)</b>
<b>INVESTING ACTIVITIES</b>		
Additions to capital assets	—	(5,578)
<b>Cash used in investing activities</b>	<b>—</b>	<b>(5,578)</b>
<b>Net increase (decrease) in cash during the year</b>	<b>732,059</b>	<b>(4,464,473)</b>
Cash, beginning of year	10,012,751	14,477,224
<b>Cash, end of year</b>	<b>10,744,810</b>	<b>10,012,751</b>

*See accompanying notes*





## GRAND CHALLENGES CANADA

### NOTES TO FINANCIAL STATEMENTS

March 31, 2014

#### 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 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 the Department of Foreign Affairs, Trade and Development Canada (DFATD) 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 ["CPA"] Handbook – Accounting which sets out generally accepted accounting principles for not-for-profit organizations in Canada and includes the significant accounting policies summarized below.



## GRAND CHALLENGES CANADA

### NOTES TO FINANCIAL STATEMENTS

March 31, 2014

#### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

##### 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 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 development

3 years



GRAND CHALLENGES CANADA

NOTES TO FINANCIAL STATEMENTS

March 31, 2014

**2. SIGNIFICANT ACCOUNTING POLICIES (continued)**

**Financial instruments**

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

**3. CAPITAL ASSETS**

	2014		
	Cost \$	Accumulated amortization \$	Net book value \$
<b>Tangible</b>			
Leasehold improvements	36,197	28,958	7,239
<b>Intangible</b>			
Software	106,591	52,592	53,999
Website development	69,636	69,636	—
	<b>212,424</b>	<b>151,186</b>	<b>61,238</b>
	2013		
	Cost \$	Accumulated amortization \$	Net book value \$
<b>Tangible</b>			
Leasehold improvements	36,197	21,718	14,479
<b>Intangible</b>			
Software	106,591	25,593	80,998
Website development	69,636	69,636	—
	<b>212,424</b>	<b>116,947</b>	<b>95,477</b>



## GRAND CHALLENGES CANADA

### NOTES TO FINANCIAL STATEMENTS

March 31, 2014

#### 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:

	2014 \$	2013 \$
<b>Balance, beginning of year</b>	<b>3,436,644</b>	14,080,401
Amounts received during the year	<b>54,249,404</b>	41,040,000
Amounts recognized as revenue during the year <i>[note 6]</i>	<b>(54,387,217)</b>	(51,683,757)
<b>Balance, end of year</b>	<b>3,298,831</b>	3,436,644

#### 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 is committing \$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





## GRAND CHALLENGES CANADA

### NOTES TO FINANCIAL STATEMENTS

March 31, 2014

#### 6. GRANT REVENUE (continued)

period from January 1, 2010 to March 31, 2017. The Organization is depending on this funding to carry out its mandate.

In fiscal year 2013-2014, the Department of Foreign Affairs, Trade and Development (DFATD) entered into a contribution agreement with the Organization for a maximum of \$9,975,000 for the Scaling Health Initiative. The agreement is effective from October 2, 2013 to October 2, 2015.

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 (SLAB) portfolio. The grant is effective from April 1, 2013 to March 31, 2017.

Grant revenue recognized as revenue in the year is from the following sources:

<i>[note 5]</i>	2014 \$	2013 \$
DIF	52,179,594	51,683,757
DFATD	950,000	----
DFID	1,257,623	----
	<b>54,387,217</b>	<b>51,683,757</b>

#### 7. FUNDING COMMITMENTS

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



**GRAND CHALLENGES CANADA**

**NOTES TO FINANCIAL STATEMENTS**

March 31, 2014

**7. FUNDING COMMITMENTS (continued)**

Funding based on agreements with various organizations is payable in the fiscal years ending March 31 as follows:

	\$
2015	23,751,000
2016	6,125,000
2017	1,645,000
2018	218,000
	<u>31,739,000</u>

**8. LEASE COMMITMENTS**

Future minimum annual lease payments for operating leases are as follows:

	\$
2015	113,000
2016	117,000
2017	80,000
	<u>310,000</u>



## 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, 2014, 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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**Opinion**

In our opinion, the financial statements present fairly, in all material respects, the financial position of Grand Challenges Canada as at March 31, 2014 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.

*Ernst & Young LLP*

Toronto, Canada,  
June 27, 2014.

Chartered Accountants  
Licensed Public Accountants



A member firm of Ernst & Young Global Limited



## Annex 1: Board of Directors

GRAND CHALLENGES CANADA Members of the Board of Directors	
Name	Affiliations
<b>Joseph L. Rotman</b>	<ul style="list-style-type: none"> <li>• <b>Chairman of the Board of Directors of Grand Challenges Canada</b></li> <li>• Chairman, Roy-L Capital Corporation</li> <li>• Director, Clairvest Group Inc.</li> <li>• Chairman of the Ontario Brain Institute</li> <li>• Chairman, Canada Council</li> <li>• Chancellor of Western University</li> <li>• Officer of the Order of Canada</li> </ul>
<b>Robert Bell*</b>	<ul style="list-style-type: none"> <li>• President and Chief Executive Officer, University Health Network</li> <li>• Former Regional Vice President, Clinical Council of Cancer Care Ontario</li> </ul>
<b>Alain Beaudet</b>	<ul style="list-style-type: none"> <li>• President, Canadian Institutes of Health Research (CIHR)</li> </ul>
<b>Daniel J. Carucci</b>	<ul style="list-style-type: none"> <li>• Former Vice President for Global Health, United Nations Foundation</li> <li>• Former Director, Grand Challenges in Global Health Initiative at the Foundation for the National Institutes of Health</li> <li>• Former Director, Malaria Program at the Naval Medical Research Center</li> </ul>
<b>Abdallah S. Daar</b>	<ul style="list-style-type: none"> <li>• Chief Science and Ethics Officer, Grand Challenges Canada</li> <li>• Chair, Grand Challenges Canada's Scientific Advisory Board</li> <li>• Senior Scientist, Sandra Rotman Centre</li> <li>• Professor of Public Health Sciences and of Surgery, University of Toronto</li> <li>• Member, United Nations Secretary-General's Scientific Advisory Board</li> </ul>
<b>Elizabeth Dowdeswell**</b>	<ul style="list-style-type: none"> <li>• President and CEO of the Council of Canadian Academies</li> <li>• Past Executive Director of the United Nations Environment Program and Undersecretary General of the United Nations</li> <li>• Founding President and CEO of Canada's Nuclear Waste Management Organization</li> <li>• Officer of the Order of Canada</li> </ul>
<b>Charles Field-Marsham</b>	<ul style="list-style-type: none"> <li>• President of Kestrel Capital Management Corp.</li> <li>• Founder and Executive Chairman of Panafrican Group</li> <li>• Chairman of Kenya Fluorspar Company</li> <li>• Member of the Board of Healthy Kids International</li> </ul>
<b>Alan E. Gotlieb</b>	<ul style="list-style-type: none"> <li>• Former Canadian Ambassador to the United States</li> <li>• Former Chairman of the Canada Council</li> </ul>

	<ul style="list-style-type: none"> <li>• Companion of the Order of Canada</li> </ul>
<b>Mohamed H.A. Hassan</b>	<ul style="list-style-type: none"> <li>• Co-Chair of IAP, the global network of science academies</li> <li>• Chairman of the Council of the United Nations University</li> <li>• Past President, African Academy of Sciences</li> <li>• Past Executive Director, Academy of Sciences for the Developing World (TWAS)</li> </ul>
<b>Jean Lebel</b>	<ul style="list-style-type: none"> <li>• President of the International Development Research Centre (IDRC)</li> </ul>
<b>Allan Ronald</b>	<ul style="list-style-type: none"> <li>• Distinguished Professor Emeritus, University of Manitoba</li> <li>• Visiting lecturer, Makerere University, Uganda, Africa</li> <li>• Founding member of the University of Manitoba/University of Nairobi/WHO Research and Training Program on Sexually Transmitted Diseases</li> <li>• Officer of the Order of Canada</li> </ul>
<b>Morris Rosenberg</b>	<ul style="list-style-type: none"> <li>• Former Deputy Minister of the Department of Foreign Affairs, Trade and Development</li> <li>• President and CEO, The Pierre Elliott Trudeau Foundation</li> </ul>
<b>Guyllaine Saucier</b>	<ul style="list-style-type: none"> <li>• Former Chairman of the Board of Directors of the Canadian Broadcasting Corporation</li> <li>• Former Director of the Bank of Canada</li> <li>• Former Chair of the Canadian Institute of Chartered Accountants (CICA)</li> </ul>
<b>Peter Singer</b>	<ul style="list-style-type: none"> <li>• Chief Executive Officer, Grand Challenges Canada</li> <li>• Director, Sandra Rotman Centre</li> <li>• Officer of the Order of Canada</li> </ul>

\* Resigned May 20, 2014, as a result of new role as Ontario Deputy Minister of Health

\*\* Resigned June 28, 2014, as a result of new role as Ontario's Lieutenant-Governor

## Annex 2: Scientific Advisory Board

Name	Title	Sub-Committee Participation
<b>Dr. Abdallah Daar,</b> Chair	Senior Scientist, Sandra Rotman Centre Professor of Public Health Sciences and of Surgery, University of Toronto	Global Mental Health
<b>Ms. Jane Aubin</b>	Chief Scientific Officer/Vice President of Research, Canadian Institutes of Health Research	Stars in Global Health
<b>Dr. Lorne Babiuk</b>	Vice President, University of Alberta, Grand Challenge in Global Health Initiative Grantee	Stars in Global Health
<b>Sir John Bell</b>	Regius Professor of Medicine, University of Oxford	Stars in Global Health
<b>Dr. Michel G. Bergeron</b>	Professor, Founder and Director of the Centre de Recherche en Infectiologie (CRI) of Université Laval, Québec City	Stars in Global Health
<b>Dr. Zulfiqar Bhutta</b>	Co-director and research head of Global Child Health centre, SickKids Founding chair of the Division of Women and Child Health, and the Husein Laljee Dewraj Professor at The Aga Khan University, Karachi, Pakistan	Women and Children's Health
<b>Dr. Cedric Bisson</b>	Venture Partner, Teralys Capital	Investment Committee
<b>Dr. Jane Cardosa</b>	Former Director, Institute of Health and Community Medicine, Universiti Malaysia	Stars in Global Health
<b>Dr. Pamela Collins</b>	Director of the Office for Research on Disparities and Global Mental Health & the Office of Rural Mental Health Research at the U.S. National Institute of Mental Health	Global Mental Health
<b>Dr. Christine Debouck</b>	Former Sr. VP, Genetics Research, GlaxoSmithKline	Stars in Global Health
<b>Mr. Tim Draimin</b>	Executive Director of Social Innovation Generation	Stars in Global Health



<b>Mr. Paul Dufour</b>	Fellow, Institute for Science, Society and Policy at the University of Ottawa, and Principal, PaulicyWorks	Investment Committee
<b>Mr. Darrell Elliot</b>	CEO, Isuma Strategies Inc. / Chairman and CEO of Calyx Bio-Ventures	Investment Committee
<b>Dr. Nirmal K. Ganguly</b>	Past Director, Indian Council of Medical Research	Stars in Global Health
<b>Mr. Kiyoshi Kurokawa</b>	Former Science Advisor to the Cabinet of Japan	Stars in Global Health
<b>Dr. Charles Larson</b>	Director, Centre for International Child Health / Senior Associate Clinician Scientist, Child & Family Research Institute	Investment Committee
<b>Dr. Joy Lawn</b>	Director of Maternal, Reproductive and Child Health Centre, London School of Hygiene and Tropical Medicine	Women and Children's Health
<b>Dr. Crick Lund</b>	Director of the Alan J Flisher Centre for Public Mental Health	Global Mental Health
<b>Dr. Mwele Ntuli Malecela</b>	Acting Director General, National Institute for Medical Research, Tanzania	Women and Children's Health
<b>Dr./Prof. Anita McGahan</b>	Associate Dean of Research, Rotman School of Management, University of Toronto	Stars in Global Health, Investment Committee
<b>Stephen McGurk</b>	Representative from the International Development Research Centre	TBD
<b>Dr. Hassan Mshinda</b>	Director General of the Tanzania Commission for Science and Technology (COSTECH)	Stars in Global Health
<b>Dr. Vikram Patel</b>	Professor of International Mental Health and Wellcome Trust Senior Research Fellow in Clinical Science at the London School of Hygiene and Tropical Medicine	Global Mental Health
<b>Dr. Frank Plummer</b>	Professor of Medicine and Medical Microbiology, University of Manitoba	Stars in Global Health
<b>Mr. Gerhard Pries</b>	Founder, Managing Partner and CEO, Sarona Asset Management Inc. / Founding Director and Vice Chairman, MicroVest General Partner Holdings	Investment Committee



<b>Dr. Shekhar Saxena</b>	Director of the Department of Mental Health and Substance Abuse at the World Health Organization	Global Mental Health
<b>Dr. Jack Shonkoff</b>	Julius B. Richmond FAMRI Professor of Child Health and Development at the 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 at Harvard University	Women and Children's Health
<b>Dr. Kishor Wasan</b>	Associate Dean of Research and Graduate Studies, Faculty of Pharmaceutical Sciences / Distinguished University Scholar / Director, Neglected Global Diseases Initiative	Stars in Global Health
<b>Dr. Yongyuth Yuthavong</b>	Former Minister of Science and Technology, Thailand	Stars in Global Health

## Annex 3: Organization Chart

