



Grand Challenges Canada®  
Grands Défis Canada

**Supporting African Innovation  
Stories and Lessons Learned**

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Chief Strategy Officer**

1. Overview of **Grand Challenges Canada**
2. Focus on **Africa**
3. **Examples**
  - **Current projects**
  - **Success stories**



# **OVERVIEW of *GRAND CHALLENGES* CANADA**

***“Canada will **build innovation** into its international assistance, encouraging **greater experimentation** and **scaling-up of new solutions** to development challenges”***  
**Canada’s Feminist International Assistance Policy**



# Grand Challenges Canada is an Innovation Platform



GCC is an **innovation platform** that seeds and transitions to scale **scientific, social and business innovation** to drive sustainable impact at scale. The platform:

1. Leverages resources and expertise from **public, private and philanthropic partners**;
2. Deploys both **grant and non-grant financing**;
3. Supports **gender equality** in all aspects of our organization and programming; and
4. Applies the best of public and private approaches to **evaluate impact, manage risk** and **knowledge** and to **ensure affordable access**.

- Primarily funded by the Government of Canada through **Global Affairs Canada**, originally via **IDRC**
- Peer review mostly conducted by **CIHR** and our **Investment Committee**
- Launched in **2010** with a current pipeline of over **1000 innovations** in more than **90 countries**
- ~2/3 based in LMICs, ~1/3 Canadians
- Part of a network of **14 grand challenges partners**

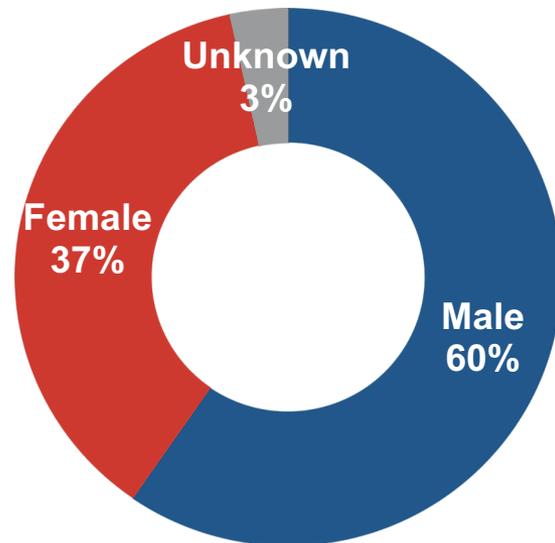
# Our Programs

PRIORITIES	PROGRAMS
<b>DEVELOPMENT</b>	<ol style="list-style-type: none"><li>1. Transition To Scale</li><li>2. Stars in Global Health</li><li>3. Saving Lives at Birth</li><li>4. Saving Brains</li><li>5. Global Mental Health</li><li>6. Urban Sanitation Challenge</li></ol>
	<ol style="list-style-type: none"><li>7. OPTions Initiative</li></ol>
<b>HUMANITARIAN</b>	<ol style="list-style-type: none"><li>8. Creating Hope in Conflict</li></ol>
<b>INDIGENOUS</b>	<ol style="list-style-type: none"><li>9. Indigenous Innovation Initiative</li></ol>
<b>OTHER INITIATIVES</b>	<ol style="list-style-type: none"><li>10. Global Health Investment Fund</li><li>11. Every Woman Every Child Innovation Marketplace</li><li>12. Kangaroo Mother Care Development Impact Bond</li></ol>

- Grand Challenges Canada is committed to supporting **gender equality**
- We believe that promoting gender equality and **empowering women and girls** is the most effective approach to achieving Canada's development goals
- In alignment with **Canada's Feminist International Assistance Policy**, GCC's approach to gender includes:
  - Expanding our investments in innovations pursuing **gender equality outcomes** (SRHR, MHM, GBV)
  - Implementing our **gender equality assessment scale**
  - Launching our **gender equality portal** and **strategy** (gender modules, gender white paper, venture advisors)
- We assess innovations using a gender lens:
  - Increase number of innovators selected for funding with **Gender Equality Scores  $\geq 2$**
  - Support innovators in **raising their gender equality scores** over funding period with limited closed projects scoring 0
  - Encourage innovators to **leverage GCC's gender resources** and venture advisors

# Gender Distribution & Gender Lens Investing

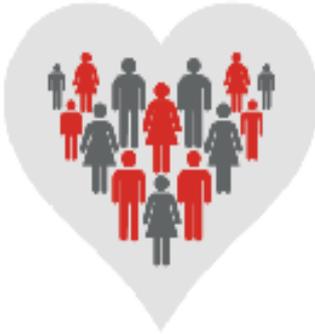
Grand Challenges Canada®  
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- ✓ **Source widely** and **scale selectively**
- ✓ **Fail fast** and learn
- ✓ Innovators who **live with a challenge** are best placed to **understand and solve it**
- ✓ Impact comes from **scale** and **sustainability**
- ✓ Engage a **broad range of partners** across the public, private and charitable sectors

# A Focus on Partnerships





**450,000–1.6 million lives saved by 2030**  
through the use of innovative products and services that save lives.  
**11,000 lives have been saved to date.**



**11-35 million lives improved by 2030**  
through the use of innovative products and services that improve lives.  
**1.5 million lives have been improved to date.**

# Breakdown of Lives Improved





# FOCUS ON AFRICA

- From 2010-2018, Grand Challenges Canada invested more than **\$159M** in **670 projects** that are being implemented across Africa\*

Benin 2	Ethiopia 26	Mozambique 7	South Sudan 7
Botswana 6	Gambia 2	Namibia 1	Sudan 2
Burkina Faso 7	<b>Ghana 37</b>	Niger 2	Swaziland 1
Burundi 2	Guinea 2	<b>Nigeria 43</b>	<b>Tanzania 74</b>
Cameroon 10	<b>Kenya 170</b>	Rwanda 28	Togo 1
Comoros 1	Lesotho 2	Senegal 11	Tunisia 1
Congo 1	Liberia 4	Sierra Leon 4	<b>Uganda 113</b>
Cote d'Ivoire 2	Madagascar 2	Somalia 2	Zambia 12
DRC 12	Malawi 21	<b>South Africa 31</b>	Zimbabwe 9
Egypt 9	Mali 3		

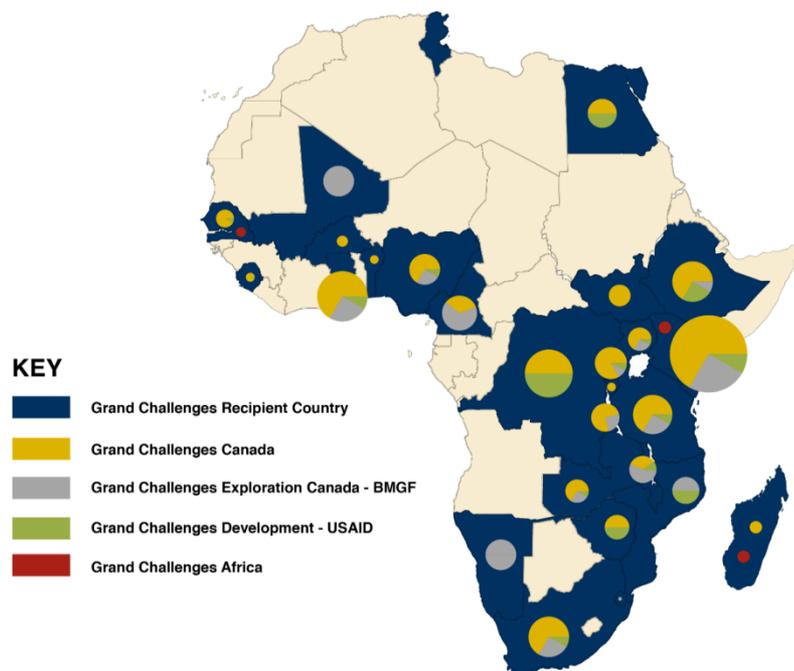
\*Of the 557 projects, 90 are implementing in multiple countries

- GCC has funded **170 projects** that are implemented in **Kenya** for a total investment of **\$46,409,972**
  - **54 of the projects** are currently active for a total investment of **\$19,974,949**
  - Strong entrepreneurial/social impact focus
- Also strong clusters in **Uganda** and **Tanzania**
  - Uganda academic focus through Makerere University
  - Tanzania strong government support and leadership (Mwele Malecela) and spill-over

- **Alliance for Accelerating Excellence in Science in Africa** (AESA)
- An initiative of The African Academy, is an **agenda setting and funding platform** established to address Africa's health and development challenges.
- AESA's mission is to **catalyze investments, strategies and programmes** that promote the brightest minds in Africa, foster scientific excellence, inspire research leadership and accelerate innovation in ways that will improve lives
- AESA is a transformational approach for the continent that aims to **shift the centre of gravity for African science to Africa** (it is Africa-led, Africa-centred and Africa-specific)
- The AESA model is recognised as **paradigm shift** by African governments, AU/AUDA, Researchers, Global NGOs & Funders and Industry



- GC partners collectively invested **\$140 million in 490 projects in Africa** between 2010-2017.
- Analysis of survey of the 490 projects ongoing to determine important components of support for innovation hub / incubator / accelerator
- Vision: **To build an incubation engine/ incubation programme for innovators on the African continent** hosted by Grand Challenges Africa

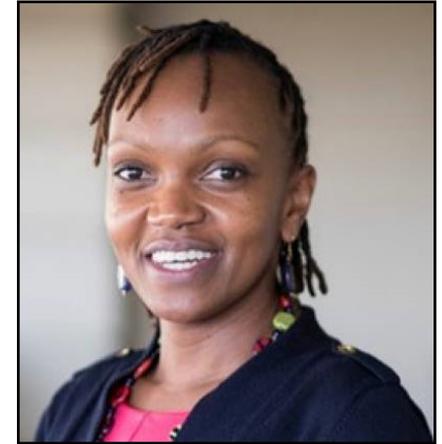


## Initial involvement with GCC:

- Dr. Gitau was first involved with GCC as a Stars in Global Health innovator
  - She led the Kenya Medical Research Institute project called, **“Multiple biomarkers for diagnosis of infectious diseases: A solution to undiagnosed infection in Severe Acute Malnutrition in Children”**

## Current work:

- Dr. Gitau worked with the AESA and helped to launch Grand Challenges Africa
- Dr. Gitau is currently the director of research capacity strengthening at the African Population and Health Research Center
- She is also a member of the Investment Committee (GCC approval body for Transition To Scale innovations)



***Stars Innovator  
Evelyn Gitau***

# Examples

# Example: *Equality Effect*

**Investment:** \$1M grant

**Challenge:** 2/3 of Kenyan girls experience sexual violence before the age of 18, yet Kenyan laws against sexual violence are rarely enforced.

**Innovation:** Novel police training program to eliminate the culture of impunity, enable officers to better investigate, arrest the accused, and prevent re-offense.



Photo: Equality Effect

**Expected Impact by 2030:** 80,000 officers trained, over 17,000 offender arrests leading to fewer children sexually assaulted.

# Example: *Sanivation*

**TTS Investment:** \$1M  
grant/loan

**Challenge:** 95% of human waste is disposed into the environment untreated, leading to diarrheal disease, the second leading cause of death of children under-5.

**Innovation:** Toilets and waste processing system for low-income urban communities to cost-effectively manage, treat and convert fecal sludge into charcoal briquettes.



**Impact to date:** 1,900 lives improved

**Expected Impact by 2030:** 921,000 lives improved through the use of sanitation facilities, waste removal & treatment

## Example: *World Vision PM+*

**Investment:** \$1.15M grant

**Challenge:** Massive burden of depression & anxiety paired with poverty and a shortage of services for mental health support.

**Innovation:** A brief psychological intervention delivered by CHWs to address common mental disorders in community.



**Impact to date:** More than 4500 people with increased use of evidence-based therapy; 1,600 CHWs trained in PM+.

**Expected Impact by 2030:** more than 76,000 women with increased use of evidence-based therapy.

# CASE STUDY: HOPE Worldwide

## INNOVATION:

- The Bold Idea for Girls (“BIG”) program works to improve girls’ HIV/STI protective behaviors and target their social and economic determinants through a unique approach that incorporates 3 components of adolescent SRHR interventions – HIV/STI intervention, gender and life skills, and vocational and entrepreneurial skills.

## PATH TO SCALE:

- Double the reach to an additional 500 girls by expanding to 3 more urban slums
- Generate additional evidence on the impact of the enhanced BIG model through a mixed methods study
- Map out a viable path to long-term scale and sustainability of the program, including knowledge transfer to other NGOs and uptake by government-funded agencies by engaging with governments and other HOPE Worldwide country offices



# CASE STUDY: Tiny Totos Kenya

## INNOVATION:

- Tiny Totos Kenya (TTK), a Kenyan non-profit social enterprise, has developed a cost-effective intervention programme, providing capital and skills training to existing daycares in the slums of Nairobi. The programme partners with existing informal daycare centers to enhance standards of service through skills-upgrading, investment and technology innovation.

## PATH TO SCALE:

- Improve health outcomes in collaboration with the Kenya Medical Research Council by conducting a joint research project on the impact of TTK's model on child health and development outcomes
- Refine the sustainability plan by introducing a tiered partnership model while leveraging CHWs to collect outcomes from TTK-supported entrepreneurs along with continued skill building and training opportunities for partner daycares to access loans
- Expand the number of partner daycares from 30 to 200



Photo Credit: Tiny Totos Kenya

# Success:

## *The Friendship Bench*

“Friendship Bench” proves effective at reducing symptoms of mental illness

Patients with depression or anxiety who received problem-solving therapy using the Friendship Bench were:

**3x**

less likely to have symptoms of depression

**4x**

less likely to have symptoms of anxiety

**5x**

less likely to have suicidal thoughts

Match funding: **1:2.8** by municipal government and NGOs  
The Friendship Bench has scaled to **72 clinics** in **3 cities** in Zimbabwe.  
**Over 50,000 people** have accessed treatment.

# Success:

## *Kangaroo Mother Care*

### Kangaroo care for preemies helps them for decades

Young adults born low birth weight who received Kangaroo Mother Care from birth had:



Greater  
survival



Bigger  
brains



Better school  
attendance



50% higher  
wages

Match funding: **1:3.6** from MoPH Uganda, Global Financing Facility, NGOs through a **Development Impact Bond** to transition Kangaroo Mother Care to scale in Cameroon will launch in 2018.

# Success: *Inhaled Oxytocin*

## Inhaled formulation to increase access to life-saving oxytocin

A dry, powder version of oxytocin - the gold standard to prevent postpartum hemorrhage - is:



Heat-stable



Inhaled, not injected  
(Less skill needed)



Bio-equivalent  
to injected forms

Match funding: **1:17.2** from GSK and foundations  
Positive results from the **first in-human study** means inhaled oxytocin  
could be accessible to mothers much sooner.

**Thank You!**



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