



Grand Challenges Canada®  
Grands Défis Canada

**Saving Brains:  
Strategies to Fill the Gaps  
for Child Development**

Dr Karlee Silver, VP Programs

# -saving brains™

Unlocking the  
potential for  
development.



BILL & MELINDA  
GATES foundation



\* New partner recently added: *Grand Challenges Ethiopia*

*with strategic advisors:*



BOLD IDEAS WITH BIG IMPACT®

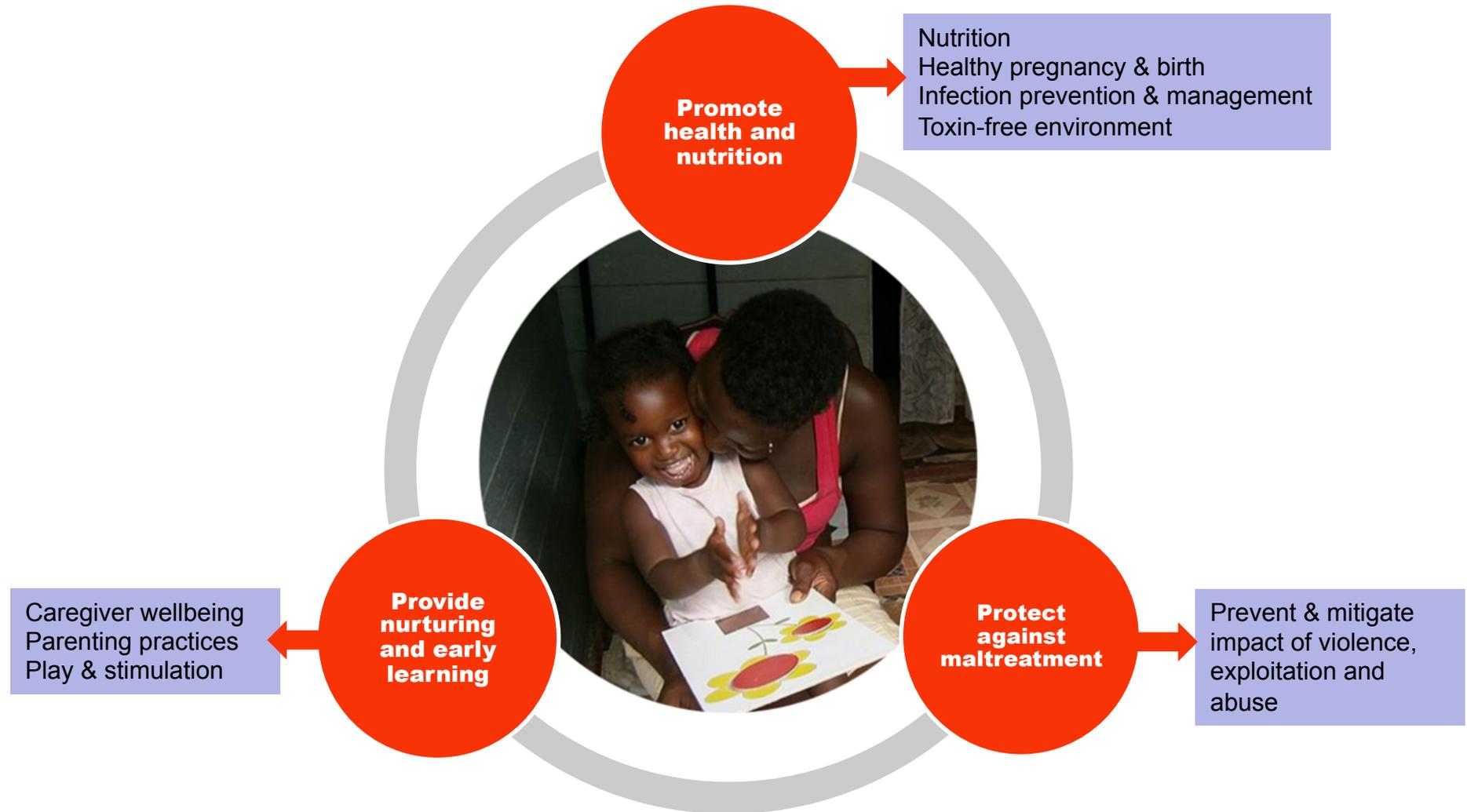


Check out Dr Mike Evans' video ***Saving Brains, A Grand Challenge*** on YouTube

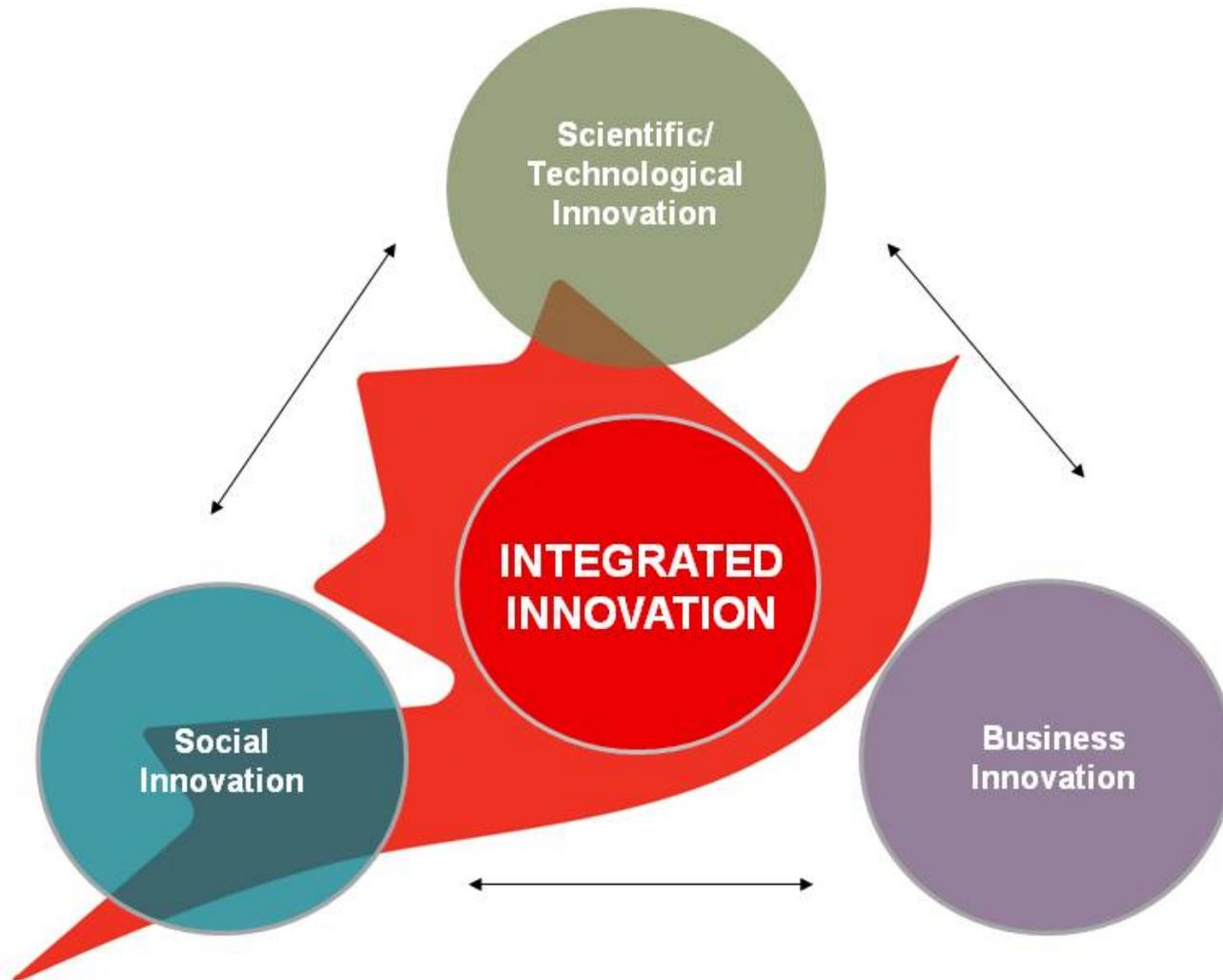


Improved outcomes for each child

# The Approach



# The Approach



## Progress to Date

- **54 innovation projects** funded (see [www.savingbrainsinnovation.net](http://www.savingbrainsinnovation.net))
- **Six innovations** transitioning to scale
- Saving Brains platform that helps **track and accelerate progress**
- **C\$36.7 M** invested by the partners



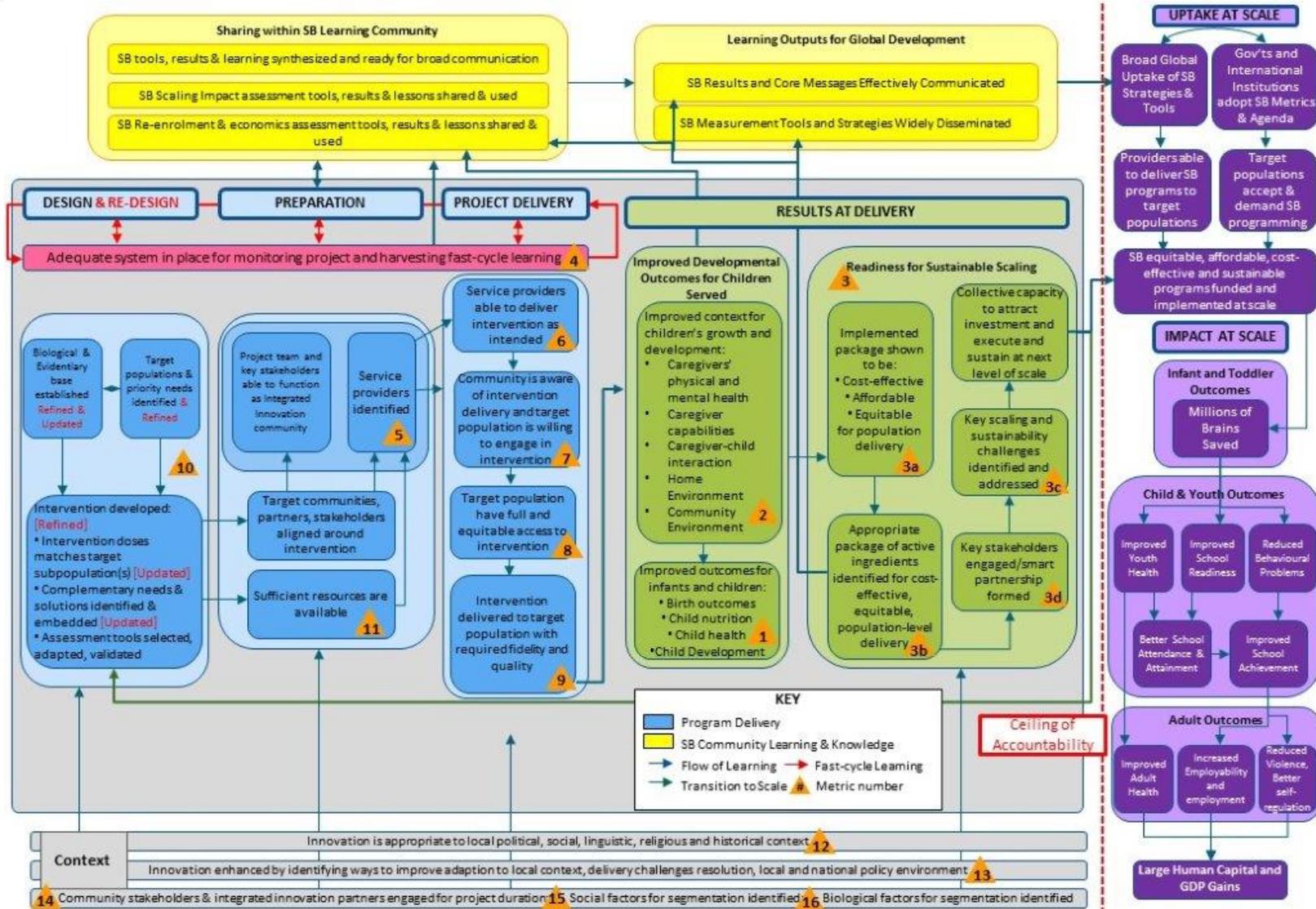
With less than half of the projects completed & innovation timeline at play:

- **20,000** parents and **22,000** have accessed services or products
- Over **3000** children with improved development

# The Approach: Outcomes Driven



Grand Challenges Canada®  
Grands Défis Canada



# The Approach: Outcomes Driven

Construct	0-2 year olds	4-18 year olds
<b>Physical growth</b>	<p>Length-for-age</p> <p>Weight-for-age</p> <p>Gross/fine motor skills</p>	<p>Height-for-age with measure of self-reported puberty for 10-18 years</p>
<b>Cognition</b>	<p>Measure of cognitive function</p>	<p>Estimate of general intelligence (e.g, KABC or Weschler scales)</p> <p>Measures of executive function (working memory; cognitive flexibility; inhibitory control; sustained attention)</p>
<b>Language</b>	<p>Measure of receptive language</p> <p>Measure of expressive language</p>	<p>Indication of literacy</p>
<b>Socioemotional</b>	<p>Measure of socioemotional capacity (eg infant temperament)</p>	<p>Presence of behavioural and emotional problems, and, as is feasible, criminality or its risk factors</p>
<b>Academic attainment</b>		<p>Years of school, with indication of school access and, as is feasible, a measure of school quality</p>

## Proof of Concept: Intervention Effect

### Thinking Healthy + Play

icddr,b, Bangladesh

#### Problem

60% of children are at risk of poor development due to high LBW, undernutrition (41%), poverty and suboptimal stimulation. About 1/3<sup>rd</sup> of Bangladeshi mothers suffer from depression, most go untreated.

#### Innovation

Provide “Thinking Healthy” cognitive behavioural therapy for mild-moderate depression and parental coaching on psychosocial stimulation at community clinics by health workers to improve both maternal mental health and child development.

#### Outcomes

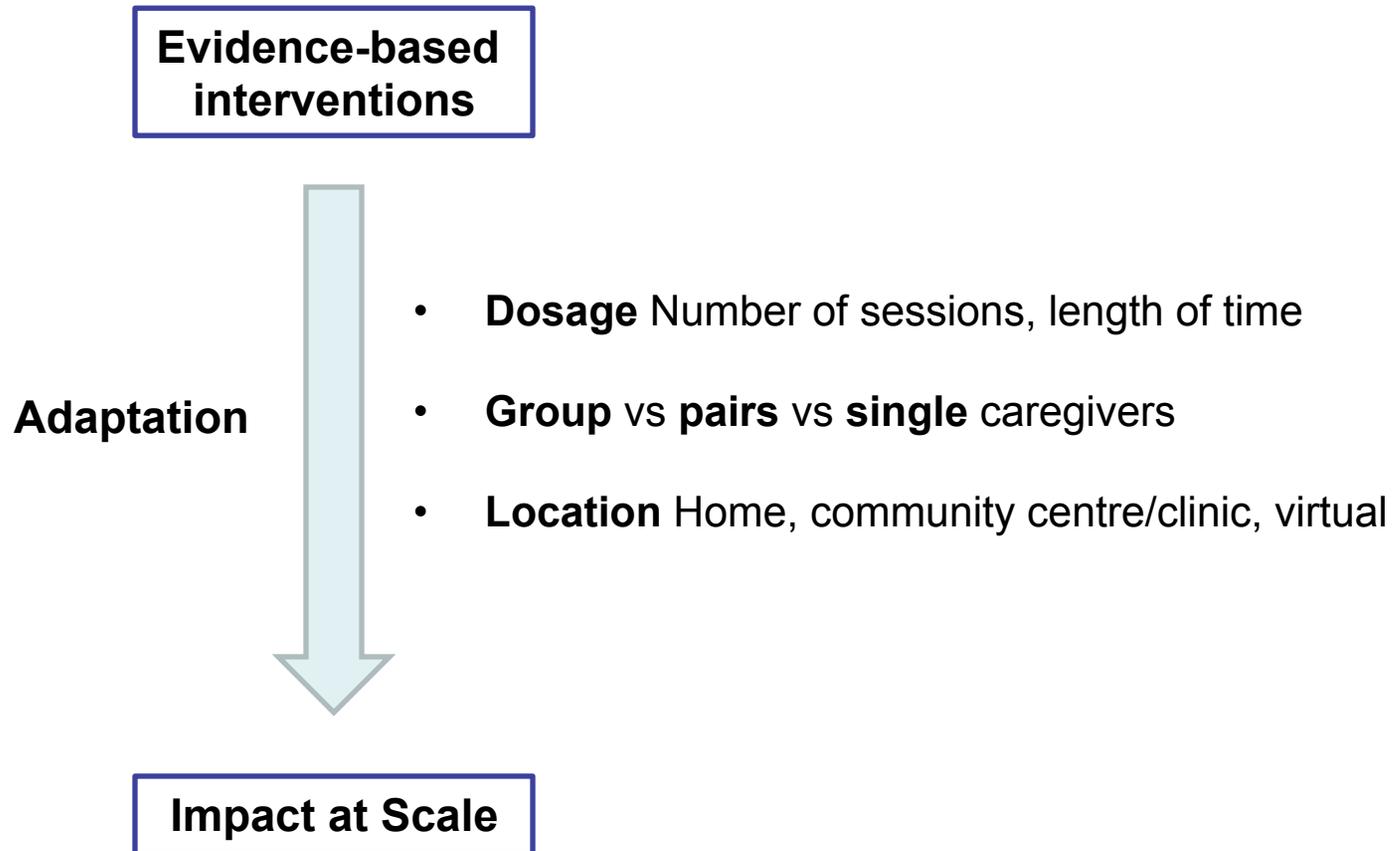
- Over 450 mothers with depressive symptoms were screened for depression
- Intervention reduced maternal depression scores compared to comparison group
- Children showed improvements in cognitive, motor and language scores in the intervention community clinics.

#### What's next?

Further testing needed to make package intervention less labour-intensive to deliver, and to identify optimal delivery path: group sessions, media-based delivery, clinic contacts + home visits/ group sessions, home visits only, conditional cash transfers.

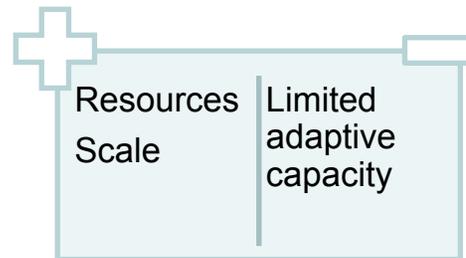


# Proof of Concept: Scaling Feasibility

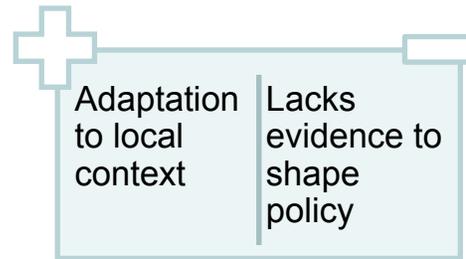


## Transition to Scale: Typical Approaches

### Governments / Multi-lateral Orgs



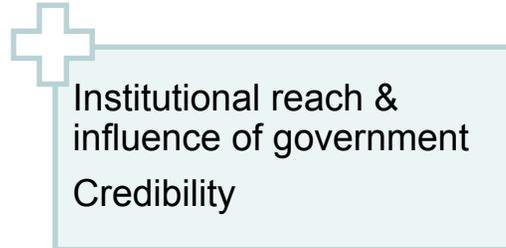
### Social Entrepreneurs / Local Civil Society Orgs



### Private Sector

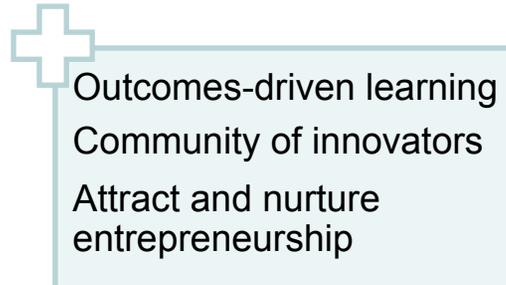


## Supportive Policy & Funding Context



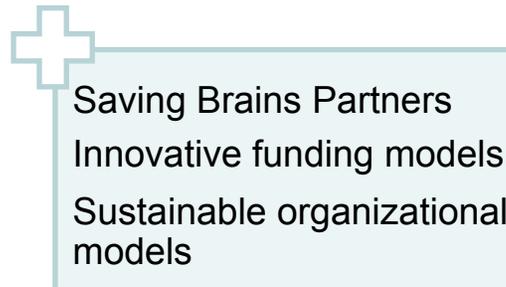
Institutional reach & influence of government  
Credibility

## Distributed Leadership & Learning Capacity



Outcomes-driven learning  
Community of innovators  
Attract and nurture entrepreneurship

## Financial Sustainability & Smart Partners



Saving Brains Partners  
Innovative funding models  
Sustainable organizational models

## Transition to Scale: Criteria

These form the basis\* of the due diligence on the innovation and the assessment by the Grand Challenges Canada's Investment Committee:

- **Impact** Does the innovation lead to improved development? Actuals and projected impact is assessed.
- **Entrepreneurship** Does the team have the capacity, skills, resources and knowledge to achieve scale? What success has the innovator had in the past?
- **Smart Partnerships** Does the team have sufficient partnerships that will enable the sustainability and scale of the innovation?
- **Sustainability** What happens after the last Grand Challenges Canada dollar is spent? Is there a clear path to reach financial sustainability via private and/or public channels?

\*For full criteria assessed please see the Transition-to-Scale Request for Proposals online

## Reach Up

University of West Indies, Jamaica

While home visitation programs can be effective at improving child development, there are few evidence-based programs available for implementation across the developing world. Where they exist, there is a challenge to meet demand for technical assistance.

The Jamaica program is one of the most evidence based home visitation programs, demonstrating impact on human capital beyond 20yrs. Reach Up packages this curriculum with training manuals with technical support to help agencies implement home visitation in their own countries.

### Results

- Reach Up launched on September 2015
- Early users include Zimbabwe (rural, 400 children, about 0.5M leveraged funds); Guatemala (8000 children, supported by World Bank, Child Fund); Brazil (GCC seed grant in Sao Paolo)

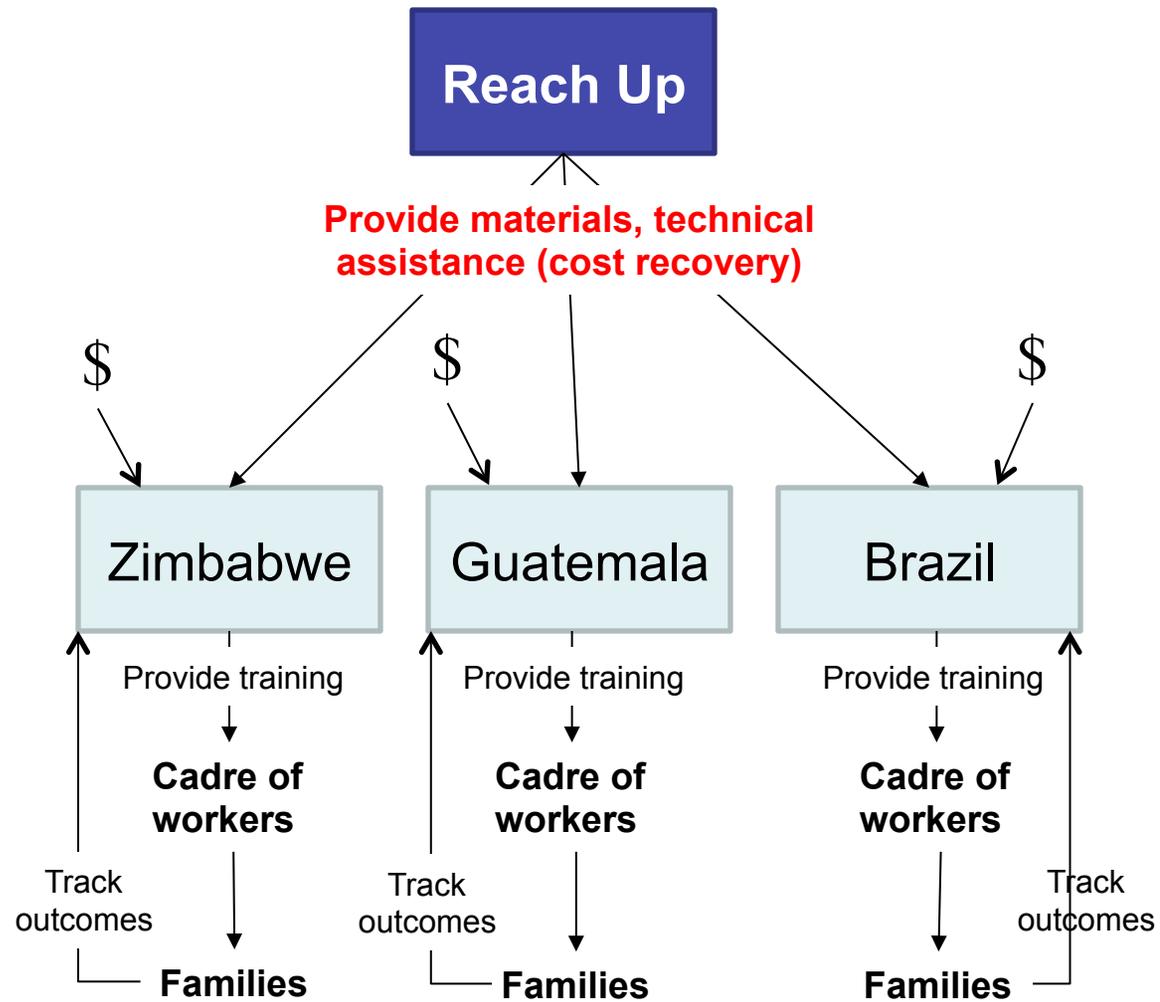
- Training, implementation and evaluation by early users
- Implementation of a sustainable business model to ensure Reach Up can cover costs and ensure quality

### Scaling Model

Facilitate replication of the intervention by providing detailed instructions for all the critical components coupled with technical assistance to ensure intervention fidelity in multiple contexts



# Transition to Scale: Implementation Champion



## CASITA

Socios En Salud, Peru

Approximately 4200 children have developmental delays in Carabayllo, one of Lima's oldest and poorest municipalities

Coaching to improve parenting behaviors and early learning for at risk children 6-24 months by CHWs in individual or small group settings. Includes nutritional support and links to social services

- Children receiving the intervention had a **large positive effect on development scores** as well as improved communication, motor, and personal/social scores.
- Children in control groups did not improve.
- Intervention group showed improved home environment, parent responsiveness, parental involvement.
- Caregiver mental health did not improve.

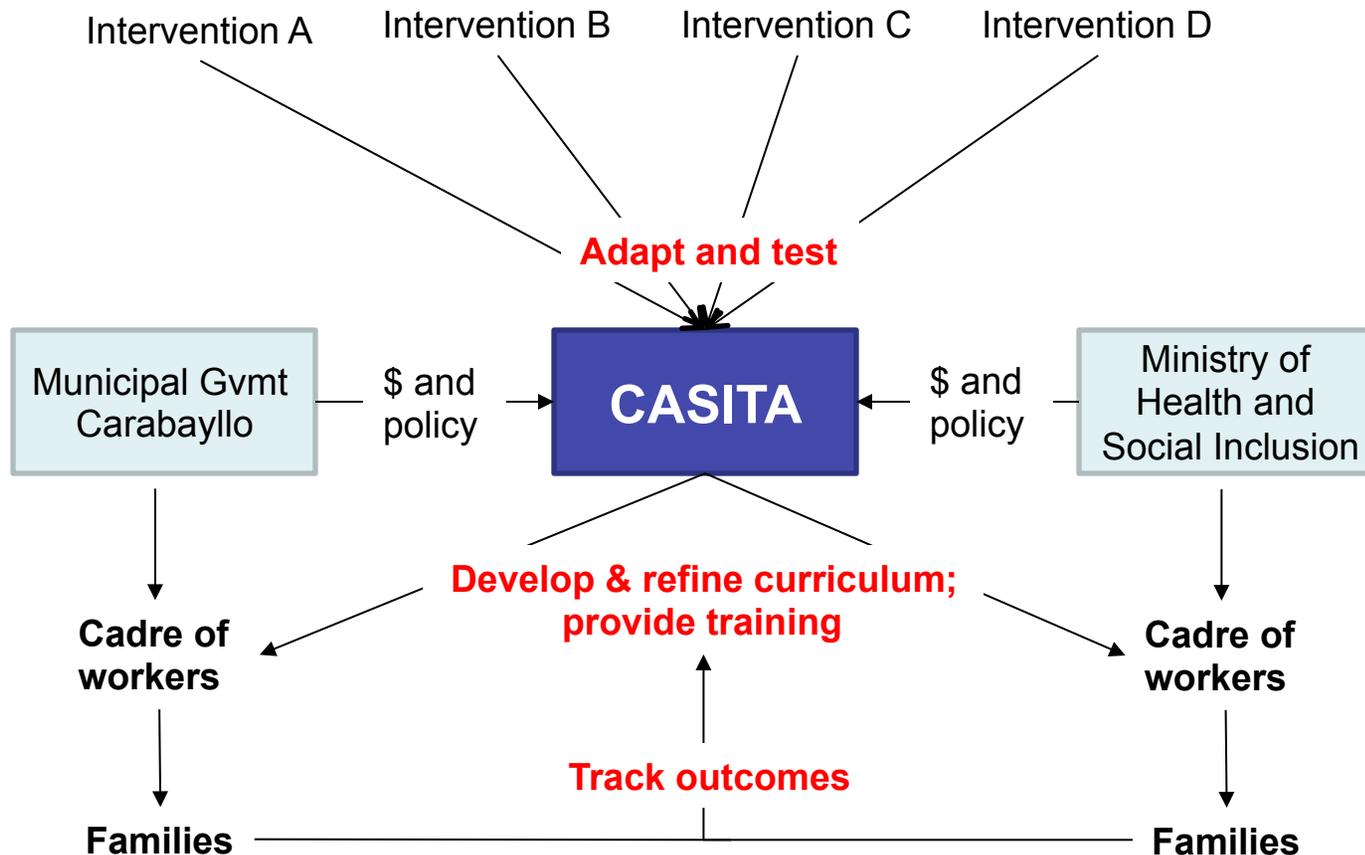
- Scale CASITA to all at risk children of Carabayllo with funds (\$700K) from the Municipality of Carabayllo
- MIDIS to pilot training of urban CUNAMAS workers
- Pilot of group intervention for caregiver wellbeing

### Scaling Model

Integrate adapted interventions, existing services and political demand for optimal outcomes in a specific geographic area



# Transition to Scale: Solutions Partner



## Transition to Scale: Pay-for-Results

### Scaling of Kangaroo Mother Care in Cameroon

Kangaroo Foundation, Colombia

Access to Kangaroo Mother Care (KMC) remains low globally, despite strong evidence for newborn health. The Every Newborn Action Plan set an access target for KMC of >50% low birth weight (LBW) infants globally by 2020. KMC dissemination remains weak.

A KMC scaling strategy based on a culturally sensitive train-the-trainer model supported by an e-learning and data tracking platform. Centers of excellence in Cameroon and Mali will establish, train and maintain KMC units in regional hospitals across the country

#### Outcomes

1200 LBW babies (900 in Mali and 300 in Cameroon) have accessed KMC.

With an outcome-based funding model, an estimated 13,000 newborns lives could be saved and thousands more brains saved in Cameroon by 2030.

#### What's Next?

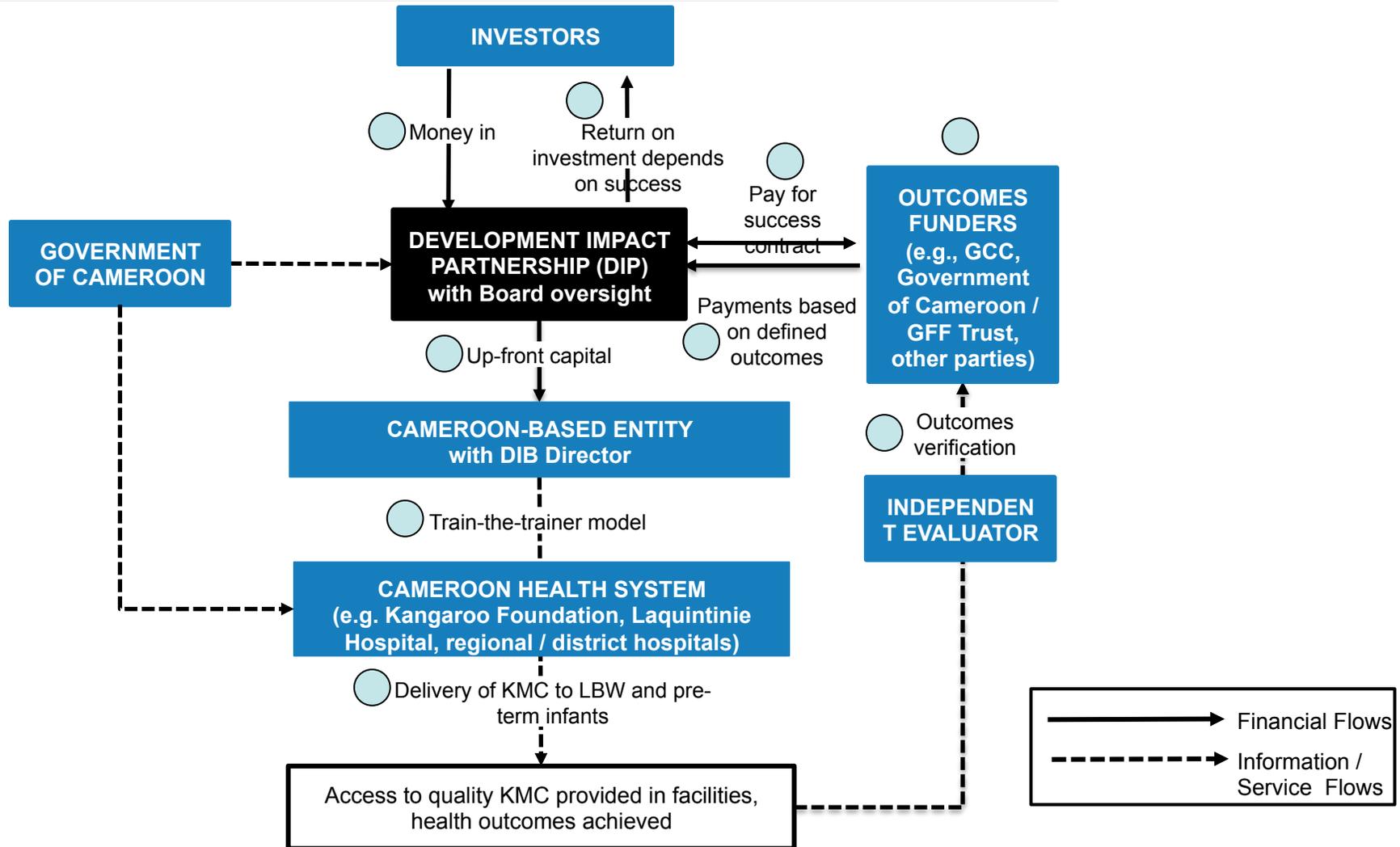
Develop an outcome-based financial instrument – a development impact bond (DIB) – to fund the rollout of KMC across Cameroon. Government of Cameroon includes KMC outcomes payments in their country plan to be financed by the Global Financing Facility.

#### Scaling Model

Private investors fund the up-front costs to expanding KMC to lower tier health facilities. Upon achievement of significant outcomes (e.g., weight gain, mortality), investors are paid (capital + interest) by outcomes funders (e.g, the Government of Cameroon)



# Transition to Scale: Pay-for-Results



### Kidogo – Sustaining Quality

Building best-practice ECD centers and partnering with local baby-care micro-franchises to provide high-quality, community-based childcare in East Africa's urban slums. Kidogo is currently testing its model, curriculum and micro-franchising “business-in-a-box” as well as evaluating its impact on children and their families



### TNH Digital Health – Mobile Scaling

Using interactive dialog SMS technology to improve parent knowledge and management of child health and development. TNH is currently testing the adherence and engagement of the mothers to the messages as well as evaluating the impact on child health and development.





## Many thanks to:

**Saving Brains innovators** and the **families** they engage to develop their innovations

**Dominique McMahon** (Saving Brains Program Officer) and **Maia Johnstone** (Saving Brains Program Coordinator)

**Nathaniel Foote, Jamie Radner, Jim Cairns, Anu Shankar, Penny Holding, Tarun Dua, Joy Lawn** (Saving Brains Platform)



LONDON  
SCHOOL of  
HYGIENE  
& TROPICAL  
MEDICINE





# Grand Challenges Canada<sup>®</sup> Grands Défis Canada

## Thank you!



**@karleesilver**

T 416.673.6568  
info@grandchallenges.ca

Grand Challenges Canada  
MaRS Centre, South Tower,  
101 College Street, Suite 406  
Toronto, Ontario, Canada M5G 1L7  
**grandchallenges.ca**

### Connect with us:



Grand Challenges Canada



@gchallenges



Global Health Innovation



grandchallengesca



grandchallenges.ca/blog