



# INNOVATION EDGE

invest early

**INVESTMENT PORTFOLIO**

# About Us.

## **Innovation Edge is an innovation catalyst and social impact investor.**

We take a hands-on approach to supporting unconventional ideas that aim to transform early life experiences for children, aged 0 to 6, living in poverty.

Our experience has shown that truly transformative solutions to large-scale problems are created when very different people are brought together to make unusual connections to each other and to ideas.

We act as a catalytic connector and provide financial, strategic and project management support to individuals, nonprofit and for profit organisations from any field of expertise, to affect meaningful change for young children.



# Our Focus Areas.

## **Our Vision: All children in South Africa start school on track**

### **Picture a country in which all children are provided with the starting blocks they need to begin school with equal advantage.**

Starting blocks are used by athletes to achieve an explosive start in competitive sprinting events. They allow athletes to easily accelerate from an inert position so that they quite literally, “hit the ground running”.

Imagine positive early life experiences as the equivalent of starting blocks for life.

Athletes (in this case young children) who enter school without the support and acceleration that a starting block offers will begin the “race” at a distinct disadvantage.

**Our investment areas are focused on enabling early life experiences that build sturdy starting blocks for all children.**

#### **Daily Brain-Building Interactions**

A child who has daily brain-building interactions right from birth develops strong language and learning foundations

#### **Quality Preschool Programmes**

A child who attends a quality preschool programme for at least 2 years performs better at school

#### **Early Health Care & Nutrition**

A child who receives nourishing food and good healthcare is able to grow to their full potential

#### **Cross Cutters**

Innovations that cut across more than one focus area

# Innovation Levers.

**We invest in for-profit and not-for-profit ventures with the potential for impact at scale within 3 categories:-**

**Products and Services**

**Platforms**

**Data Tools and Insights**

Our pathways to scale and sustainability include building Profitable Companies, achieving Platform Integration, enhancing Government systems and driving change through intelligent, impactful insights.

<b>Products and Services</b>	We invest in innovative products and services with the potential for impact at scale.
<b>Platforms</b>	We pivot, enhance or leverage platforms to improve quality, reduce cost, reach new target markets or facilitate scale.
<b>Data Tools and Insights</b>	We develop and test research tools, conduct research and share data to inform and support innovation.

# Our Pipeline.

Our involvement typically spans the full lifespan of an innovation, from source to scale.



By Stage 5-6 we would expect to have -

- A working prototype, demonstrated in the target context, and reaching the intended beneficiaries
- A sustainable revenue or funding model and a competent team
- Scale targets

# Levels of Impact.

**We define impact as the positive change that can reasonably be attributed to our support. Our investments may have impact at three levels. We aim to monitor these outcomes during the period of investment and up to 3 years after closure.**

<b>Impact Level 1</b>	We would expect to demonstrate improved systems efficiency or effectiveness in the delivery of essential services to young children and those who care for them.
<b>Impact Level 2</b>	We would expect to demonstrate positive change in knowledge and behavior of those who care for, educate, assess and treat young children.
<b>Impact Level 3</b>	We would expect to demonstrate a direct positive change in child outcomes in one or more of the following developmental domains - Emergent Literacy and Language, Emergent Numeracy and Mathematics, Gross Motor Development, Fine Motor Coordination and Visual Motor Integration, Cognitive & Executive Functioning, Socio-Emotional Adjustment, Height for Age. Outcomes are measured using South African standardised tools that are accurate, fair and appropriate.

# Our Investments.

Infographics reflecting the period from 2015 to mid 2019



**Ideas Attracted**

**627**



**Rands Invested**

**R21m**



**Rands Leveraged**

**R75m**



**Total # Investments**

**36**



**Open Investments**

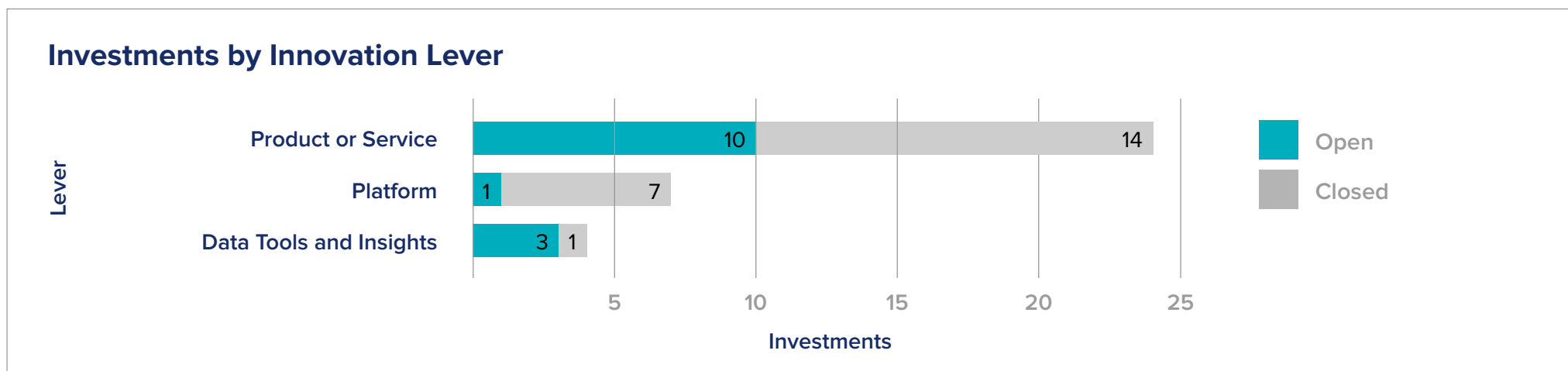
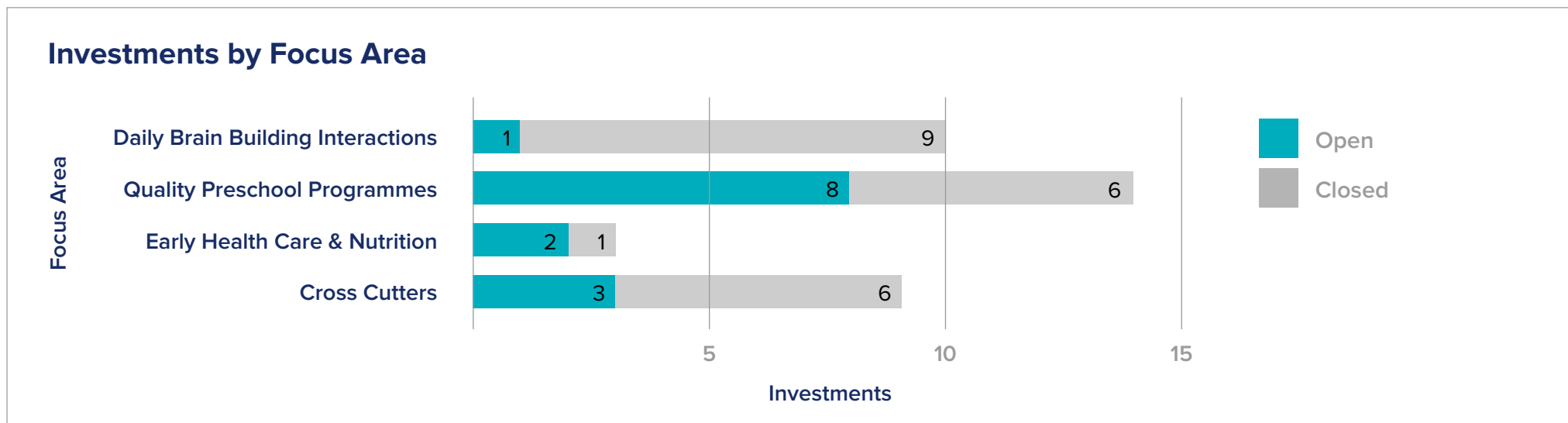
**15**



**Closed Investments**

**21**

## Number of Open & Closed Investments In Each Lever and By Focus Area.



**Cross Cutters:** Innovations that cut across more than one focus area.

**Closed Investments:** These are investments that we are no longer funding - they fall into two main categories:

1. Active - The investment continues to exist without IE support. 2. Inactive - The investment is no longer operational.



# A Sample of Our Investments to Date.

INVESTMENT	DESCRIPTION	FOCUS AREAS	INNOVATION LEVER	IMPACT
<b>TRACKOSAURUS</b>	Trackosaurus is a gamified formative assessment tool that enables the concept of 'teaching to the level of the child'. The tablet-based app houses a suite of fun games and a collection of short assessment tasks across a range of early childhood domains.	Quality Preschool Programmes	Product or Service	Level 3
<b>EARLYBIRD EDUCARE@WORK</b>	Earlybird Educare@Work is South Africa's first high-quality, socially inclusive, employer-sponsored educare provider. Earlybird functions as a social enterprise: a fixed portion of revenue generated from their workplace-based educare sites is used to subsidise the provision of the same high-quality educare model at preschool centres in low-income communities.	Quality Preschool Programmes	Product or Service	Level 3
<b>ECD APPS LAUNCHPAD</b>	The ECD Apps Launchpad is a tech platform that enables cost-effective development and maintenance of early learning-specific mobile apps. The apps that are added to the Launchpad share a common infrastructure with a modular system of components that can be easily connected and customised.	Cross Cutters	Platform	Level 1

INVESTMENT	DESCRIPTION	FOCUS AREAS	INNOVATION LEVER	IMPACT
<b>ECD COMPLIANCE MADE EASY</b>	This mobile app empowers Social Workers, Environmental Health Practitioners and other professionals to navigate the complexities of preschool centre compliance for government registration. It helps pivot the services and support offered by assessors from punitive to an approach that enables continued improvements.	Quality Preschool Programmes	Product or Service	Level 1
<b>ECDINSITES</b>	ECDinSites enables Early Childhood Care and Education (ECCE) service providers, practitioners and caregivers to contribute, and access relevant and accurate information on the coverage and quality of early learning services in South Africa. The innovation lies in the use of crowdsourcing to collect and verify much needed data.	Quality Preschool Programmes	Product or Service	Level 2
<b>ELOM</b>	The Early Learning Outcomes Measure (ELOM) is a South African population based child assessment tool that determines whether children are developmentally on track for their age. It has been developed and validated in South Africa for children aged 4 - 6 years old and is currently available in all 11 official South African languages.	Quality Preschool Programmes	Data Tools and Insights	Level 2
<b>EARLY LEARNING NATIONAL ASSESSMENT (ELNA)</b>	The ELNA measures the proportion of children entering Grade 1 who are at the expected developmental level for early numeracy, early literacy and cognitive and executive functioning.	Quality Preschool Programmes	Product or Service	Level 1

INVESTMENT	DESCRIPTION	FOCUS AREAS	INNOVATION LEVER	IMPACT
<b>MATHSUP</b>	MathsUp is a mobile application used by Grade R teachers to access fun and relatable Mathematics content to help their teaching practice. It also helps parents support learning in the home environment. MathsUp is aligned to and supports the Mathematics content of the South African National Curriculum Assessment Policy Statement (CAPS).	Quality Preschool Programmes	Product or Service	Level 2
<b>SA EARLY YEARS INDEX</b>	The SA Early Years Index will provide regular and reliable data on the proportion of South African children who start school at the expected developmental level ('on track for age'). Trends in the Early Years Index over time will provide South Africa with a critical measure of its human capital potential.	Cross Cutters	Data Tools and Insights	Level 1
<b>SLIDE+GUIDE</b>	The Road to Health Booklet (RTHB) is a useful child medical record in the form of a booklet, which captures a child's health info in the first five years of life. The easy to use Slide Guide tool helps healthcare workers correctly interpret growth chart data in the RTHB. It also sparks constructive conversations between healthcare workers and parents or caregivers on how best to support their child's healthy development.	Early Health Care & Nutrition	Product or Service	Level 2
<b>CHATBOT: FINDING THABO</b>	Finding Thabo is an interactive 'Where's Wally' inspired game. It uses chatbot functionality on Facebook messenger and WhatsApp, combined with physical images, to facilitate fun brain-building interactions between parents / ECD practitioners and children.	Daily Brain- Building interactions	Product or Service	Level 2

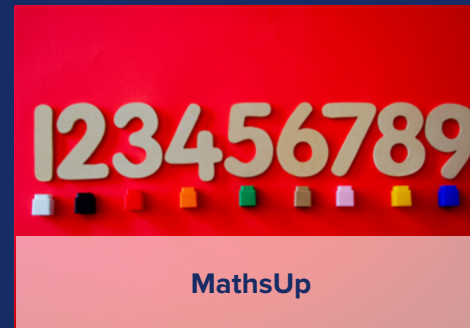
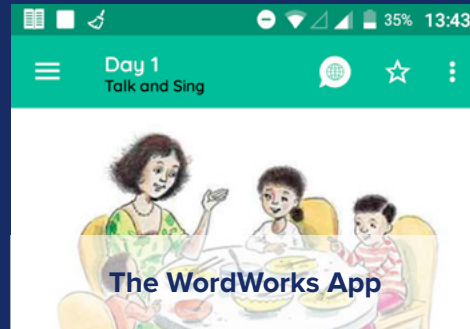
INVESTMENT	DESCRIPTION	FOCUS AREAS	INNOVATION LEVER	IMPACT
<b>TEACH ASSIST</b>	Teach Assist uses existing smartphone technology, and leverages established ‘selfie culture’ and skill sets to make preschool attendance tracking fun through a rapidly scalable solution familiar to users. It uses photos to track class attendance, location, dates and even class duration.	Quality Preschool Programmes	Product or Service	Level 1
<b>BARROWS EXCESS BUSINESS INVENTORY</b>	Barrows is a design and manufacturing company that produces display units for retailers all over South Africa. This shared value initiative demonstrated that excess business inventory can be used to produce high quality early learning materials and distribute them to under-resourced communities throughout South Africa.	Cross Cutters	Platform	Level 2
<b>CAREUP</b>	CareUp is a free mobile app designed to improve early literacy through mobile messaging, audio files, activities and resources for preschool teachers and parents of children aged 4-5 years.	Quality Preschool Programmes	Product or Service	Level 2
<b>CHILDCONNECT</b>	ChildConnect tested the efficacy of integrating early learning messages into a National Department of Health (DOH) mobile messaging platform called MomConnect . It also motivated for the extension of the platform, from a focus on infants only, to serve caregivers of children up to 5 years of age.	Daily Brain- Building interactions	Platform	Level 2
<b>DIGITAL ENABLEMENT WITH DAPPS</b>	DApps are open-source, decentralized apps, based on Blockchain technology. The product suite being developed by the investee, uses this change-making technology to digitize and streamline ECD service administration.	Cross Cutters	Product or Service	Level 1

INVESTMENT	DESCRIPTION	FOCUS AREAS	INNOVATION LEVER	IMPACT
<b>ECD HEROES CHALLENGE</b>	The ECD Heroes Challenge set out to explore a novel approach to training and supporting the professional development of preschool teachers in low-resourced settings. An existing digital platform, with built-in game mechanics, was adapted to spark applied learning throughout an 8-week competition.	Quality Preschool Programmes	Product or Service	Level 2
<b>ECD IMPACT BOND</b>	Testing the use of outcomes-based financing mechanisms as a public private partnership for improved ECD service quality in South Africa.	Cross Cutters	Product or Service	Level 1
<b>FIGHTING FASD</b>	This digital game uses playful learning techniques to help children with Foetal Alcohol Spectrum Disorder (FASD) form new neural pathways, helping them overcome some of their learning challenges.	Daily Brain-Building interactions	Product or Service	Level 3
<b>MAKING ECD SYSTEMS FLOW</b>	Inspired by the private sector, factory-style workflow boards are used to provide a visually effective way to identify and address blockages within the system of registering Early Childhood Development (ECD) Centres with the Department of Social Development (DSD).	Quality Preschool Programmes	Product or Service	Level 1
<b>MHEALTH SCREENING SOLUTION</b>	Mobile hearing and vision screening tools that can be used by anyone, anywhere. hearScreen™ is an award-winning hearing test solution, while Peek Acuity offers clinically-validated visual acuity testing - both on a smartphone.	Early Health Care & Nutrition	Product or Service	Level 2

INVESTMENT	DESCRIPTION	FOCUS AREAS	INNOVATION LEVER	IMPACT
<p><b>SIFUNDA NGOKUTHETHA</b></p>	<p>Sifunda turns routine shopping trips into learning adventures with the use of colorful, playful in-store signage. The initiative was designed on the premise that everyday environments can be used to spark simple, loving, brain-building interactions between parents and young children.</p>	<p>Daily Brain-Building interactions</p>	<p>Platform</p>	<p>Level 2</p>
<p><b>THE WORDWORKS APP</b></p>	<p>The Wordworks app has been designed for parents, caregivers and educators of young children from birth to five years old. The app provides creative ideas and tips to support learning through everyday activities with a focus on early literacy.</p>	<p>Daily Brain-Building interactions</p>	<p>Product or Service</p>	<p>Level 2</p>
<p><b>WORDS COUNT (LENA)</b></p>	<p>This project tested the use of existing technology – in the form of the Language Environment Analysis System (LENA) – to analyse and segment audio data within children’s everyday environments in a nonintrusive way. The system includes a sensitive recording device for capturing information on carer-child interactions over the course of a defined period.</p>	<p>Daily Brain-Building interactions</p>	<p>Data Tools and Insights</p>	<p>Level 1</p>

# Portfolio Showcase.

The remainder of this pack showcases a selection of our investments.





# Sifunda

**FOCUS AREA** Daily Brain-Building Interactions

**INNOVATION LEVER** Platform

**STAGE** Proof of Concept | Closed, Inactive

**IMPACT LEVEL** L2

## The Problem

In the first few years of life, more than 1 million new neural connections are formed in a child's brain every second. Sensory pathways like those for basic vision and hearing are the first to develop, followed by early language skills and then higher cognitive functions. The kinds of interactions that children have with their carers will influence which neural connections are made, and which are strengthened or lost. Parents therefore play a critical role in their child's early learning. Many parents do not see themselves as their child's first and best teacher or understand why and how they might use everyday interactions to boost their child's brain development.

## The Project Team

South Africa Partners builds mutually beneficial partnerships between the United States and South Africa in the areas of health and education.

## The Innovation

By adapting a US study to South African conditions, Sifunda's project team placed conversation-prompting signage within selected retail outlets in lower-income areas.

Shoppers encountered playful characters that captured their attention from the moment they entered a store. Children were encouraged to search for the characters that appeared on floor stickers, overhead banners, or on the glass covering display cases. At each interaction site, a colourful character prompted adults and children to interact in a number of ways – by discussing shapes and colours, naming objects, or talking about where products come from and how they can be prepared.

The positive outcomes are mutually reinforcing: parents/caregivers practice a positive parent behavior and children are exposed to more positive interaction and learning opportunities. The theory of change assumes that parents and children will carry the type of interactions they practice within the store into the larger environment and into the home, leading to richer verbal interactions across moments of the day.

In addition, the gain for the business - with a small, low-tech input, supermarkets can capture and deliver an entirely new value to customers by pivoting the existing store platform to support early learning. Sifunda demonstrates that what is good for our children is good for business.

The longer-term strategy is to extend the Sifunda concept into other sites across the everyday environment within a given community, with the supermarket as the vertical "anchor" for scale complemented by horizontal reinforcing prompts in locations such as taxi ranks, government offices, clinics and such.

[Watch explainer video here.](#)



# The Wordworks App

**FOCUS AREA** Daily Brain-Building Interactions

**INNOVATION LEVER** Product or Service

**STAGE** Transition to Scale | Closed, Active

**IMPACT LEVEL** L2

## The Problem

One focus of South Africa's Early Childhood Development (ECD) Policy is to provide quality information about how to support informal learning at home. However, access to parent support services is limited and there is a need for innovative programmes that support parents in their role as nurturing caregivers. Parents know that young children need food, shelter and health care, but many don't realise that interacting with children through singing, talking, playing and reading is also essential for their healthy development.

## The Innovation

The free Wordworks app is available in English, isiXhosa, isiZulu and Afrikaans. Content is split into two modules: one relevant for birth-two years old, and the other for three-five years old. The app takes parents and other caregivers on a fun journey and provides ideas about how to talk, play, sing and share books with babies and young children.

Users receive activity related messages from Monday to Thursday and an inspirational message on Fridays. The resource section contains short instructional videos as well as stories, rhymes and songs for young children. The app can be used by individuals, groups of parents, caregivers or preschool teachers. A tracking and sharing functionality allows users to see how they are progressing through the learning journey and to share activities or ideas with other users.

To address the cost of data, the app runs in offline mode after it has been downloaded, and there is no cost to access the content. The cost of download depends on whether Wifi or mobile data is used, but even on an expensive mobile data package, the once-off download costs should be less than R10 (USD 0.70.)

## The Project Team

The app was developed by The Reach Trust and Wordworks, using adapted content from the Every Word Counts programme.

The video content embedded in the app was sourced with permission from The Family Literacy Project, Mikhulu Trust, Bulungula Incubator and Rhodes University Community Engagement.

# Trackosaurus

**FOCUS AREA** Quality Preschool Programmes

**INNOVATION LEVER** Product or Service

**STAGE** Proof of Concept | Open

**IMPACT LEVEL** L3

## The Problem

Assessing how young children (aged 4 to 6 years) are performing in their learning and development journey is notoriously difficult – in part because they are preliterate, in part because teacher-led assessments are time-consuming and expensive. Accurate and affordable assessment methods have to date been absent in South Africa. As a result, teachers, supervisors and principals typically collect only a couple of reliable data points on each child each year. This makes regular curriculum improvements difficult. It also limits the extent to which teachers are able to fine-tune the level of attention needed for each child.

## The Innovation

Trackosaurus is innovative in that it draws on behavioural insights and child-centred game design to create an assessment tool that actually works under real-life conditions. It is largely self-administered, inexpensive and easy to use, while still being reliable, appropriate, and psychometrically valid.

The app is designed to be used for 25 minutes per child per week, with very limited assistance from the teacher. When a child plays a game and completes an assessment, data is fed back to the teacher to help inform which children are struggling in which particular areas. Trackosaurus allows a child's progress to be tracked across subject areas/functions and over time. It also allows the teacher to track the overall class's proficiency in a given subject area/function. Additionally, supervisors or principals are able to look across a network of classrooms to see which portions of the curriculum may need to be improved.

## The Project Team

Luke Crowley (Founder) is a development economist with ten years of experience running large-scale randomised evaluations of social programmes at Innovations for Poverty Action and J-PAL Africa.

Brendon Smuts (Senior Unity Developer) has eight years experience as a Senior Unity Developer for leading Cape Town-based development houses including Sea Monster and RetroEpic. During this period, he worked with clients such as Disney and the IMVU.

# Earlybird Educare@Work

**FOCUS AREA** Quality Preschool Programmes

**INNOVATION LEVER** Product or Service

**STAGE** Proof of Concept | Open

**IMPACT LEVEL** L3

## The Problem

South Africa has chronically high levels of socio-economic inequality. One of the perpetuating factors is unequal access to quality preschools. At least 1 million South African children aged between 3 and 5 years have no access to preschool educare services despite the large body of evidence demonstrating the importance of preschool for a child's success in primary school and beyond. For those who do attend an early learning service, there is often little social integration across income levels, most of the 'learning' that takes place is rote, families are largely sidelined, and meaningful formative assessment is non-existent.

Ensuring affordable access to high quality preschools for all children in South Africa needs to be a national priority.

## The Innovation

Earlybird Educare@Work is innovative in that it taps into the trend of companies worldwide realising the retention, diversity and productivity gains of including workplace-based educare as part of their employee wellness package. Earlybird runs high-quality educare centres on-site for employees' children and they work with companies to tap into Enterprise and Supplier Development, Skills Development, and Preferential Procurement funding wherever possible to keep parent fees affordable for employees at all salary levels.

Revenue from their workplace-based preschools is used to cross-subsidize their social franchisees who run community-based preschools delivering the same high-quality Earlybird educare model, at a fee affordable to families in their immediate surrounds.

Every aspect of Early Bird's early education model is designed to equip children to flourish in school and in life. Earlybird educare centres are characterised by: (i) well-trained and supported teachers who meet each child where they are at to support their individual learning and development journey, (ii) an engaging play-based learning programme underpinned by rigorous evidence, (iii) regular and meaningful family engagement.

## The Project Team

Megan Blair (CEO) is a former teacher and Fulbright scholar and draws on her experience from both the practical and academic side of the education aisle.

Atli Phatudi (CFO) is a qualified CA(SA) with her formative training completed at PWC and KPMG.

Michelle Dos Santos brings to Earlybird a wealth of on-the-ground experience that benefits both the operational and curriculum teams.

# The ECD Heroes Challenge

**FOCUS AREA** Quality Preschool Programmes

**INNOVATION LEVER** Platform

**STAGE** Proof of Concept | Closed, Inactive

**IMPACT LEVEL** L2

## The Problem

**A 2014 report** found that more than 40% of teachers and assistant teachers in Early Childhood Development Centres (ECD) in South Africa have below a Grade 12 level of education and less than 10% have an early childhood development qualification. These low barriers to entry into the profession may be a good thing for job creation, but have potential negative consequences for both teacher and child. Two such consequences for teachers are the underrated public opinion of the profession and the low levels of remuneration. Most preschool teachers, regardless of qualification, earned less than R2500 (173 USD) per month in 2014.

## The Innovation

With this in mind, the first ECD Heroes Challenge (2017) set out to explore a novel approach to training and supporting the professional development of preschool teachers in low resourced settings.

The idea was inspired by a digital gamified platform developed by the Allan Gray Orbis Foundation. They have been using the platform to motivate and equip high school students, through fun and competitive applied learning, to become future entrepreneurs. True to our fondness for pivoting platforms for new purposes, we worked with the Allan Gray Orbis Foundation to adapt their product for preschool teachers.

To create a sense of urgency and to drive uptake, we designed an 8-week challenge-based competition. Preschool teachers were able to practice applied learning through participating in 40 themed tasks/challenges, accessible from any smart device (phone, tablet or desktop), and incentivised with weekly cash prizes. The completed tasks were peer reviewed, with moderation, and earned points towards live leaderboards. We also ran a national PR campaign around the competition to shift public perception of the importance of preschool teaching and to celebrate the work of exceptional teachers.

**[Take an in depth look at our approach, lessons and next steps in this Innovation Insights report.](#)**

## The Project Team

The Allan Gray Orbis Foundation was the tech and implementation partner with Anthony Selley as Project Manager. The Allan Gray Orbis Foundation invests in the education and development of individuals with entrepreneurial potential within Southern Africa.

ByDesign Communications looked after the PR Campaign component.

Cotlands, Tree ECD, LETCEE, Smart Start, and Ntataise were the content partners.

# ECD Compliance Made Easy

**FOCUS AREA** Quality Preschool Programmes

**INNOVATION LEVER** Product or Service

**STAGE** Research and development | Open

**IMPACT LEVEL** L1

## The Problem

There are an estimated 40 000 preschool services in South Africa. Less than half are registered with government. Preschools not registered with the relevant government department are unable to access much-needed government funding. The registration process is a lengthy one and requires, among other things, that centres meet government norms and standards for infrastructure, curriculum, health and safety. Environmental Health Practitioners (EHPs) and social workers play a key role in this assessment process, but they are regularly faced with a challenging dilemma – they cannot approve registration of sites that don't comply with norms and standards; but without approval these services will be unable to access the government subsidy they need in order to upgrade their facilities to meet the standards.

## The Innovation

Drawing inspiration from private sector approaches to ensuring compliance with operational laws, a toolkit in the form of a mobile app will help social workers, EHPs and other assessors navigate the preschool centre assessment and registration process.

This ECD registration support app distills complex compliance legislation into simple mobile checklists/questionnaires for use by social workers and EHPs during their assessment of preschool services. It also assists in timeous and reliable reporting on registration blockages and enablers through real time data collection and analysis.

This support app will assist in addressing blockages, facilitating and streamlining preschool assessments and reducing the time it takes for an applicant to become registered. A number of enhanced features are planned to help with scheduling of assessments, flagging registration expiry dates, and geolocation. The content management system will allow the relevant departments to easily update checklists as necessary, and the data dashboard will assist in tracking registration progress and identifying where additional capacity is needed.

## The Project Team

Developed in partnership with relevant South African Government Departments.

Network Action Group (NAG) is a network of grassroots organisations in the Ugu District of Kwazulu Natal.

Early Learning Resource Unit (ELRU) is an internationally recognised NGO involved in early childhood development.

Accenture Digital for Good - innovating to improve the lives of millions, now and for the next generation.

# MathsUp

**FOCUS AREA** Quality Preschool Programmes

**INNOVATION LEVER** Product or Service

**STAGE** Proof of Concept | Open

**IMPACT LEVEL** L2

## The Problem

South Africa regularly ranks as one of the worst performing countries in terms of Maths and Science attainment. Fewer than 12,000 learners every year ( $\pm 1\%$  of Grade 12 learners) achieve more than 70% in Maths and Science, a level generally considered necessary to be selected for degrees in Science, Technology, Engineering or Medicine. A report from the University of Stellenbosch revealed that 40% of Grade 6 children are functionally innumerate. These problems arise largely because of a failure to lay good mathematics and literacy foundations during the first 6 years of a child's life.

The majority of South African Grade R teachers do not have a formal teaching qualification. Most have a National Qualification Framework (NQF) Level 4 or 5, which does not adequately prepare them to teach the Mathematics content of the Grade R South African Curriculum Assessment Policy Statement (CAPS) in preparation for Grade 1.

A scalable and affordable intervention to strengthen foundational numeracy is needed, targeting teachers and simultaneously empowering parents to support their children's learning within the home.

## The Innovation

The MathsUp app aims to strengthen early Mathematics through the use of mobile technology to deliver accessible Maths content to Grade R teachers and parents of Grade R children. There is currently no other app of this kind, designed specifically to support the delivery of the South African Grade R Maths curriculum through co-ordinated school and home-based communication.

The app features fun hands-on activities that encourage problem solving and investigative skills. Suggested activities encourage play-based, active teaching and learning. Tips are provided on how to involve parents in their children's maths learning at home. Stories and rhymes are recorded for easy listening in preparation for reading to or reciting with Grade R learners, and a direct link allows teachers to share information in-app with parents, colleagues and friends.

## The Project Team

Redink provides resources and education for learners. They develop high quality materials and offer training and mentoring programmes for children and parents/caregivers.

Reach Trust has helped more than 10 million people transform their lives through access to free education, health and counselling services on their mobile phones.

# The Early Learning Outcomes Measure (ELOM)

**FOCUS AREA** Quality preschool programmes

**INNOVATION LEVER** Data Tools and Insight

**STAGE** Transition to Scale | Open

**IMPACT LEVEL** L2

## The Problem

The types of experiences children have during their first six years determine the extent to which they develop the foundational skills they need when entering school. These experiences include the interactions they have with their parents and other caregivers in their home and their participation in an early learning programme. In order to determine whether children in South Africa are being exposed to the kinds of early life experiences that build thriving brains, we need to be able to measure child outcomes at a population level - across various developmental domains. We also need to be able to evaluate and inform the efficacy of early learning programmes.

Until recently, South Africa lacked a child outcomes assessment tool tailored to our context.

## The Innovation

**The Early Learning Outcomes Measure (ELOM)** was designed to fill this gap. The ELOM is a South African population based child assessment tool that determines whether children are developmentally on track for their age and whether an Early Childhood Development (ECD) programme is effective in preparing children for entry into school, and identifies areas for programmatic improvement.

The ELOM has been constructed to assess child outcomes in two age groups: 50-59 months and 60-69 months. The instrument has been peer-reviewed and published internationally. It is aligned to the South African National Curriculum Framework and other relevant guidelines.

The age-normed, psychometrically sound tool enables direct assessment of crucial milestones, including gross and fine motor coordination and visual motor integration, emergent literacy and language, early numeracy, and cognitive and executive functioning. It also incorporates a teachers' assessment of the children in their care, enabling evaluation of emotional and social development in the crucial early years. More recently a home learning environment scale has been added to the ELOM suite which provides a window into a child's home environment and its opportunities for early learning support.

## The Project Team

Professor Andy Dawes is a clinical and developmental psychologist and Associate Professor Emeritus in the Department of Psychology at the University of Cape Town.

Linda Biersteker is a developmental psychologist and independent Early Childhood Development specialist.

Elizabeth Girdwood is an economist, focusing on early child-centered research and developmental interventions.

This investment also involves collaboration with the relevant South African Government Departments.

# The Slide Guide

**FOCUS AREA** Early Healthcare & Nutrition

**INNOVATION LEVER** Product or Service

**STAGE** Proof of Concept | Open

**IMPACT LEVEL** L2

## The Problem

Growth charts in the Road to Health Booklet (RTHB) for infants and toddlers are used by healthcare workers to monitor the growth of a child and to help guide intervention if necessary. Growth is monitored by plotting key measurements (such as the baby's height, weight and head circumference) on a chart and comparing changes over time with accepted 'norms'. Growth faltering is often the first sign of a serious health issue and these charts are important tools for supporting healthy development. While research shows the significant health and developmental benefits of using growth monitoring charts, these charts are underutilised and often poorly interpreted by healthcare workers in South Africa.

## The Innovation

The Slide Guide is a simple non-tech device that helps healthcare workers accurately interpret a child's growth trend on the RTHB's growth chart. It also contains prompts and messages that help the healthcare worker to discuss the growth trend with the caregiver in a way that makes sense to them and is encouraging. This tool is innovative in that it drives behaviour change and is cost effective and scalable in the most resource-constrained settings. The look and feel of the Slide Guide has been developed to match the RTHB and has had extensive input from health care professionals.

This tool improves how growth data is captured and interpreted and, equally important, enhances the way in which healthcare workers engage with parents through constructive dialogue. Having meaningful conversations enables healthcare workers to establish rapport and learn more about the child and parent's context, allowing for preventative intervention to take place when necessary.

## The Project Team

Developed in partnership with relevant South African Government Departments.

Open CPT is an employee and change communication agency with a focus on design-driven, experiential, digital and engaging employee communications.



# Mhealth Screening Solutions

**FOCUS AREA** Early Healthcare & Nutrition

**INNOVATION LEVER** Product or Service

**STAGE** Proof of Concept | Closed, Active

**IMPACT LEVEL** L2

## The Problem

Traditionally, hearing and vision screening services have been limited to hospitals and clinics, because the screening tests require expensive equipment and trained professionals. As a result, children in low-income communities have not had easy access to screening tests. The earlier hearing loss or visual impairments are diagnosed and treated, the better chance children have of developing to their full potential. At the time of our investment in late 2015, there were no systematic screening programmes using a combined approach to detect childhood vision and hearing problems in preschool children in underserved communities. Early detection and remediation of hearing loss and vision problems before school-entry is essential to ensuring a child's ability to learn.

## The Innovation

hearScreen™ is an award-winning hearing test solution on a smartphone.

It operates on Android-based smartphones or tablet devices, and delivers the screening via calibrated headphones. Test administrators undergo basic audiology training prior to using the digital solution, to ensure they understand the concepts specific to hearing screening. During the exam, the screener explains the procedure to the patient in their mother tongue, selects the icons to begin the automated protocol, and records the patient's responses. The application analyses the responses and reports either a pass (with no further action required) or a fail, with referral options. When a referral is recommended, hearScreen™ can provide information on the nearest clinic.

Peek Acuity offers a clinically-validated visual acuity (sharpness of vision) test on a smartphone. Developed by Peek Vision, the app calculates the visual acuity and presents it at the end of the test.

With support from Innovation Edge, the Peek Acuity offering was offered alongside the hearing screening app in a combined health solution. This innovative combined screening tool was successfully adapted and piloted for use with preschool aged children.

Have a look at this hearScreen™ [Case Study by UNESCO-Pearson Initiative for Literacy](#)

## The Project Team

The hearX Group focus on affordable access to hearing care using smart digital health solutions that anyone can use, anywhere.

Peek Vision is a UK company that develops mobile eye screening applications and lens adaptors for testing vision

The NEA Foundation is a public charity supported by contributions from educators' dues, corporate sponsors, foundations, and others who support public education initiatives.

# The ECD Apps Launchpad

**FOCUS AREA** Cross Cutter

**INNOVATION LEVER** Platform

**STAGE** Transition to Scale | Open

**IMPACT LEVEL** L1

## The Problem

Organisations who work in the early learning arena often enlist the help of software developers when needing to create mobile apps as part of their programmes. In many cases, the developers have relatively little understanding of early childhood care and education. They also often have limited insight into the lives of the potential app users. In addition, their support tends to be contract based, making it difficult for organisations to undertake changes to the app at a later stage without incurring further costs. In these circumstances, the uptake for these apps may fail and render them obsolete.

## The Innovation

The ECD Apps Launchpad's innovative ecosystem approach allows for early learning apps on the platform to share a common technology infrastructure with a modular architecture that allows for cost-effective customisation and scale. Organisations wanting to develop a new app are able to build on the existing platform and gain access to its full suite of functionalities. This enables them to develop and maintain their apps at a fraction of the full cost.

The Launchpad also facilitates the sharing of best practice, allowing partner organisations to share new ideas and quickly refine existing content. One of the most powerful features of the Launchpad's ecosystem approach is the ability to track app users over time. This will produce valuable data, enabling stakeholders to better track and understand the factors influencing the progress and levels of participation amongst users.

Initial applications being developed on the Launchpad include: (1) The Wordworks App - sending daily prompts to caregivers of young children to encourage interactions that support early language development, (2) Bird Seed - a daily activity guide for preschool teachers, (3) CareUp - a mobile app designed to improve early literacy through resources for preschool teachers and parents of children aged 4-5 years, (4) MathsUp - an app supporting Grade R teachers to deliver engaging maths content, and (5) Singakwenza - an app that aims to help parents build educational toys from recycled material.

## The Project Team

The Reach Trust, The ECD Launchpad founder, has helped more than 10 million people transform their lives through access to free education, health and counselling services on their mobile phones.

# Pivoting Business Processes for Purpose with Barrows

**FOCUS AREA** Cross Cutter

**INNOVATION LEVER** Platform

**STAGE** Transition to Scale | Closed, Active

**IMPACT LEVEL** L2

## The Problem

Young children and their teachers need quality early learning materials. Many preschool programmes in under-resourced communities (creches, playgroups, reading clubs, Grade R classrooms etc.) rely on training and support organisations (usually NGOs) to provide them with educational materials. However, NGOs find it difficult to carry the cost of printing and distributing these resources.

## The Project Team

Barrows Design and Manufacturing (Pty) Ltd is a Retail Marketing / Shopper Conversion company and is part of the WPP group. They design and manufacture retail display units for companies all over South Africa.

Content providers and distribution partners: Embrace | Wordworks | Ilifa Labantwana | Nal'ibali | Smartstart | Earlybird Educare@Work | The Reach Trust | Redink | RCL Foods (Do More Foundation)

## The Innovation

When Barrows (retail design and manufacturing company) Creative Director Ian Gourley heard about the content dilemma facing South Africa's early learning services, he realised Barrows had something valuable to offer: an existing national printing and distribution business and free space on printing material made for retail display units already paid for by clients.

Barrows places the artwork for early learning materials, such as posters and flashcards, on these unused white spaces, and because the print run is already scheduled and paid-for, the material is produced at little or no additional cost. It is then distributed to a network of early learning services close to each of the nine national Barrows' distribution hubs.

By February 2019, Barrows had produced 184 267 pieces of educational material.

What is innovative about this initiative is that it leverages unused inventory in an existing business process to create a quality product that addresses an educational need at little or no extra cost. At the same time, the initiative has a positive impact on the business in a number of ways that ultimately benefits its bottom line – including offering its clients social impact value-add with every job it prints, strengthening its B-BBEE (Broad-Based Black Economic Empowerment) scorecard and attracting and retaining top talent who are looking for employment opportunities that provide a sense of purpose.

Because of the perceived business value, Barrows has committed to funding the project management role going forward – ensuring full business integration.

**FOR MORE INFORMATION ON OUR  
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