Company and Investment Profiles

Green Pioneer Accelerator

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INTRODUCTION

The following reflects a collection of investment introductions for businesses that have completed the South African Green Pioneer Acceleration Program (GPA) in June 2015.

This Accelerator was designed and implemented by Impact Amplifier, funded by Hivos and supported by VC4Africa and the Global Social Benefit Institute.

The GPA was a comprehensive business accelerator that supported ecologically innovative enterprises. The four-month acceleration program was designed to take the selected businesses from ‘market proof’ to ‘ready for investment’. The program sought to position the participating companies for scale by getting their strategy, market access, financial model and investment case prepared for fundraising conversations with investors. This program combined a rigorous curriculum with practical experience shared by successful entrepreneurs, mentors and investors.

The businesses that completed the GPA program include:

• **Botanica Natural Products** has commercialised the production of an indigenous South African succulent plant, Bulbine frutescens. The plant is used in the nutraceutical and cosmetic industries.
• **Lady Bonin’s Tea** manufactures and distributes loose-leaf teas sourced from farms that support sustainable farming practices and community development.
• **Mechanical Concrete** is a patented road building technology, which utilises discarded car tyres and other recycled materials to construct better quality, ecologically sensitive, cheaper roads.
• **Mellowcabs** manufactures and operates new, electric mini-cabs that provide low cost, eco-friendly and convenient transport and taxi services in cities.
• **MySmartFarm** is a patented one-stop-shop mobile software for farmers, which aggregates the critical information required to optimise yields such as weather, soil conditions, water usage and input management.
• **Savvy Loo** is a unique sanitation solution that uses a patented technology to dry bio-waste for use as fuel and creates nutrients from urine, which can be used as fertilizers all through a micro franchising system.
• **Shakti Energy** offers an affordable, pay as you go, pedal powered generator for recharging lights and electronics for areas that are off the electrical grid.

• **Solar Turtle** offers a container based renewable energy micro-franchise. The container charges batteries via solar power that are then used as the energy source for households without electricity.

• **SunChem SA (Project Solaris)** produces high-quality jet fuel and biodiesel from the patented, nicotine-free tobacco variety “Solaris”.

• **Terrasano Holdings** is the largest producer of plant-based human and animal food products in South Africa, using protein derived from peas. Its retail brand is Phyto Pro.

While each of the businesses above completed the GPA program not all currently require funding or are ready for investment as of June 2015. The introductions that follow however, clearly articulate the business highlights, market opportunity, impact, and value proposition.

In addition, to the businesses that completed the GPA program, there are two additional investment introductions included here, which are businesses Impact Amplifier has recently completed the investment readiness process with and are now seeking investment. These businesses include:

• **Biogreen** uses patented, state-of-the-art technology capable of producing high quality biodiesel from both waste and virgin oils.

• **Mobenzi** provides mobile first technology platforms for health, education and agriculture, in over 40 countries. Its platforms are targeted at frontline workers enabling data collection and content distribution supported by flexible back-end workflow and reporting.

For any questions about the businesses included please contact one of the partners at Impact Amplifier – Tanner Methvin – 083 460 4087 or Max Pichulik -082 991 0704.
Botanica is an award-winning natural skin care business with double digit growth since inception. Botanica is the first and only company to develop an extract from the indigenous South African plant, Bulbine frutescens. The product is sold to cosmetic producers in South Africa, West Africa and Europe.

Investment Highlights

**Existing Clientele and Scalability:** Botanica has generated more than R3 million of revenue from customers in 18 countries. Revenue has grown by more than 50% annually, and is expected to grow at 30% for the next 3 years.

**Unique Product:** The plant is endemic to Southern Africa and has healing, soothing and moisturizing attributes which have been clinically proven to be significantly more effective than other natural active ingredients.

**Market Opportunity:** Production capacity is currently 10 tons per month. In West Africa, the opportunity for natural cosmetic active ingredients is 25 tons per month. The cosmetic market opportunity for organically certified active ingredients in the EU and US will exceed 50 tons per month within the next 5 years.

**High Barriers to Entry:** It has taken 3 years to develop the process and create market demand. Botanica has patented the extraction process and achieved first mover advantage in the market. High capital costs, onerous regulatory requirements and long sale cycles act as a barrier to entry for competitors.

**Shareholder Commitment:** Shareholders have proven their commitment by investing R18 million in capital to set up the production facility, conduct clinical research and operate the company since 2009.

**Attractive Margins:** Cost of sales are approximately R60 per kg while the sales price varies between R150 and R500 per kg. The minimum margin of 150% shows that profitability is highly attractive after break-even is achieved.

**ESTABLISHED:** 2009 | **HEADQUARTERS:** Mогалаквена, South Africa | **IMPACT AREA:** Limpopo, South Africa | **SUCCESS TO DATE:** Raised grant finance of R7m, Developed 15ha plantation and EU quality processing facility, generated R3 million revenue, won several awards including best indigenous plant product | **TYPE:** For profit | **SECTOR:** Agro-processing | **INVESTMENT REQUIREMENT:** R6 million equity | **STAGE:** SCALE | **MANAGEMENT TEAM:** Michel Colson (Founder & Technical Director), Will Coetsee (Managing Director)
Value Proposition
Botanica has established agricultural and processing infrastructure to produce 120 tons of product per annum. The infrastructure can be scaled to achieve increased production and value-added quality as soon as market demand increases. The market demand for organically certified and natural active ingredients in the US, Europe and West Africa is large and Botanica has already shown double-digit growth each year. However, it takes time to enter new market territories due to the long sales cycles of the industry. Beyond the long sales cycles, there are even longer periods before new product lines with new active ingredients, get significant take up by consumers. To unleash the real commercial value of these markets, Botanica requires working capital to meet the sales cycles, enter new markets and scale the business.

“Improving skin health by promoting the use of indigenous South African plants and traditional knowledge.”

Impact Opportunity
Botanica provides a source of income to 25 staff from a remote, rural part of Limpopo. Seventy percent are previously unemployed mothers who earn a good living wage, receive access to medical care and family planning support. This positively impacts more than 120 people in the local community. Botanica has minimized its carbon footprint by planting 250,000 Spekboom trees, which capture carbon dioxide and converts it into oxygen 24 hours a day. Botanica’s organic production methods ensure the preservation of biodiversity. By scaling the business, impact initiatives will be scaled accordingly.

Market Segments
Botanica produces an innovative active ingredient, which is proven to have a powerful soothing and healing effect when applied to the skin or hair. The active ingredient is added into formulations of existing products as well as new product ranges.

Botanica sells its products mainly to West African cosmetic companies because access to these markets has been easier. The product has been introduced to the South African cosmetic market and substantial growth is expected in 2015. Botanica signed an exclusive supply agreement with a major Swiss cosmetics producer, which will conduct clinical trials and purchase minimum quantities of product for the next 2 years.

Management Team
Michel Colson (Founder & Technical Director): Michel has more than 45 years’ experience in the personal care industry and brings extensive business acumen to Botanica. He was managing director of Unilever’s European Chemical Division and established a global network of clients and colleagues in the personal care, cosmetic and chemical sectors. His technical background contributes to product development and marketing products to new markets.

Will Coetsee (Managing Director): Will has a Bachelor’s degree in Biodiversity and a MBA (cum laude), and has been recognized as a specialist in African social enterprise. He was selected as one of the top four MBA students worldwide and is a member of the South African Bureau of Standards (SABS) Technical Commission on the promotion of Traditional Knowledge in South Africa. He regularly advises government and academia on best practice, policy and regulations regarding commercialisation of indigenous plant products. Will’s experience has been essential in enabling Botanica to develop its production facility, procure sustainable raw ingredients and secure a strong customer base.
Lady Bonin’s Tea is a well-known, socially responsible brand that develops, blends and distributes unique high quality teas. By radically shifting the consumer’s experience and perception of tea, Lady Bonin is championing tea trends in South Africa, serving around 14,000 cups per month.

Seeking R1.5m in working capital to grow distribution in line with current market demand and expand retail operations

Investment Highlights

1. Large local market demand for Japanese Matcha Green Tea and Unique South African tea Blends.
   • Strong Distribution Partners – largest organic retail distributor in South Africa with a network of over 300 stores nationally.
   • Flourishing restaurant trade – Lady Bonin currently serves 17 restaurants nationally, and growing at 5 per month.
   • Two existing shops – Lady Bonin currently has a Tea Parlour and market shop in Cape Town, and will be opening more.
   • Export Opportunities – China, Japan and Europe provide immediate opportunities for unique local tea blends.

2. Scalability globally.
   • Export - clear interest for South African premium teas and flavours in China, Japan and Europe.
   • Through a strong brand and future e-commerce platform.

3. Established and loved brand.
   • Lady Bonin featured regularly in all major consumer media, locally and internationally.
   • Lady Bonin has a loyal following of consumers in South Africa who buy their products regularly.

ESTABLISHED: 2010 | HEADQUARTERS: Woodstock, Cape Town | IMPACT AREA: South Africa and Japan | SUCCESS TO DATE: 14,000 cups of tea sold per month through small Cape Town avenues alone | TYPE: For Profit | SECTOR: Tea manufacture and distribution | CAPITAL REQUIREMENT: R1.5 Million | STAGE: Scale | MANAGEMENT TEAM: Jessica Bonin (Founder and Managing Member)
Impact Opportunity

ENVIRONMENTAL - The Japanese and South African teas are sourced direct from organic farms that use sustainable farming practices. This results in a high nutritive content of the plants, adaptability to climate change, environmental preservation and the use of indigenous knowledge.

SOCIAL - The fair trade and local cooperative farms are breaking ground through their unique models that supports communities by creating jobs, developing people, supporting education, improving infrastructure, applying mentorship programs and putting profits back into the community. Through the platform of the brand and education of the consumer, demand will encourage the shifting of current unethical and archaic farming monopolies which control the local market.

HEALTH – The organic teas and herbals have higher nutrient dense properties due to increased plant health and a lack of chemicals and additives. Consuming these products supports health. It simultaneously provides a healthy alternative to current hot beverages, which are contributing to the increasing ill mental and physical health of people.

Value Proposition

Lady Bonin has built a distribution infrastructure and brand over the last 5 years, which is now ready to scale nationally and into export markets. Current market demand outstrips Lady Bonin’s ability to supply due to the lack of working capital in the business, particularly raw materials and staff. This working capital will allow Lady Bonin to double its revenue in 2 years, and become profitable within 3 years.

Market Environment

Lady Bonin’s customers are established tea drinkers, health conscious or health migrating. In South Africa there are currently 360,000 active consumers increasingly spending in the health industry. Tea is a growing demand as people look for healthy beverage alternatives to support their lifestyle requirements. China and Germany are South Africa’s biggest exporters of Rooibos Tea, with the rest of Europe and America following suit. Matcha is currently taking the world by storm as people replace their morning coffee with this beverage. The emerging coffee culture provides a new way to experience tea blends through tea based cappuccino and latte machine variants.

Management Team

Jessica Bonin has self funded and independently built the business from South Africa’s first food truck selling take away tea to an internationally followed brand. Jessica has grown a brand that has been featured in over 50 blogs, 15 magazines, on prime time news, in international magazines, as well as in 2 documentaries. Jessica Bonin has made over 40000 cups of tea in the last 4 years. Tea is not just her business; it is her passion and her practice.
Our main objective is to expand the Southern Africa rural road network as this creates economic gateways, facilitating the flow of affordable products and services while developing new collaborative opportunities. Seeking equity partner for Africa expansion.

**Highlights**

- **Mechanical Concrete**: the technology has been in research, development and implementation since 2004 in the USA. It re-uses one of society’s most important and high-quality industrial products – the automobile tyre. A geo-cylinder is made by removing both sidewalls from waste auto tyres, which are then filled with bound granular soil and stone particles that together becomes the base for road construction.

- **Strength, Speed and Price**: the Mechanical Concrete technology is simpler, stronger, and more economical than other methods of road building. Mechanical Concrete more than triples the load supporting capacity of aggregate materials, can be built 40% faster than traditional roads and 30% cheaper.

- **Demand**: there are 50,000 km of roads planned in South Africa over the next five years. While this number is more than 20 fold throughout the African Continent. The primary constraint faced by national and local governments everywhere is the cost of building. Mechanical Concrete is the only method available to meaningfully address this constraint providing an extraordinary market opportunity.

- **Business to Date**: after completing its first demonstration road at the Council for Scientific and Industrial Research, Tiro Sechaba began marketing the Mechanical Concrete technology in January 2015. Through the end of May 2015 it has confirmed orders of circa R24 million of roads.

- **Used Tyres**: per the Recycling and Economic Development Initiative of South Africa there are between 60 and 100 million scrap tyres stockpiled in South Africa alone. Finding ways to reuse these waste tyres is an on-going challenge.

- **BBBEE**: Tiro Sechaba Construction is fully compliant with the South African Broad-Based Black Economic Empowerment legislation and has a Level II BBBEE status.
Impact Opportunity

ENVIRONMENT: In South Africa, over 11 million tyres are scrapped every year and only 26% are either recycled or reused while the rest are disposed of at landfills or illegally dumped. Compared to countries in the global north where over 85% are recycled or reused.

Waste tyres are dangerous to human health because they provide ideal breeding grounds for malaria carrying mosquitos via the trapped rainwater and because tyres leach hazardous chemicals into our streams, oceans and ground water from long standing storage and burning. The most danger caused to humans and the environment is from burning tyre air pollution. Burning tyres, the most common disposal method in Africa, produces carbon dioxide and sulphur dioxide. It also releases dioxins and noxious gases, volatile organic compounds and other hazardous air pollutants.

Every 125 tyres (a tonne of weight), when burned, create 2.2 tonnes of GHG emissions. For every kilometre of road built, 8,000 tyres are used saving 140 tonnes of GHG emissions, as well as the other hazards caused by landfill and illegal dumping disposal.

SOCIAL: Infrastructure is the fundamental driver of most African economies. Ports, telecoms, rail, electricity, sanitation and roads are the foundation of every economy. Unfortunately, Africa’s road network lags far behind the entire world. Its road density is only 25% of the world average. This lack of road infrastructure prevents cross border connectivity and the creation of an intraregional network. Physical isolation is preventing large areas of the continent from accessing healthcare, education and new economic opportunities. The primary reason for this lack of road infrastructure is cost. As the Mechanical Concrete technology provides a 30% reduction in price it can substantially unlock these economic opportunities by providing an inexpensive, durable, ecologically sensitive road building solution.

Market Environment

SOUTH AFRICA: 79% of the roads in South Africa are gravel and only 21% are paved. With 50,000 kilometres of roads already planned by the South African Government over the next five years this is an ideal market opportunity. In addition to public sector demand, there is a broad spectrum of private road buyers seeking high quality, low cost solutions.

SADC/REST OF AFRICA: The continent’s trunk road network comprises strategic trading corridors linking deep-sea ports to economic hinterlands. These corridors carry about $200 billion of trade per annum on no more than 10,000 kilometres of road. To truly facilitate intra-Africa connectivity an estimated 60,000 to 100,000 kilometres of new commercial freeways are required. Again, the primary reason for this backlog is the high capital expenditure required for road construction. This combination of demand from both within South Africa and from the rest of the continent creates a ripe opportunity for the Mechanical Concrete approach to road building.

Value Proposition

For the public and private sector in Africa seeking high quality, low cost, environmentally sensitive road construction, Mechanical Concrete’s patented recycled tyre technology builds roads 30% cheaper and 40% faster than conventional roads with a 20 year durability guarantee.

Management Team

It is led by Khutso Manthata CA (SA). He is a registered chartered accountant with over eight years of investment banking experience, having worked in Africa for large international investment banks specialising in mergers and acquisitions. As an investment banker he focussed on the construction and building materials sector, telecoms, and general industrials.

Robert Jooste, is a shareholder with over 30 years experience in the financial, oil and construction industry. He holds a BComm and MBA, and has worked in Nigeria on turn around strategies for major international companies as well as KPMG, Shell and Bosil in South Africa. He is the founder and majority shareholder of ACIN Two.

Kgabiso Manthata leads the South African division. She is a risk specialist having worked as an external auditor for SizweNtsalubaGobodo and as a credit risk analyst for Nedbank Ltd. She is also a seasoned entrepreneur who is shareholder and managing director in Thari Entertainment a marketing and recording company. She has a B.Com (finance) degree.
Mellowcabs manufactures and operates electric micro-cabs that provide low cost, eco-friendly and convenient transport and taxi services in cities.

Seeking a R 10 million equity investment to scale production of vehicles.

**Investment Highlights**

- **Proudly South African:** Mellowcabs is the first 100% electric vehicle to be designed and manufactured in South Africa. The vehicles have excellent speed, acceleration and range. In addition, Mellowcabs are fully roadworthy and very safe.

- **Revenue Streams:** Mellowcabs has a very diverse revenue model as it both a manufacturer and an operator. It has designed a leasing model for the vehicles it manufactures, a transport and taxi service, and it sells branding right on the vehicles. This creates a very strong revenue base for growth.

- **Adaptable:** Mellowcabs are modular in design which allows them to be easily converted to cargo or delivery vehicles as well as to become completed enclosed based on the customer’s requirements.

- **IP/Patents:** Mellowcabs has filed for various patents and trade marks including South African Design Patents, April 2015. Trademark registered, registration nr 2012/14281.

- **Licence to Operate:** Mellowcabs has operating rights in all of South Africa's major cities.

- **Internationally scalable:** There are plans to expand out of South Africa rapidly with both pilots projects planned and expressions of interest received from Europe, Africa and the Middle-East.

- **Technological innovations:** The Mellowcabs design includes solar panels, regenerative braking and on-board tablets. Illuminated body panels light up at night, greatly enhancing its visibility and advertising value. In addition it has a mobile-app which allows you to see where the nearest cabs are, set a meeting point, and hail one to meet you there. You can even see your driver’s information (including ratings) as you watch the cab get closer to your location.

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**ESTABLISHED:** 2012 | **HEADQUARTERS:** Franschhoek, South Africa | **IMPACT AREA:** Urban Areas, South Africa | **SUCCESS TO DATE:** product in pre-production, operating permissions in place, revenue lines secured | **TYPE:** For-profit | **SECTOR:** Transport | **CAPITAL REQUIREMENT:** R10 million equity (26% equity) | **STAGE:** Scale | **MANAGEMENT TEAM:** Neil du Preez (Founder and Managing Director), Marcel Swanepoel (operations), Ideso (design) Cinevation (advertising)
Short Description
Mellowcabs manufactures and operates electric micro-cabs that provide low cost, eco-friendly and convenient taxi and transport services in cities. These services can be provided through our mobile application, seamlessly connecting commuters and cabs. The passenger section of the cab can be replaced with a cargo section, making the Mellowcab a versatile delivery vehicle. We are now in a pre-production phase, where we have designed and are now building a re-imagined micro vehicle.

Impact Opportunity
Transportation produces approximately 23 percent of the global CO2 emissions from fuel combustion. As an all-electric micro vehicle it has zero direct tailpipe emissions. On a per kilometre basis Mellowcabs produced only 10% of what a normal petrol or diesel passenger vehicle does. Over the course of one year each mellowcab on the road will save over 8 tonnes in GHG emissions.

Mellowcabs also has a diver training program, where drivers are trained to become qualified tour guides, as well as a owner-driver scheme, where after a period of successful operation, ownership of the vehicle is transferred to the driver.

Market Environment
Mellowcabs has three distinct target markets:

TRANSPORT: Mellowcabs was designed for urban commuters, who needs taxi services in cities. 80% of all urban vehicle trips are shorter than 4km, which is an extremely inefficient use of fuel burning cars, but is ideal for an electric micro vehicle. The Mellowcab provides convenient, low-cost and eco-friendly transport. Mellowcabs provides a on-demand taxi service, allowing passengers to see where the nearest cabs are, book a cab, set a meeting point on the screen, hail a cab or even see the driver’s information. Once you arrive at your destination, the application charges your card, or provides you with a payment option. It can also provide a transport service within a 4km radius from a train or bus stations, providing first and last mile transportation.

ADVERTISING: The global urban advertising market is very lucrative, with outdoor advertising space in cities in high demand. Mellowcabs have been designed to be extremely visible, and to offer optimum advertising space. We have signed advertising agreements with two large-scale advertisers.

CARGO DELIVERIES: The passenger section of the vehicle is very easily replaced with a cargo section. These cargo vehicles will be leased to courier companies and retailers wanting to facilitate deliveries. Mellowcabs is currently negotiating a lease agreement with one of South Africa’s largest online retailers.

Value proposition
We have three revenue sources, passenger fares (we provide a more affordable option than traditional cabs), cargo delivery and advertising sales. Cargo deliveries will be facilitated through leasing the vehicle to third parties initially. Advertising on the vehicles has proven to be very powerful and lucrative. Operating the vehicles is also significantly more efficient and therefore more affordable than traditional fuel-burning vehicles.

Mellowcabs is in the privileged position to both manufacture and operate these unique vehicles.

Core Team Credentials:
Neil du Preez (founder and team leader)
• Neil has proven business development and operational skills and experience. He is a successful entrepreneur, having founded and operated businesses in the chemical and transport retail sectors.
• BA Environmental Management
• International business experience

Neil de Vos (Industrial Designer)
• Industrial design masters at Cape Peninsula University of Technology
• Design and Research Assistant at the Product Lifecycle Management Competency Centre (PLMCC) with focus on the process of simulating and managing the entire life cycle of a product from its conception, through design and manufacture, to service and recycling
• Experience in Universal / Inclusive Design with relevance to ergonomics and accessibility, and have a keen interest in Automotive / Transportation Design, in the development of urban micro first and last mile transport solutions as a way to reduce the need for fossil-fuelled cars

Naeem Cassim (Industrial Designer)
• BTech in Industrial Design
• Main Interests: powertrains, aerodynamics, vehicle dynamics, interior and exterior design
• Other interests and inspiration - Design, Philosophy

Gerry Banda (Mechanical Engineering)
• National Diploma Mechanical Engineering
• Fields of interest: Creative design in automotive and aeronautics
• Currently studying towards BTech
MySmartFarm provides a one-stop shop online solution, allowing farmers to better manage their soil, water, energy, and crops. By technologically transforming farmers towards environmental sustainability and profitability, MySmartFarm will have a massive impact on food security.

Seeking R5m equity capital to further develop its product base and expand operations globally

Investment Highlights

- **Large market opportunity**: South Africa has 5m ha of intensive crops and less than 5% technology adoption. The US market is, similarly structured to South Africa’s commercial farming sector with 250m ha of farmland while the EU countries have 350m ha of commercial farmland.

- **Relative ease to access market**: SA has 30,000 farms; of which 1,000 make up more than 2.5m ha (50% of the available market). MySmartFarm will access these 1,000 farms through publicly listed agri-businesses and consultancies.

- **High barrier to entry = loyalty**: Farmers are generally slow to adopt new technology. However, MySmartFarm deeply integrates its software, hardware and data, making it difficult for clients to shift providers. Therefore forming long term partnerships.

- **Market validation**: MySmartFarm has invested R4.8m to date and built an MVP that launched in October 2014. MySmartFarm currently has twelve beta testing clients of which five are paying clients, and is now ready to ramp up its product base out of the beta version.

- **Recurring Revenue model & scalability**: MySmartFarm has an attractive annual recurring software subscription model in addition to commissions from hardware and services of 3rd party partners and suppliers.

- **Attractive to industry verticals**: As MySmartFarm aggregates all farm-level data on cloud based dashboards, it provides value to other industry partners: banks, insurances, co-ops, consultants, etc.

- **100% IP, copy and patents owned**: Company owns all its IP: copy, trademarks and two patents currently at PCT level.

- **Big Data sources, technologies, & Artificial Intelligence**: MySmartFarm accumulates: wireless meshed sensors, satellite images, soil moisture, weather stations, climate data, GIS maps, laboratory data and more. MySmartFarm intends to use image recognition, machine learning and spatial analytics for benchmarking and predictions on crop diseases, yield, and irrigation; all of which ordinarily would not be available to farmers.

- **Farmer’s commercial benefit**: A user of MySmartFarm will see rapid significant returns, pending farm size between 1 & 12 months, from using its technology and tools, which include:

  - Reduce water use by up to 20%
  - Reduce input costs by up to 20%
  - Save time by up to 15 hrs/m
  - Increase yield by 15%

**ESTABLISHED**: 2012 | **HEADQUARTERS**: Somerset West, South Africa | **IMPACT AREA**: World & Africa | **SUCCESS TO DATE**: MVP in the market | **TYPE**: For profit | **SECTOR**: Agriculture | **FUNDING REQUIREMENT**: R5 million equity (15% ownership) | **STAGE**: Commercialization | **TEAM**: Start-up experienced business development, CA, and coding for scale
Impact Opportunity

ENVIRONMENTAL: Scientific research of the technologies MySmartFarm deploys, indicate that 20% water usage and 15% electricity can be saved with accurate irrigation application. Proper soil balancing and irrigation can reduce fertilizer inputs by up to 50%; thereby reducing the impact on ecosystems and groundwater contamination.

FOOD SECURITY: Long-term food security is ensured when land is farmed sustainably and farmers remain economically viable. The MySmartFarm technology and services play a role in ensuring farmers are equipped to increase their yields, while managing their farms efficiently, profitably and sustainably.

SOCIAL: The MySmartFarm tools will enhance the viability of smallholder farmers through the development of large agricultural value chains in Africa. This will ensure that sufficient nutritious food is cultivated whilst providing ethically valued jobs.

Value Proposition

MySmartFarm has developed a one-stop-shop Software as a Service (SaaS) platform that aggregates all of a farmer’s data and technology into a single cloud based dashboard. By delivering live farm data, MySmartFarm’s patented “SmartFarm System” saves both time and money while giving rise to increased yields and reduced environmental impact. The system uses networked intelligent hardware and 3rd party information harnessed into convenient dashboards to supply basic actionable metrics available anywhere, on any device 24/7.

OPPORTUNITIES: MySmartFarm’s immediate market opportunity lies within the SA market. MySmartFarm sells a combination of hardware and software either directly or through key partners. MySmartFarm will have an attractive product for the US market in the next 18 months and is therefore planning for the product readiness of that market.

JUSTIFIABLE ASK: MySmartFarm is seeking R5 million in equity funding in order to:
1. Create a foothold in the SA market and to further develop the Base Product to promote 3rd party collaboration
2. To prepare the business to enter the US market within 16 months by developing the product to include more globally competitive features and modules

The R5 million investment will enable MySmartFarm to breakeven by reaching 250 commercial farmers in SA and get MySmartFarm ready for the US market.

“Farmers will like this, can I sell your product?”

- Nvirotech CEO
“Energy and nutrients from waterless sanitation”

SavvyLoo is a patented, decentralised, affordable and highly scalable waterless sanitation solution, which creates energy, nutrients and fertilizers utilising a network of micro-franchisees.

Seeking $2.5 million in debt to acquire moulds, extended field trials and establish micro-franchising networks.

Investment Highlights

- **Uniquely Patented Technology**: SavvyLoo is patented in South Africa, across 17 ARIPO countries in Africa, and in China. The SavvyLoo technology is a waterless sanitation solution, which dries the bio-waste for reuse as a source of energy and stores concentrated urine for extraction of nutrients and reuse as a soil enhancer (liquid fertiliser).

- **Product Demand**: Centralised water borne sanitation solutions are not viable for most rural areas and in resource constrained urban areas. In addition, the proliferation of unhealthy pit latrines that contaminate underground water tables have created a large scale commercial opportunity for SavvyLoo’s affordable solution.

- **Scale and Flexibility**: SavvyLoo is extraordinarily flexible and can be used in rural and urban contexts, as temporary or permanent solutions, and can be retrofitted into existing pit latrines. SavvyLoo augments the revolutionary shift in South African Government’s mind-set towards “innovative green inspired and sustainable technologies that reuse waste and recycle grey water”.

- **Diversified Market Segments**: SavvyLoo has a broad range of markets, which include Government, international donors, waste management service providers, construction and security companies, mining and the leisure industry. Although South Africa is a significant market, there are many other African countries in desperate need of an affordable, decentralised sanitation solution.

- **Attractive margins and financial profile**: The SavvyLoo business model has three revenue streams:
  1. 7% manufacturing royalty income - capable of manufacturing 200 units per day per mould, which can be scaled up to some 3 600 units per day if needed.
  2. Sale of business to micro-franchisees, and
  3. 5% royalty income from turnover of micro-franchisees.

- **Ecological Benefits**: SavvyLoo is the most ecologically sensitive sanitation solution on the market based on its waterless technology and energy, nutrients and fertiliser conversion solutions.

**ESTABLISHED**: 2011  |  **HEADQUARTERS**: Midrand, South Africa  |  **IMPACT AREA**: Africa

**SUCCESS TO DATE**: Field trials in-progress  |  **TYPE**: For-profit  |  **SECTOR**: Water, sanitation & energy  |  **INVESTMENT REQUIREMENT**: $2.5 million debt  |  **STAGE**: Commercialisation

**MANAGEMENT TEAM**: Richard Mutshekwane (Director) and Dr Dudley Jackson (Director)
Impact Opportunity

ENVIRONMENTAL: In South Africa, there are approximately 4 million pit latrines, and 6 million flush toilets which account for some 300 billion litres of potable water flushed away each year costing South African households an estimated R4.5 billion annually. There is overwhelming evidence that contaminated water from poorly managed waterborne sewerage is consistently polluting our rivers, dams and seas.

In Africa, less than half the population in more than 30 countries has access to sanitation, principally based on the cost of infrastructure. SavvyLoo’s ability to separate urine from faeces, dry faeces and eliminate pathogens without any contamination of the environment, at the lowest cost available, provides a flexible and competitive alternate sanitation solution.

SOCIAL: Unmanaged human excreta is one of the leading causes of parasitic and infectious diseases such as cholera, typhoid, hepatitis and polio. Poor sanitation is the cause of 88% of diarrhoeal cases and costs the South African Department of Health an estimated R8 billion each year. The World Health Organisation estimates that about 2.1 million people die annually from diarrhoeal diseases – and 90% of these are children under five.

SavvyLoo, being a self-contained desiccating toilet, provides dignity, prevents contamination of the user, and eliminates pathogens.

“It’s not all about flushing... dry sanitation solutions must become the reality we work towards.”


Market Environment

In Africa, the sanitation landscape is dominated by the challenges ensuing from waterborne sanitation, pit latrines and open defecation. In most countries the public sector is desperate for solutions. The South African Government has recently changed its thinking regarding sanitation and is now convinced that the future will be defined by decentralised, scalable options that do not rely on water and do not require chemicals, sewer pipes or septic tanks, and sludge to manage. These solutions are also sought from other buyers such as international donor agencies, waste management service providers, construction companies and those in need of temporary waterless solutions. SavvyLoo obviates the need to manage composting or sludge, has a modern functional design, is competitively priced and, unlike other sanitation options, requires no excavation and can be retrofitted into most existing top structures.

Value Proposition

SavvyLoo has been designed for both the public and private sector buyers who need an affordable, healthy and safe sanitation solution. Unlike Ventilated Pit Latrine (VIP) and chemical toilets it avoids toxic sludge, prevents underground water contamination, does not require chemicals, provides energy from the dry bio-waste and makes it possible to extract nutrients from the urine.

Management Team

Richard Mutshekwa (AEP from UNISA)
Role: Marketing and Operations
Experience: Non-executive Director of Seda; Previously, non-executive Director of NCR, Regional Manager for UNIBANK, retail banking manager at FNB; Member of Swan Electrical Africa supplying small solar systems to rural areas for the Department of Energy; and Member of the Institute of Directors SA.

Dr Dudley Jackson (B Econ (Rhodes), MBL, DBL, CMC)
Role: Commercial and Product Design
Experience: Co-founder of GasWeld Technologies and Pen-nine Marketing; Previously, Head of National Strategic Initiatives, Productivity SA (1985 to 2007) and Director Schacht Cullum (home building group). Certified Management Consultant (IMC) with 27 years’ experience.
Shakti Energy is a for-profit social enterprise that distributes low-cost lanterns that are recharged using pedal-powered generators and solar panels by local micro-entrepreneurs.

Seeking R850,000 in debt funding to establish 15 micro-entrepreneurs

Investment Highlights

- **Business model**: By using a POWERCycle™ pedal generator and rechargeable portable LED lanterns called Nuru Lights we provide clean, sustainable energy anytime and anywhere, improving access to lighting and mobile phone recharging for the poor in both urban and rural areas. A reliable and easy-to-use solution substitutes expensive kerosene, which reduces CO₂ emissions and contributes to the development of local communities. Customers purchase a Nuru light at R80 which is significantly cheaper than other solar options and recharge them on a weekly basis at a cost of R10 per recharge via local micro-entrepreneurs.

- **Strong product model**: demand for solutions like this is strong and will continue to be so in the absence of grid electricity, which will not reach many areas in the medium term. In addition, many low income families that do have some grid electricity are finding it unaffordable.

- **Inventor benefits**: Shakti Energy earns a 60% gross margin on the annual income generated through its franchising system of micro-entrepreneurs.

- **Success in Africa**: Nuru lights have been successfully rolled out in Rwanda and Burundi by our technology partners, Nuru Energy to over 1500 micro-entrepreneurs. Shakti Energy has the sole exclusive distribution rights for the Nuru Energy range of products in South Africa.

- **Profit sharing**: Profits are shared with our micro-entrepreneurs with 40% of profits going directly to them. Mobile Money is employed to collect revenues from micro-entrepreneurs, who purchase recharge credits from us before they can recharge devices. Every micro-entrepreneur can earn an upper income of approximately R24,000 per month, with 1000 Nuru lights in use. An initial investment of R35,000 is required to provide the equipment required with 250 Nuru lights. This enables them to earn a sustainable and repeatable income that can scale as they increase the amount of Nuru lights in use.

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**ESTABLISHED**: 2013  |  **HEADQUARTERS**: Cape Town  |  **IMPACT AREA**: South Africa / Africa  |  **TYPE**: For Profit Social Enterprise  |  **SECTOR**: Energy / Renewables  |  **INVESTMENT REQUIREMENT**: R850,000 in debt funding  |  **STAGE**: Startup  |  **MANAGEMENT TEAM**: Vijay Mitha (Founder and CEO)
Impact Opportunity

SOCIAL
- Local micro-entrepreneurs sell the lights into their communities and earn a sustainable and repeatable income from the recharging of Nuru lights and mobile phones. This income can be used to empower themselves and others in the community.
- Improving community members’ sense of self-worth by providing basic services and saving them money on kerosene, and improving household air quality.
- Community health workers can strap the Nuru Light around their head or neck and use it as a hands-free lamp during night-time births and medical emergencies.
- Schoolchildren can use the Nuru light to read and study after dark without having to use candles or kerosene lanterns, which are dangerous and can cause fires or injury.

ENVIRONMENTAL
- Increasing awareness of climate change and its effects through training micro-entrepreneurs on how distributed energy solutions can benefit their communities.
- Reducing CO2 emissions as a result of cleaner lighting. Each Nuru Light displaces 0.1 tonnes of CO2 every year, improving household air quality and preventing respiratory diseases.

ECONOMIC
- Reducing household expenditure on kerosene.
- Improving people’s productivity by enabling them to work after dark.

Market Environment
South Africa has over 3.4 Million unelectrified households. The majority of these are in informal settlements and rural areas mostly located in the Eastern Cape, Kwa-Zulu Natal, Gauteng, and Limpopo provinces. The current grid is highly constrained and will not provide them with energy in the short to medium term, and for others it will not provide energy that they can afford. Our energy solutions allow households to purchase lighting and mobile phone recharging just as households purchase kerosene and other products in increments, as and when they have income.

Value Proposition
For off-grid consumers, and those who can afford the cost of energy in Africa and South Africa who need access to lighting and mobile phone recharging, the Nuru range of products is a solution that provides affordable, clean, safe and bright light and convenient mobile phone recharging. Unlike solar lanterns which can be lost due to theft, and require more than 8 hours of direct sunlight to charge, our product can recharge 5 lights with just 20 minutes of pedaling at a cost of R10 to provide 20 hours of light at a time.

Management Team
Vijay Mitha (Founder and CEO) has over 25 years of experience in the Information Technology field, with extensive project management experience. He has a passion for BOP (Base of Pyramid) communities and how relevant renewable energy solutions can be implemented and scaled in these environments to empower communities, alleviate poverty and create a better planet for all. Having partnered with Nuru Energy, he has local access to their technology as well as learnings from Rwanda and Burundi, two key markets in which Nuru Energy has proven traction for their range of energy solutions for BOP communities.

“Freedom alone is not enough without light to read books with at night”
- Nelson Mandela
Seeking municipalities, government agencies, independent power producers and community based partners to rollout renewable energy franchises

Highlights

- **Energy Spazashop Franchise**: SolarTurtle sets up community owned shops, which offer a solar battery charging station for selling electricity by the bottle (battery packs), micro-grid connections for powering local schools and businesses, and a shop providing 12V energy efficient appliances.

- **Secure Infrastructure**: For security, portability and scalability, a shipping container (shell) is fitted with a fold-away solar PV system which provides basic electricity to 300-400 households and a local school. At night the whole business folds away into the container for security.

- **Affordable and Accessible**: A bottle costs R150 to purchase and R10 to recharge. The bottle contains a 7A deep cycle battery that offers 70Wh worth of power. With LED lighting up to 65 hours of study time can be provided to families living without electricity. Larger bottles are also available to power more energy hungry appliances.

- **Profitable businesses**: A franchisee can generate an estimated annual income of R285k and R135k net profit, primarily generated through electricity sales. SolarTurtle acting as the for profit franchisor is expected to break-even after 9 SolarTurtle deployments.

**ESTABLISHED**: 2012 | **HEADQUARTERS**: Stellenbosch | **IMPACT AREA**: Off-grid communities in Sub-Saharan Africa | **SUCCESS TO DATE**: Pilot deployed in June 2015 | **TYPE**: Hybrid (for-profit / non-profit) | **SECTOR**: Energy | **STAGE**: Commercialization | **MANAGEMENT TEAM**: James van der Walt (founder and CEO), Charlene Barnes (Project manager), InnovUS Stellenbosch University (Business Partners)
Impact Opportunity

With urban sprawl, and thousands of lower income South Africans moving to our towns and cities every month, the formal electricity grid can no longer service large portions of our population. SolarTurtle franchises are an ideal solution to replace paraffin lights, charge cellphones and power other energy efficient appliances.

The SolarTurtle partners with both grid & off-grid schools, as a last mile distribution and charging point for energy into a community. Learners (and the community) can bring batteries to school for charging during the day. After school, the batteries can be collected and returned home for usage in the evening.

Value Proposition

The SolarTurtle is a renewable energy business is a box. It is assembled and tested off-site, after which it can be transported to any off-grid community no matter how remote due to its portable design. At the site the SolarTurtle becomes operational within minutes thanks to its unique solar panel deployment/security system.

Each of the SolarTurtle franchises are funded with a combination of grants and franchisee fees. These fund the infrastructure setup, deployment, training and stock for each SolarTurtle. Once operational, The SolarTurtle franchisee will pay royalties to the franchisor based on a percentage of revenue generated. SolarTurtle, as a for-profit company, playing the role as franchisor, manages the distribution of products, the maintenance of infrastructure, develops new products for distribution, and provides continued entrepreneurial support to the franchisees.

Management Team

James van der Walt is the founder of the company and has a master’s in mechanical engineering with his research focussed on how micro-utilities should be structured in Africa. He has 10 years of engineering experience in a range fields.

Charlene Barnes is a seasoned project manager and has worked on large design projects (hotel interiors etc.) and she has a degree in information technology.

Stellenbosch University is also a business partner represented by Philip Marais who is business developer at InnovUS (the business leg of the university)

The SolarTurtle has been designed with the aid of the Centre for Renewable & Sustainable Energy Studies (CRSES) at Stellenbosch University, and has won numerous awards including:

- Stellenbosch Idea Completions, 2013
- WWF Climate Solver, 2014
- Better Living Challenge finalist, 2014
- 110% Green Flagship, 2014
Sunchem SA produces high-quality jet fuel and biodiesel from a patented, nicotine-free tobacco variety called “Solaris”. With an agreement to supply SAA with 500 million litres of sustainable jet fuel by 2023, Project Solaris is preparing for take-off.

**Investment Highlights**

- **High Yield, High Margins:** Solaris is a non-GMO and nicotine-free tobacco variety with approximately 33% of the seed being oil and the remaining 66% suitable for animal feed. Compared to other crops used in the biofuel industry, Solaris is exceptionally suited as a feedstock with higher oil yields. This means higher comparable margins per ton of seed.

- **Patented Technology:** After 10 years of R&D in Italy by Sunchem Holding International, Sunchem SA holds the patent and distribution rights to grow Solaris in Southern Africa.

- **Secure Supply:** From 2016, Universal Tobacco, the largest tobacco company in the world, has agreed to handle all Solaris farming operations to meet expansion goals in line with demand. Solaris seed will be sold to Universal Tobacco and semi-processed products of oil and press cake will be bought back exclusively by Sunchem SA, to be traded.

- **Commercial Opportunities:** Agreement signed with SAA for 500 million litres of jet fuel by 2023. 
  
  With a 2% mandatory biofuels blend in SA, there is a large market opportunity for entering the diesel market. Agreement with Grains for Africa to supply their cattle feed with Solaris seed co-product.

- **The Bottom Line:** With notable agreements that guarantee a market, and a major partner handling farming operations, significant return multiples of the initial equity investment are expected by 2020. (See our financial projection).

**Seeking R5.5 million equity investment for expansion of operations in Southern Africa, up-scaling to 5000Ha by 2018**

**TRIALS IN LIMPOPO SINCE 2012**

| Launched in 2014 | Set to provide 500 million litres to SAA by 2023 | Limpopo, South Africa with expansion into Southern Africa | R5.5 million equity (20% ownership) | 5x Return by 2020 | Cape Town, South Africa | Joost van Lier (Managing Director) and Samantha Bartle (Project Manager) |

**CAPITAL REQUIREMENT:** R5.5 million equity (20% ownership)
Solaris, an “Energy Crop”

“Solaris” is the brain-child of R&D company Sunchem Holding (Italy) that cross-bred tobacco varieties for 10 years to develop a non-GMO, nicotine-free variety. Containing excessive seed with up to 33% oil content, Solaris can be grown in multiple climate and soil conditions. This high-yielding crop also produces cattle feed from the remaining 66% of the seed and the potential for the stalk to be used in the paper industry.

Impact Opportunity

ENVIRONMENTAL: The meaningful impact of Project Solaris is twofold. On the environmental side, greenhouse gas reductions of between 60-80% are possible. Along with providing sustainable oil yields for jet fuel, the crop has little to no wastage, ensuring efficient feedstock production all-round.

SOCIAL: On the social front, Project Solaris has partnered with Universal Tobacco to implement the project growing on a larger scale using their large network of numerous smallholder farmers in South Africa, Zimbabwe, Zambia, Mozambique and Malawi, as well as commercial farmers. This partnership will provide ethical and sustainable employment to the poorest farmers.

In an area facing over 60% unemployment, Limpopo has welcomed Project Solaris as part of the socio-economic solution. With the decline of the traditional tobacco industry in the region, infrastructure and expertise on growing tobacco remains. Project Solaris hopes to restore that agricultural industry, nicotine-free.

The Markets

The Solaris seed can be used in two main sectors – namely biofuel and cattle feed. Within the biofuel sector, Project Solaris has agreed to produce at least 500 million litres of jet fuel for SAA by 2023. Normal biofuel supply has also been agreed upon for SAA’s ground fleet. With South Africa importing over 1 million tons of cattle feed a year, Project Solaris also has an agreement with Grains for Africa to buy all cattle feed material provided by the seed.

Value Proposition

Currently Project Solaris is growing 50Ha within the Limpopo province. With secured demand, Project Solaris aims to grow 5000Ha by 2018 with incremental scale-ups every season. Sunchem SA will use this investment to cover operational costs to grow Project Solaris in South Africa from 350Ha to 5000Ha.

Management Team

Joost van Lier (Managing Director of Sunchem SA) is an industrial engineer with 8 years experience in renewable energy and has been involved the development of Project Solaris since the first trials in 2012.

Samantha Bartle (Project Manager of Project Solaris) has an MEng in Renewable and Sustainable Energy Engineering and has managed Project Solaris trials and programme development since conception in 2012.

“The impact this will have on South Africans is astounding...”

- SAA
Seeking an equity investment to build the isiLimela Processing Plant in Africa and develop new products and markets throughout the continent.

Highlights

- **What is pea protein?** Pea protein is extracted from yellow peas (Pisum sativum L.). In the human nutrition market it serves as an alternative to animal protein (beef/chicken/pork/lamb/fish/eggs/dairy/whey) and other plant proteins (soy/maize) and is incorporated into nutritional shakes, prepared meals, baked goods, meat and dairy-type products. It is also used as a protein additive in the pet, agriculture and aquaculture feed markets.

- **Our experience with pea protein.** We have been importing pea protein from the EU since 2012, using it to produce 9 retail products in 3 lines for the human nutritional shake and plant-based meal markets. We have experienced organic growth rates of between 150-200% and reached an annual turnover of R3 million.

- **Processing in Africa opens up markets.** Pea protein is currently an imported ingredient and as such is sensitive to fluctuations in the exchange rate and the oil price. Localising the processing to Africa will improve security of supply and reduce the cost per ton by 54%, making us competitive on the global and African markets. We will become even more competitive when we localise the farming of peas to Africa, which we plan to do within 3 years.

- **Protein demand is growing.** The global demand for protein is expected to increase by 45% over the next 20 years, driven by population growth and economic development. Over 75% of this growth is expected to occur in emerging markets like India and Africa. We currently use 80% of planetary resources to farm animal protein. We simply cannot meet the future demand for protein by scaling up animal protein production. Plant proteins, and specifically pea protein, is the only solution. Globally, the pea protein market grew by 234% (2010-2013) and the USA nutritional shake market alone is predicted to pass $32 million by 2019.

- **Pea protein is the solution.** It is as effective as animal-derived proteins in maintaining health, but has none of the negative impacts on the health of consumers or the environment associated with proteins derived from animals and other plant sources like soy and maize. Localising production to Africa will result in a significant reduction in production costs, making African pea protein very competitive on the global market, ready to meet the increasing global and African demand.

- **Pea protein is a healthier protein.** It contains all the amino acids essential for health and wellbeing, as well as providing additional B vitamins, iron and zinc. It’s ability to build new, and maintain existing muscle is equivalent to that of meat, whey and soy but without any of the inflammatory side effects. It is one of a few alkalising proteins and is uniquely non-allergenic.

- **Pea protein is a cleaner protein.** Pea protein can be produced from non-GMO yellow peas. This crop can be grown without the use of chemical fertilisers, herbicides and pesticides. Protein extraction is water-based, without chemical residue.

- **Pea protein is a sustainable protein.** Peas are a strong nitrogen-fixing crop and nutrient the soil, unlike other plant protein crops like soy and wheat. Pea farming is easily integrated into existing sustainable agriculture practices and can easily satisfy the human demand for protein and fibre.

- **Protein in animal feed.** 85% of global soy and maize production is used to feed animals bred for meat, dairy and eggs. These crops, however, are not as healthy for the environment, the animals or human consumers as pea protein, resulting in massive antibiotic and hormone usage in the industry. The cost of imported pea protein is prohibitive but a local product change this.

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**Established:** 2012 | **Headquarters:** Cape Town, South Africa | **Impact Area:** Africa | **Success to Date:** R3 million in sales with organic growth since establishment | **Type:** For-profit | **Sector:** Agriprocessing and Food Manufacturing | **Capital Required:** An equity investment | **Stage:** Expansion | **Management Team:** Yesheen Singh (Co-founder and CEO), Remo Belluco (Co-founder and COO)
**Impact Opportunity**

**ENVIRONMENT:** Animal protein is an unsustainable source of protein for the rapidly growing and economically developing global population. It currently produces 51% of global greenhouse gas emissions, consumes 80% of all water used and is responsible for 91% of forest destruction, desertification and species extinction. Currently 45% of available land worldwide is used to farm animals and 33% to produce livestock feed. We simply do not have enough land or resources to sustain an expansion in animal protein production. Plant proteins have to be adopted as the solution. However, not all plant-derived protein alternatives are environmentally-friendly - soy, maize and wheat are equally harmful due to genetic modification and toxic cultivation practices. When a community begins to replace their animal and soy protein foods with pea protein-based products their environmental footprint is reduced by between 54 - 102%, depending on whether they substitute some of their meat based meals with pea vs. going vegan. For every metric ton of pea protein used, greenhouse gas emissions are reduced by 120 tons CO2 and agricultural water usage by 182 m3.

**HEALTH:** Contrary to popular belief, animal proteins are not the healthiest source of protein for the human body. It is an inefficient protein source - only 13% of animal protein consumed is assimilated into the body whereas 80% of pea protein eaten is assimilated. Most damning are the long-term studies being published that describe how diets high in animal proteins lead to an increased risk of diseases - 130% greater risk for autoimmune diseases, 80% greater for lifestyle diseases such as diabetes and hypertension, and 50% greater risk for cancers of the breast, colon and prostate. Replacing animal protein with pea protein has the potential, among regular consumers, to reduce the number of new diagnoses of autoimmune diseases, lifestyle diseases and cancer by by 34% and improve their quality of life by 15%.

Soy protein has been marketed as a healthy plant protein alternative and has become widely disseminated, mostly due to low costs secondary to subsidised production. However, processed soy protein, when consumed regularly, is associated with many human and animal health risks, ranging from hormonal problems in the thyroid, ovaries and testes, to osteoporosis and autoimmune conditions. Pea protein does not have a similar risk profile.

**Market Environment**

Pea protein was introduced to the human consumption market in South Africa in 2012 through our PhytoPro brand of protein nutritional shakes and Health Nation brand of textured protein food products, which have seen annual growth rates of >150%. Demand is consumer-driven, who seek alternatives to meat-, whey- and soy-based products. Our primary markets are the sports nutrition and plant-based meal markets, estimated to be worth R40bn and R57m respectively in South Africa alone (2014) and exhibit growth rates of 11% and 25% respectively. The agriculture and aquaculture feed markets, worth R7.9b in South Africa alone (2010), while appreciating the benefits on yield and health, remain wary of the cost of imported pea protein. The agricultural feed market is growing at an annual rate of 3.8% and the aquaculture feed market at 7% globally.

Localising the production and processing will not only enhance the existing markets, but open up new opportunities in the sports nutrition and plant-based meal markets based on price. In addition, it will also create new agricultural and aquaculture feed markets for the same reason.

**Value Proposition**

Terrasano Holdings will use this round of investment to build the ISIL-IMELA PROCESSING PLANT. The plant will initially utilise imported yellow peas while we develop a local agricultural supply chain, whereafter only locally sourced yellow peas, from commercial and eventually smallholder farmers, will be used to produce our range of protein, starch and fibre products for the human and animal feed markets. This will provide these markets with a healthier, more environmentally-friendly source of complete protein that meets their nutritional needs in an affordable manner.

**Management Team**

**DR YESHEEN SINGH** (Co-founder, CEO): Yesheen has a medical background (MBChB) and additional qualifications in business administration (MBA) and public health (MPH) from the University of Cape Town. His passion for pea protein began when he introduced it to patients at his chronic disease practice and observed positive change in both range and severity of disease symptoms in those who utilised it regularly. He cut his entrepreneurial teeth when, together with Remo, he set up Health Nation in 2010 and Phyto Pro in 2012. Phyto Pro produces and distributes pea protein-based products to the broader South African market. It has experienced organic annual growth in sales of between 150-200% and logged a turnover of R3 million in the last year.

**REMO BELLUCO** (Co-Founder, COO): Remo has a 20 year history in the international food and hospitality industry and is experienced with, and passionate about, plant-based food technology and product development. He has been the operational lead for the pea protein business he founded with Yesheen in 2012 and has formulated the current range of pea protein-based sports nutrition and plant-based food products.
Biogreen is a leading South African biodiesel company using patented, state-of-the-art technology capable of producing high quality biodiesel from both waste and virgin oils.

Seeking R6 million equity investment to expand production facilities in Gauteng and KwaZulu-Natal

Investment Highlights

- **Scale and Stability**: Established in 2009, Biogreen is one of the oldest and currently the largest biodiesel producer in the country.

- **100% Waste Vegetable Oil (WVO)**: Biogreen’s biodiesel feedstock is the most environmentally friendly biofuels available and also combats a key social issue – the harmful resale and reuse of WVO in low-income South African communities.

- **Patented, Highly Efficient Technology**: Jet reactor technology uses fewer chemicals and less electricity, reducing processing costs versus traditional methods.

- **Diversified, Blue Chip Supplier Base**: Biogreen’s ability to secure a steady and large supply of WVO is a key driver of its success. The Company’s WVO suppliers include Burger King, Cape Concrete, Pick n Pay, Woolworths and more.

- **Strong Product Demand**: Biodiesel is an accepted commodity in the industrial market with high demand when at parity prices to petroleum based diesel.

- **Regulatory Tailwinds**: The South African government is establishing a new regulatory framework to encourage / mandate biofuels industry development and consumer demand. A 5% mandatory biodiesel blend will come into effect in October 2015.

- **Attractive Margins and Financial Profile**: Total input costs including input oil and processing are R5-6 per litre and biodiesel can be sold at R9.5-12 per litre and up depending on the existing market rate for petroleum based diesel. This provides 45% and more gross margin on every litre sold.

**ESTABLISHED**: 2009  |  **HEADQUARTERS**: Cape Town, South Africa  |  **IMPACT AREA**: South Africa  |  **SUCCESS TO DATE**: Sold 700,000+ litres of biodiesel since establishment  |  **TYPE**: For-profit  |  **SECTOR**: Biodiesel (renewable energy)  |  **INVESTMENT REQUIREMENT**: R6 million  |  **STAGE**: Scale  |  **MANAGEMENT TEAM**: Roy de Gouveia (Founder & Managing Director) & Jeff Theodor (Director)
**Impact Opportunity**

**ENVIRONMENTAL:** Biodiesel extends the usefulness of petroleum as well as the longevity and cleanliness of diesel engines. The overall ozone (smog) forming potential of hydrocarbon exhaust emissions from biodiesel is ~50% percent less than that for conventional diesel (Average Biodiesel Emissions Compared to Conventional Diesel.) The most environmentally friendly and energy-efficient biodiesel production is from WVO. Biodiesel made from waste products does not require dedicated agriculture production, thus reducing the overall impact on Green House Gas emissions.

**SOCIAL:** WVO is currently being illegally reused for human consumption in South Africa. The WVO is filtered, bleached and then rebottled and sold as “fresh” cooking oil in low-income communities. Unknowingly, these communities are consuming mislabelled products that are extremely detrimental to their health. A growing biodiesel market that productively reuses WVO will make this illegal practice no longer economically viable.

**Market Environment**

Biodiesel has been locally sold into the Commercial industry – agriculture, transportation, mining and off grid generation – for over 10 years. Demand is currently driven principally by reliable supply and price. Over 1 million tons of vegetable oil is consumed annually in South Africa and it is estimated that there are in excess of 27 million litres of WVO available on a monthly basis. Much of this WVO was being shipped to Europe for biodiesel production, however, European virgin oil stock has grown to a level where shipping WVO from South Africa is no longer economically feasible. This has had large impact on the supply available locally and induced downward pressure on pricing. There are currently no crops being grown for biodiesel production principally because regulatory mandates have not been established to date. In the 2nd to 3rd quarter of 2015, the South African DoE is expected to release the final version of a supportive regulatory framework for the Biofuels sector. The new framework will include mandatory blending levels and raise tax-free production caps for producers.

**Value Proposition**

Biogreen is currently producing and selling biodiesel in the Western Cape and supplying from other producers in other provinces. Accordingly, it is uniquely positioned to expand production into the other two major markets in South Africa. The Company will use this investment round to finance the establishment of two additional production facilities in Gauteng and KwaZulu-Natal and for working capital. With 5+ years of operating experience in the Western Cape, Biogreen has a proven business model and long-standing relationships with blue chip suppliers, which is key to scaling. Feedback indicates these suppliers seek to partner with a single off-taker provider with a nationwide presence. In addition, Biogreen has a firmly established customer base prepared to purchase everything it can produce. With gross margins of 45% and more per litre, Biogreen is well positioned to scale, make a meaningful environmental and social impact, and provide a commercial return to investors.

**Management Team**

**ROY DE GOUVEIA** (Founder & Managing Director): Roy is a veteran of the hospitality industry, having owned various restaurants in the Western Cape and Gauteng, including Wakame, Wasabi and Salushi. He is an ex-board member of Cape Town Tourism and FEDHASA and was also an assessor and working group panel member of the Tourism Grading Council of South Africa.

Roy’s experience and contacts in the restaurant and hotel business have been essential in enabling Biogreen to procure large quantities of waste cooking oil. He currently sits on the board of SABA (Southern African Bioenergy Association) as well as on the committee which brought about the new SANS 1933 Biodiesel Spec, the current standard in South Africa for Biodiesel.

**JEFF THEODOR** (Director): Jeff has spent 25+ years in the financial world and brings extensive business acumen to Biogreen. His business interests and expertise range across the environmental, industrial and real estate sectors.
Mobenzi is a mobile-first technology impact business headquartered in Cape Town, South Africa, which empowers communities and frontline workers in more than 40 countries.

Seeking R12m equity capital to further develop its product base and expand operations globally

**Investment Highlights**

- **Scale and stability:** Established in 2009, Mobenzi currently services clients in over 40 countries, generates R9m in annual revenue and employs 16 people.

- **Attractive annuity income and financial profile:** Mobenzi’s business model blends together short-term, cash generative services with long-term annuity income streams. Revenue from annuity-based services is rising, with one third already stemming from recurring sources.

- **Enticing growth strategy:** Mobenzi has grown organically through direct client engagement, but its global strategy will enable it to scale by leveraging its technology through partnerships.

- **Powerful impact value proposition:** Mobenzi’s “not only for profit” philosophy drives its mission to improve service delivery and expand access to those who are in greatest need.

- **Mature offering:** Mobenzi has developed a robust suite of sophisticated, integrated platforms which have been field-tested and refined over many years in some of the most challenging deployment conditions imaginable.

- **Strong product demand:** Mobenzi requires capital to grow, as the global demand for its services far outstrips current capacity.

- **Diversified blue chip global clients:** Longstanding, high profile clients include the CDC, Oxfam, Nandos, UNICEF, World Vision, public sector institutions (including the South African government) and many of the world’s leading academic and research institutions.

**ESTABLISHED:** 2009 | **HEADQUARTERS:** Cape Town | **IMPACT AREA:** Health / Education / Agriculture | **SUCCESS TO DATE:** Operating in 40 countries, generating R9m revenue | **TYPE:** For-profit | **SECTOR:** Mobile for development | **CAPITAL REQUIREMENT:** R12m | **STAGE:** Growth | **MANAGEMENT TEAM:** Andi Friedman (CEO), Pete Fowles (CTO)
Value Proposition
Mobenzi has developed a suite of flexible mobile applications and software-as-a-service (SaaS) platforms which can be rapidly configured and applied to a broad range of sectors and use cases. The platforms are targeted at frontline workers and enable structured mobile interactions (e.g. data collection and content distribution) supported by flexible back-end workflow and reporting.

The platforms include self-service components (e.g. mobile data collection), flexible Application Programming Interfaces (APIs) and developer tools for the configuration of targeted turn-key, vertically-focused solutions.

Mobenzi is experiencing significant demand for its mobile solutions across multiple sectors, and requires growth capital to support its expansion globally.

“The mHealth project has improved the work of the CHWs. They are now confident and motivated because of this innovative technology and their performance has also improved.”
- Community Outreach Team Leader,
  North West Province, South Africa

Impact Opportunity
Mobenzi has the potential to disrupt a number of sectors including health, education, research, and agriculture to name a few. Mobenzi’s strategy is to build internal capacity in sectors where it already has traction, and develop partnerships where others have the necessary domain experience but lack technical expertise.

The potential impact presented by Mobenzi’s technology in primary health care provides a clear illustration of where it can (and has begun to) revolutionise the sector through the empowerment of community health workers (CHWs) and outreach teams.

Mobenzi’s community outreach mHealth solution has been field tested since 2012 and has already been rolled out to over 600 health workers in several South African provinces – with further expansions planned. It has the potential to be scaled nationally and throughout the developing world, improving access to health services for millions of South Africans – and hundreds of millions of people around the globe.

Another example, in the education sector is illustrated through the empowerment of school principals and the circuit managers who support them. Mobenzi’s technology is currently being deployed to over 1,200 school principals in South Africa. The solution enables principals to track and report on attendance, and guides contextual, evidence-based management conversations between the principal and their circuit manager. Integrated communication tools further strengthen the relationship between the school and district.

Significant opportunities also exist to deliver impact by empowering farmers, agricultural extension officers, micro-entrepreneurs and other community agents with similar tools.

Management Team
Mobenzi is led by co-founders Andi Friedman (32 years, CEO) and Pete Fowles (30 years, CTO). Andi and Pete have worked together for more than a decade and have built several successful technology businesses.

Andi serves on the board of the Cape Town chapter of Entrepreneurs Organization (EO) – a worldwide network of over 10,000 successful entrepreneurs. His speaking appearances include TEDx and the GSMA mobile for development panel at Mobile World Congress.
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