



## AGRICULTURE CHALLENGE BRIEF

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Addressing challenges affecting the future of food security in Southern Africa.



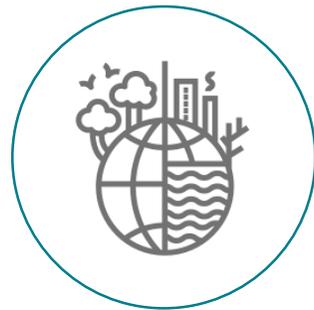
# FOR THIS CHALLENGE WE ARE ASKING THIS QUESTION



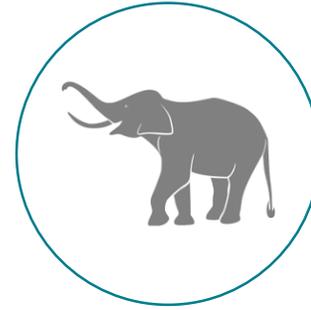
How might we enhance future food security for people in Southern Africa, by creating solutions in the following current problem areas:



**BUILDING AN  
EFFECTIVE SUPPLY  
CHAIN**



**MITIGATING RISK  
OF CLIMATE CHANGE**



**HUMAN  
ANIMAL CONFLICT**



**AGRICULTURAL  
TECHNOLOGY ADOPTION**

\*A solution solving for more than one of these areas is applicable.

# WHY FOCUS ON AGRICULTURE



A study by Generation Africa shows that Africa's agricultural food sector has the potential to offer an estimated \$1 trillion opportunity to young entrepreneurs by the year 2030.

## THE CHALLENGE

On the current African growth trajectory, population growth is likely to compound poverty in Sub-Saharan Africa as it is overtaking economic growth. If the continent's economy grows on average around 4% per year to 2035; by then, as many as 170 million more Africans could live in extreme poverty than today.. Twice the workforce also means twice the mouths to feed, house, and employ, not to mention twice the number of voters. (David Tal, 2018)

Currently, sixty percent of the world's unused land is in Africa. Even within South Africa, in the north of the Limpopo, smallholder farmers are responsible for 90% of the production in Africa. In South Africa alone, 90% of production comes from commercial farms; indicating major opportunity to ensure food security by tapping into the potential of the land and the farmers themselves.

Without ultimately harnessing larger crop yields and implementing robust supply chains across the region; it puts pressure on Southern African food governments to find alternative food sources for communities, resulting in further hikes in daily living expenses – where a large percentage of the population can already not afford to keep up. By giving entrepreneurs the platform for tackling these innate issues, we are able to curb food insecurity from a supply end, as well as a financial end.



# BUILDING AN EFFECTIVE SUPPLY CHAIN



How do we create and sustain a robust, maximised food supply chain applicable to Southern Africa?



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- Supply chain methods that can be introduced cost effectively into rural areas
- Supply chain applications to feed communities with little access to food
- Removing an action in a generic supply chain to lower costs and reach consumers more effectively

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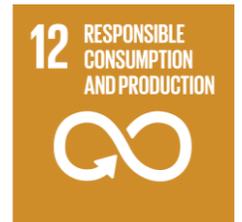
- Maximise one point in the supply chain
- Strengthen linkages across a section or whole supply chain
- How to reduce waste products or re-introduce waste back into the supply chain

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- How to distribute income fairly across the supply chain; and prevent cash leakages
- How to ensure small-farmer market access through a robust supply chain

**“The African agricultural sector is set to experience exponential growth over the next decade, but only if the sector diversifies enough and continues to invest in the factors inhibiting growth in Africa such as structural, financial and infrastructural challenges. Diversity is important for the growth of the agricultural sector as it allows for tapping into diverse global markets.”**

- Omri Van Zyl, Head of Deloitte Africa Agricultural Unit (DAAU) & Deloitte Africa Agriculture Leader.





# MITIGATING RISK OF CLIMATE CHANGE



What measures can be put in place to minimize the impact climate change on African farmers?

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- Education and behavioural change methods for small-scale and large-scale farmers
- How to maximise crop yields in unfavourable conditions
- Low cost watering solutions

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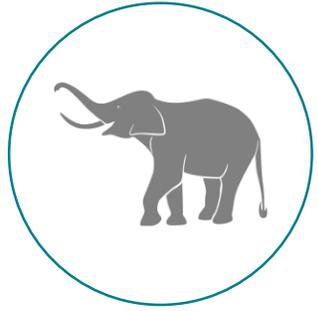
- Green solutions to decrease carbon footprint
- Clean energy applications to agricultural methods
- Soil fertility\*

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- Water retention\*
- Temperature control
- Recycling techniques
- Alternative/ natural forms of pesticides
- Mitigating the risk of weather phenomena – floods/ super droughts, and other



\*Please note, for water retention and soil fertility; the soil and water conservation methods must be stipulated: biological/ physical/



# RESOLVING HUMAN-ANIMAL CONFLICT



What cost effective solution (product, process or system) can be implemented to reduce conflicts, without endangering humans or animals?  
Non-damaging/ non-traumatic

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- Implementable product to minimise interactions between animals and humans
- Enforcing methods to change routes of animals away from farmlands and communities
- Education methods to equip humans with how to react in confrontations
- Natural behavioural change methods to reduce population size of elephants in favourable areas



**Botswana has reserved 42% of its land for national parks and game reserves. The initial carrying capacity for the elephant population in Botswana alone is 54,000, but has grown to 160,000. There therefore needs to be a balance between conservation and sustainable utilisation of natural resources for the improvement of living standards of its citizens.**

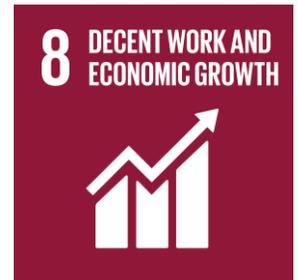


# ENABLING AGRI-TECH ADOPTION



How can we seamlessly integrate technology into rural farmlands?

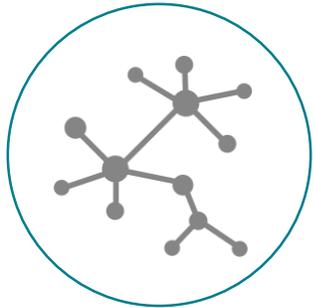
- 7** - Harnessing natural resources to boost technological performance and usage
- Clean- energy technological applications for agriculture
- Mechanisms to lower costs of agri-tech adoption and usage
- 8** - Education/ training of small-scale farmers on how to use technology on their farms
- How to optimise technology maintenance and customer support
- Methods of introducing technology to lower income farmers
- 10** - Behavioural changing mechanisms to ensure technology is used optimally
- Mitigating risk of theft/ damage of hardware in rural farmlands



**“Science and technology coupled with improved human capital have been powerful drivers of positive change in the performance and evolution of smallholders systems.”**

– United Nations.

# END GOALS FOR THIS CHALLENGE



## ENABLE COLLABORATION

We aim to enable collaboration between start-ups, students, organisations, industry experts, and supporting ecosystems that will boost capacity, knowledge and skill to ensure the success of finalists.



## EMPOWER ENTREPRENEURS

Through this challenge, entrepreneurs and businesses who are capable of solving the issues will gain access to market, valuable business training and be introduced to relevant players in their fields.



## SOLVE RELEVANT ISSUES

We want to empower solution providers to solve the pressing issues of today, by creating sustainable businesses that they can use for greater quality of life.



## SECURE SOUTHERN AFRICA'S FUTURE

By solving relevant issues now, we can ensure the future of the selected sectors for the SADC region, but ensuring sustainable and scalable solutions are selected and implemented.

# WHAT IS IN IT FOR YOU



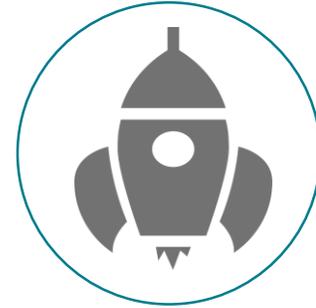
## ENTREPRENEURIAL TRAINING

A 3-day entrepreneurial training workshop will take place with the selected finalists. This will take you through important business basics to get your submission to the next level, and to build your overall business



## 3 MONTH INCUBATION

The winners of the challenges selected will be incubated at BITRI in Gaborone, with additional business skills training from Debswana incubation program. This incubation is also tailored to your



## ACCELERATOR PROGRAMMES

After the incubation period, should the winners feel they need more support, they will have first access to the Tech Tribe Accelerator - an online acceleration program tailored to their start-up needs.



## NETWORK AND MARKET ACCESS

Once the finalists are ready for market, they will be introduced to a range of support networks, as well as potential investors and market accessors, to take their solution to the next level.

# WHAT WE ARE LOOKING FOR



A potential solution to solve these issues that are at ANY of the following stages:



Your solution will be judged within parameters according to where your idea is within the start-up development stages.

The training and incubation will then be tailored to these outcomes.

Should you be a large corporate entering, we will assess the idea as a 'start-up', adjust the parameters of your submission based on what the judges think is sustainable for your particular business.

Ideating	Concepting	Committing	Validating	Scaling	Establishing
Entrepreneurial ambition and/or potential scalable product or service idea for a big enough target market. Initial idea on how it would create value. One person or a vague team; no confirmed commitment or no right balance of skills in the team structure yet.	Defining mission and vision with initial strategy and key milestones for next few years on how to get there. Two or three entrepreneurial core co-founders with complementary skills and ownership plan. Maybe additional team members for specific roles also with ownership.	Committed, skills balanced co-founding team with shared vision, values and attitude. Able to develop the initial product or service version, with committed resources, or already have initial product or service in place. Co-founders shareholder agreement (SHA) signed, including milestones, with shareholders time & money commitments, for next three years with proper vesting terms.	Iterating and testing assumptions for validated solution to demonstrate initial user growth and/or revenue. Initial Key Performance Indicators (KPI's) identified. Can start to attract additional resources (money or work equity) via investments or loans for equity, interest or revenue share from future revenues.	Focus on KPI based measurable growth in users, customers and revenues and/or market traction & market share in a big or fast growing target market. Can and want to grow fast. Consider or have attracted significant funding or would be able to do so if wanted. Hiring, improving quality and implementing processes.	Achieved great growth, that can be expected to continue. Easily attract financial and people resources. Depending on vision, mission and commitments, will continue to grow and often tries to culturally continue "like a startup". Founders and/or investors make exit(s) or continue with the company.

Startup Development Phases - From idea to business and team to organization.

Version 3.0 - [www.startupcommons.org](http://www.startupcommons.org)



# CRITERIA FOR JUDGING



CRITERIA	DESCRIPTION	1	2	3	4	5
Solution contributes to enhancing food security by solving the asked challenge	Solution is relevant to at least one of the four chosen problem areas, and ultimately works towards enhancing food security. Challenge/s solved for must be stipulated in submission	No value to food security	Limited value add to food security	Fair value add to food security	Excellent value add to food security	Can revolutionise food security
Contribution to Sustainable Development Goals (SDGs)	Does the solution satisfy at least one SDG goal based on the UN's outcomes. Should it be a different goal to what is stipulated in the brief, it must be motivated.	No relation to SDG goals	Limited contribution to achieving SDG goals	Fair contribution to achieving the SDG goals	Can greatly contribute to achieving the SDG goals	Can fulfil an SDG in a specific area/ community
Ease and sustainability of implementation, with all possible impacts considered	An implementation strategy must be included, with sustainability and ease of the strategy noted. All potential positive and negative impacts of implementation must also be considered	Not sustainable AND highly difficult to implement	Not sustainable OR not highly difficult to implement	Potential to be sustainable, with some potential impacts	Easily and sustainably implementable, with minimal negative impacts	Most sustainable, with only positive impacts
Feasibility of solution	The solution is physically possible within it's environment, with no additional R&D required to ensure the success of implementation	Not feasible	Has potential to be feasible	Feasible, with fair obstacles	Feasible, with minimal potential obstacles	Very feasible
Viability of solution	The solution can be used in a business model, and can be profitable.	Not viable (clear financial loss)	Has potential to be viable	Can be viable with additional funding	Solution is financially sustainable	Solution has potential to be worth more than 1million USD
Team capability and intent	The team is passionate and dedicated to the solution; and are able to solve problems effectively	No passion or want to solve problems	Team has little interest/ capacity	Team has passion, but other priorities	Team has passion and few other priorities	Team is fully dedicated to solution

# TIMELINE

## WHAT TO EXPECT



25 September

Submissions Close

1-10 October

3-day entrepreneurial training  
(Gaborone, Botswana, or  
Johannesburg, South Africa)

21 October 2019  
to 7 February 2020

3-month physical or virtual  
incubation  
(Physical incubation in  
Gaborone, Botswana)

Post feedback  
discussions

Accelerator program  
OR  
Investor introduction

- All announcements will be made with enough time to accommodate for planning.
- Please note that for this challenge, no travel costs will be covered. Should you not be able to attend the training in person, you can access the material and exercises through our online platform.
- Should you have any questions or queries, please do not hesitate to contact us at [info@oiregionalconnect.com](mailto:info@oiregionalconnect.com).

# SUBMISSION INFORMATION



Send your submission to:

[agrisubmissions@oiregionalconnect.com](mailto:agrisubmissions@oiregionalconnect.com)

BEFORE 25 SEPTEMBER 2019

A template of a submission is available on:

[www.oiregionalconnect.com](http://www.oiregionalconnect.com)

For exact instructions of information needed to be submitted.

For any questions/ queries, please email

[alana@oiregionalconnect.com](mailto:alana@oiregionalconnect.com)

# SUBMISSION CHECKLIST



- Submissions have to be completed with the template found on the website – other formats will not be accepted. Should you not be able to download the template, email [info@oiregionalconnect.com](mailto:info@oiregionalconnect.com) and we will send a template to you in format of your choice.
- Any additional documents/ materials must be uploaded in pdf format
- Final submission date 25 SEPTEMBER – nothing will be accepted afterwards
- Check if your submission matches judging criteria. There will be a chance for you to score your submission yourself with the criteria given in the brief
- Should you want to motivate your submission further, write a paragraph to state the additional positive impacts your project can have on Southern Africa
- If you have any questions, do ask.
- ENJOY the submission! 😊

# ADDITIONAL RESOURCES TO UNDERSTAND THE CONTEXT



## BEGINNER BUSINESS TOOLS:

### A. The Business Model Canvas

All the building blocks of your idea on one page – it will help you assess what key parts are missing to make your solution a success

<https://www.businessmodelsinc.com/about-bmi/tools/business-model-canvas/>

### B. THE DVF Framework

A tool to help you find your ‘innovation sweet spot’ – it will lower your risks when opening your business.

<https://medium.com/innovation-sweet-spot/desirability-feasibility-viability-the-sweet-spot-for-innovation-d7946de2183c>

## ADDITIONAL RESOURCES:

### Human animal conflict:

<https://www.worldbank.org/en/news/feature/2016/03/03/5-things-you-may-not-have-known-about-human-wildlife-conflict-in-botswana>

<https://www.enca.com/news/botswana>

<https://mg.co.za/article/2019-03-13-00-botswanas-lifting-of-hunting-ban-will-protect-wildlife>

### Climate change

[https://www.geo.fu-berlin.de/en/v/geolearning/watershed\\_management/soil\\_and\\_water\\_conservation/swc\\_measures/index.html](https://www.geo.fu-berlin.de/en/v/geolearning/watershed_management/soil_and_water_conservation/swc_measures/index.html)

### Agri-tech adoption

<https://www.bizcommunity.com/Article/196/358/178952.html>

# DISCLAIMER

## INTELLECTUAL PROPERTY



The intention of this challenge is to identify promising social and technological innovations that could be implemented in the Southern African region.

It is important that no confidential intellectual property or information is disclosed through this process. This may include pre-existing software, processes, systems or market research that is not publicly available.

By submitting a response, you represent that your response does not, and will not be deemed to, contain any confidential information of any kind whatsoever. RIIS, SAIS and its project partners will not be held liable for the loss of any intellectual property.

In the event that your solution is selected, if required, a partner agreement will be signed to protect intellectual property.