**ZA**SPACE **Inc.**

**SANSA** — SOUTH AFRICAN NATIONAL SPACE AGENCY

# SPACE-TECH INNOVATION CHALLENGE

## COMPETITION BRIEF

riis · MAXAR · REGIONAL CONNECT · ANZA CAPITAL · SA INNOVATION SUMMIT

# WHAT IS THE QUESTION WE ARE **ASKING**

How might we enhance and improve sustainability and socio-economic development through the innovative application of Earth Observation Data?

How might we do this through utilising Big Data analytics techniques, Artificial Intelligence, Machine Learning and cloud computing.

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# WHY FOCUS ON **SUSTAINABILITY & CONSERVATION**

> "Economic growth is not sustainable without social and environmental justice"
>
> *– Kumi Naidoo, executive director, Greenpeace International*

## The Challenge:

Africa has a great opportunity to learn from the mistakes made in the past. The continent needs to adopt a more sustainable approach as it moves forward. An economy that is based on fossil fuels, overexploitation of forests and nature resources and lack of social development is not sustainable. This can already be seen through the devastating impacts such as; climate change, poaching, habitat destruction, pollution, food security and disease outbreaks. Africa can focus its approach by harnessing the power of satellite data, allowing some of the most pressing challenges facing our planet to be addressed. Including; sustainably managing the environment, mitigating and adapting to climate change, managing our water resource, reducing disaster risks, and increasing social development.

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# SPACE-TECH & **SUSTAINABILITY**

The application of earth observation data (EOD) is enabling the drive to a more sustainable future by **increasing socio-economic development**. NASA earth observation data is currently being used to map the quality of tropical rainforests. The maps show considerably more insight than ever before, and help track disturbances such as logging and fire.

For this challenge, how can you utilise EOD to solve a problem or provide improvements to people and/or the environment? To the right are just some of the possible applications.

**Healthcare**
- Infectious disease monitoring
- Infectious disease modelling
- Vaccine distribution
- Healthcare access and rural health monitoring
- Tele-health services

**Energy & operations monitoring**
- Renewable energy
    - Energy production forecasting
    - Site selection
- Oil & gas pipeline monitoring
- Ship route management & fuel optimisation

**Climate change**
- Sea level variable tracking
- Water-source monitoring
- Coastal protection
- Natural disaster & extreme weather forecasting & monitoring
- Monitoring of commercial pollution
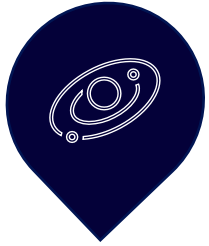- Pollutant tracking

**Nature conservation**
- Monitoring deforestation and degradation
- Forest health management
- Remote sensing of animal movement
- Monitoring forest fires

**Poverty reduction**
- Identification of areas in need of the most aid
- Monitoring of land distribution
- Identification of agricultural land
- Healthcare resourcing

# END GOALS FOR THIS **CHALLENGE**

## Grow SADC's Space-Tech Environment

Identify and empower the creation and use of downstream technologies.

Increase public awareness around the potential applications of space-tech.
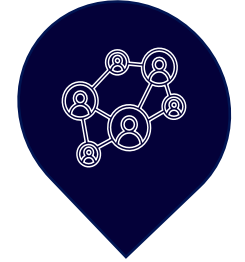
## Empower Entrepreneurs

Inspire young Africans about new frontiers, discoveries and technologies.

Provide access to valuable training, market and investors.

## Enable socio-economic development

Develop at least 10 early-stage African businesses into sustainable companies that are linked to regional markets.

## Enable Collaboration

Between start-ups, organisations, industry experts, and supporting ecosystems to boost capacity, knowledge and skill to ensure the success of finalists.

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# WHAT IS IN IT FOR **YOU**

**All participants will receive:**

- The opportunity to pitch their businesses to a global audience at GEO Week, an intergovernmental earth observation conference

- Screening for investment by Anza Capital

- Industry links and market access through ZASpace and partners

- Media coverage and social media blasts through ZASpace and partners

**Top 10 participants will receive:**

- 1-month intensive business development training through the Research Institute for Innovation & Sustainability

- The opportunity to showcase your company / application to investors and industry representatives during final pitching den

**Winners will receive:**

- 4-month online incubation and virtual mentorship, and ongoing access to a peer-to-peer network through the TechTribe
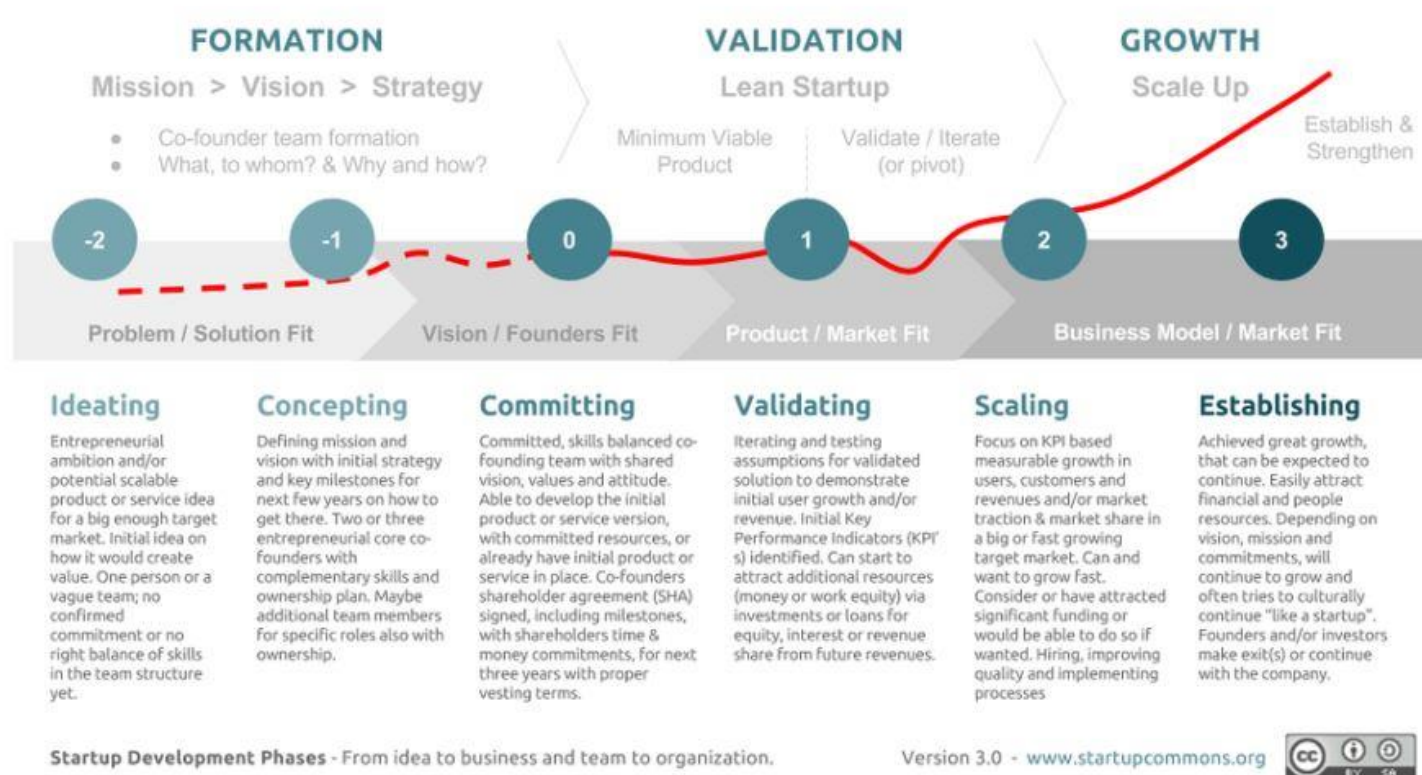
# TIMELINE

| Submissions Close | Online Pitches at Geo Week | Business Development Training | Final Pitching Den | Online Incubation & Virtual Mentorship |
|---|---|---|---|---|
| 16 October | 4-6 November | 9 November - 4 December | January 2021 | January - April 2021 |

- 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 zasubmissions@oiregionalconnect.com

# WHAT WE ARE LOOKING **FOR**

We are accepting applications at any stage of development.



- The training and incubation will be tailored to your required outcomes.

- Your solution will be judged according to the criteria and the start-up development stage you fall within.

# CRITERIA FOR **JUDGING**

| Criteria | Description | Points |
|---|---|---|
| **Solution uses Earth Observation Data in an innovative manner** | Solution uses Earth Observation Data in order to reach the goal stipulated. It can be used at any stage of the process. | 5 points |
| **Contribution to the sustainability and conservation industry** | Does the proposal assist the sustainability and convservation industry with a scalable solution / application. Does the solution / application provide a meaningful impact. | 5 points |
| **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. | 5 points |
| **Feasibility of solution** | The solution / application has a proof of concept and any additional R&D or technological requirements are known. | 5 points |
| **Viability of solution** | The solution can be used in a business model and can be profitable. | 5 points |
| **Team capability and intent** | The team is passionate and dedicated to the solution; and are able to solve problems effectively. | 5 points |

# SUBMISSION **INFORMATION**

Complete your submission at: https://spacetech.africa/

**BY MIDNIGHT 16 OCTOBER 2020**

A template of the Space-Tech Challenge submission form

is available for download on the Space-Tech Challenge website

Please complete this form and submit it as a pdf in the online submission form

For any queries, please email

zasubmissions@oiregionalconnect.com

# SUBMISSION **CHECKLIST**

- Submissions must be complete with the Space-Tech Challenge submission form template found on the website and submitted in pdf format through the form on the website.

- Any additional documents / materials need to be included in this document.

- Once completed, upload the Space-Tech Challenge submission form as part of the online submission, along with the other required details.

- Final submission date is 16 OCTOBER – nothing will be accepted after this date.

- Check if your submission matches the judging criteria. You can score your submission yourself with the criteria given in the brief.

- If you have any questions or queries, do ask.

- Enjoy the submission! ☺

# ADDITIONAL **RESOURCES**

BEGINNER BUSINESS TOOLS

- 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
    - Business model canvas videos (6 episodes)
- THE DVF Framework
    - A tool to help you find your 'innovation sweet spot' – it will lower your risks when opening your business

ADDITIONAL INFORMATION

- South Africa Launches ZASpace Inc To Boost Investment In The Local Space Industry
- New entity launched to stimulate and coordinate the South African space sector
- Earth Observation Support Tools for Socio-economic Needs During the National Lockdown
- South African space sector set to grow with new Space Infrastructure Hub

# DISCLAIMER

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

No stake/equity in your business will be required by the implementation partner, so It is important that no confidential intellectual property or information be disclosed through this process. This may include pre-existing software, processes, systems or market research that is not publicly available. However, should that become an option in future, the necessary steps will be followed.

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. SANSA, ZASpace 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 non-disclosure agreement or other appropriate legal documents will be signed to protect your interests.