

FREE

THE

SPATIAL TIMES



BRIDGING THE BORDERS BETWEEN

CATCH THEM YOUNG

Meet young surveyors &
Geomaticians around Africa

Professional Tips & Guides

Want to be outstanding in your professional conduct? Reverse the hunt, make them look for you.

Business showcase

BY AFRICAN SURVEYORS CONNECT

issue 01

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www.africansurveyors.net

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BUSINESS TIPS & GUIDES

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- Starting a Land Surveying business

PROFILES

- Llyod Ngundu | 3rd Year student
- Handsome Nyoni | Recent Graduate

GAMES

Spatial Crossword



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FROM THE EDITOR'S DESK

It is with great pleasure & satisfaction that I welcome you to the 1st Issue of **The Spatial Times** magazine.

At one point in time we actually thought we could not get this far but with the contributions from the community & beyond we have managed to pull through.

Our main focus for this magazine is to highlight some of the activities that occur in our day to day lives as students & professionals of the Geomatics & Surveying profession.

We hope that you enjoy our first edition as we will be releasing more editions in the future. This initiative can only be supported by our readers whom we value the most it.

~ Matingo Kumbirai N



ANALYSIS-READY SATELLITE DATA FOR ALL OF AFRICA TO SUPPORT COVID-19 RESPONSE AND RECOVERY

African nations can now access high-resolution satellite images in the Digital Earth Africa (DE Africa) platform that will enable countries to monitor changes that relate to people and the environment due to the impacts of COVID-19 and other critical challenges.

Story

By the News Deck Team at GeospatialWorld

DE Africa has made available a vast amount of data captured by The European Space Agency's Sentinel-2 satellites in a format that makes it accessible and suitable for general use. Satellite images captured by Sentinel-2 are particularly important for Africa because they offer ten-metre resolution and are captured every five days, so land and water can be analysed in unprecedented detail. Satellite imagery can be used to address many challenges faced by the African continent as it enables countries to actively monitor and manage natural resources and respond to crises, said DE Africa Managing Director, Dr Adam Lewis. "We are pleased to announce the availability of this new data within the DE Africa platform. It is the first analysis-ready data at the continental scale for Africa, meaning it is made available shortly after images are captured and provided in a familiar image file format."

Optimizing the availability and accessibility of satellite data places Africa in a better position to drive decisions across the continent. It addresses the key problem of making vast amounts of data being captured by satellites available, findable, accessible and suitable, providing an opportunity for a larger range of non-specialist people to use the valuable information," Dr Lewis said.

Managing Director Earth Observation at the South African National Space Agency and Co-chair of the DE Africa Technical Advisory Committee, Ms Andiswa Mlisa, said that not only is this an important milestone for the program but it comes at an important time.

"We are already seeing data play a key role in building systems and solutions for the response and recovery of COVID-19 in Africa, and now access to DE Africa's first operational satellite data means we can use it to support decision making much easier than before."

DE Africa will provide these satellite images not only directly to users but will also integrate with other information platforms and solutions already supporting the COVID-19 response in Africa."

"Whether that is greater access to water sources or addressing feared food security shortages through the ability to map food crops."

More information about DE Africa is available at digitalearthafrica.org.

Spatial Information & Its Vital Role in Monitoring Corona-virus



It is no more a doubt that there has been yet uncontained health challenges all over the world. Ranging from terminal sicknesses to recurring health conditions, infection and many more.

Image Source: eecenter.org

Series of approaches have been applied to identify causes and hence solutions. While some have been successful, others still require fine tuning and improvements.

The world at large is being affected by a pandemic condition named Corona Virus (also known as COVID -19), which belongs to the same virus family as Severe acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS). It has been recorded that although COVID-19 is less dangerous. It spreads faster than the other two viruses, as it reached 1000 cases in 48 hours against others which took two and half years, and four months respectively to hit 1000 cases.

No wonder World Health Organization (WHO) had to declare COVID 19 pandemic. Symptoms from this virus can be mild in some people and severe in some cases.

There has been calls from different organizations, Government and institutions to device means to put an end to this outbreak. Hence professionals from diverse fields are putting in their efforts to bringing it to an end. Leading global technological outfits such as Huawei & Alibaba have utilized the power of technology in some of the equipment they employed. Ranging from Drones for service delivery, Robots for disinfecting and smart city technologies such as Big Data Artificial Intelligence, Internet of Things (IoT) and Geographic Information System (GIS).

Thematic maps have been produced which provide epidemic information through charts and visual maps with reference to changes in the situation in the area. Also, Baidu produced an Epidemic Map which shows suspected and confirmed corona virus cases in real time.

The ability to collect, store and analyze spatial information is important in controlling, monitoring and preventing the spread of the virus. These are being achieved through mapping, navigation, location – based services and remote sensing means.

Management information System has also been created which incorporates Geoinformation Technologies and Internet of Things.

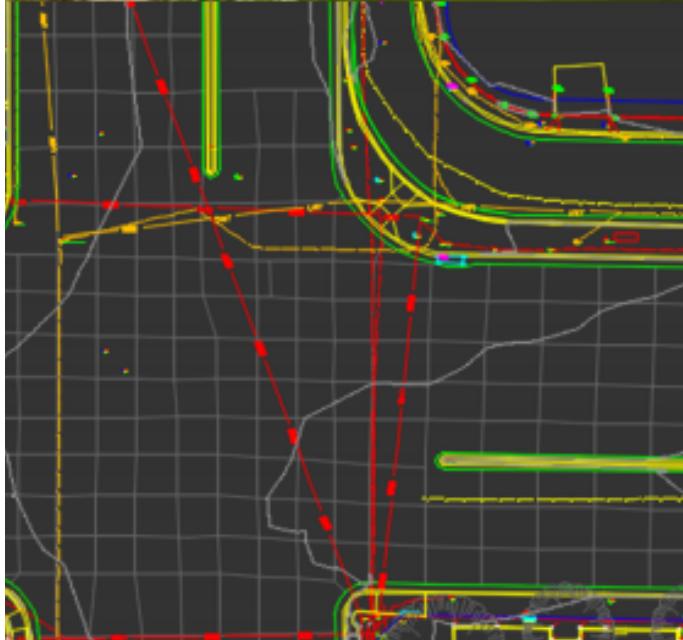
Artificial Intelligence and Big data have also been applied in the battle against the virus:

In the creation of an alarm system which triggers when a quarantine individual steps out of a quarantine zone, sensors such as infrared Cameras have been employed to measure the temperature of individuals as they go in and out of premises.

Also Information Management System have been used to fight the epidemic by collecting big data and tracking the movement of people. Nigeria Centre for Disease Control (NCDC) and different spatial professionals in the country have also employed spatial data for visualization of cases and infrastructures put in place which indicates the spread, monitoring and curtailing the outspread of COVID 19 in the Country.

*By Jayeoba Emmanuel Temitope
(Spatial Coordinator, InformSpatial team)
Nigeria*





► GEOMATICS ► SURVEYING

WHO WE ARE?

We are a team of talented geomatricians, developers and data engineers. We are passionate about innovation and solving problems with geomatics.

WHAT WE DO?

Geointel Designs and develops effective geo enabled business intelligence tools for data visualization and data analysis, enabling informative decision making.

SURVEYING & MAPPING

Conventional surveying for topographical surveys & mapping. Engineering and mining surveys

SOFTWARE DEVELOPMENT

Database design, Data collection, Mobile applications, Process automation.

GIS CONSULTANCY

Professional and cost effective software development and consultancy.

ICT4D

ICT for development .The use and application of technology and digital tools in development work.

FACTS CORNER

INTELLIGENCE

OSAMA BIN LADEN

Geographic Information Systems students at the University of California helped track down Osama Bin Laden.

Working from bin Laden's last known location in Afghanistan, UCLA students applied geographic theory to satellite imagery to try and discover his hiding place

SOFTWARE

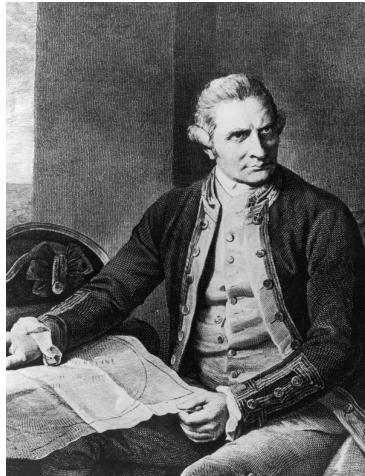


The QGIS web site supports a comprehensive user guide, training manual and handy QGIS tutorials to help a user get the most of the package. In addition, there is also a very healthy blog, hosted on the main web site, where the QGIS community can share their experiences with the package and pass along valuable advice to other users.



You can create custom apps without any code by using ArcGIS Experience Builder?

Create HTML/JavaScript apps that run on any device and let Web AppBuilder for ArcGIS do the heavy lifting.



PEOPLE

CAPTAIN JAMES COOK

Captain James Cook is one of the most famous surveyors in the world because he is one of the first who sailed into every ocean & surveyed all the areas he discovered



WORLD

ALL SPY ORGANIZATIONS IN THE WORLD RELY ON GEOMATICS

Every military and Intelligence gathering operations that occur in the modern world are based on the same questions that are involved in solving problems related to the field of Geomatics.

Think about it.

ASC



The African Surveyors Connect project started off as a simple basic HTML & CSS Web page created using tutorials from **Solo Learn**

06

9 STEPS ON STARTING YOUR OWN SURVEYING BUSINESS

- 1 Plan your Business
- 2 Form a Legal entity
- 3 Register for taxes
- 4 Open a business bank account & credit card
- 5 Set up business accounting
- 6 Obtain necessary permits and licenses
- 7 Get Business insurance
- 8 Define your brand
- 9 Establish your web presence

*For more about this topic visit
www.africansurveyors.net*

→ Take the Initiative to Expand Your Skills



One of the questions we ask our fellowship applicants is how do you go about acquiring new skills or learning new technologies?

More so than the actual techniques students use (MOOCs, web forums, workshops, educational books, etc), we want to find out if the students have a desire to build their skills beyond the standard curriculum at their university.

So, students, I implore you, even if your academic program did not offer any technical training beyond Esri ArcGIS, take some of your free time to build new skills. I'd recommend starting with QGIS, CartoDB, GeoDa, Leaflet, Mapbox Studio, and PostGIS. You don't have to learn them all at once or become an expert. But during your summer break, pick one tool a week and get familiar with something new. This shows employers that you're comfortable learning new skills independently.

→ Showcase your Work



Creating an online portfolio of work is my number one recommendation to students. It is relatively easy to state on a resume what skills you have or courses you've taken.

But highlighting those skills in a few well designed maps communicates with much more clarity. These portfolios do not need to be flashy or high-tech, but merely a showcase of your best work. I'd recommend you include maps (either static or interactive) that highlight the best analysis, visualization and communication skills you can muster. One tip is to solicit feedback on this content from both technical and nontechnical individuals before publishing to make sure it is easy to understand and visually appealing.

→ Make your work stand out!



Often times, I find that students rely heavily on the step by step instructions of a homework assignment, and the resulting maps are full of default color schemes and layouts.



PREPARING FOR A SPATIAL CAREER

By Sarah Cordivano

Global Director Diversity & Inclusion at Springer Nature
University of Pennsylvania

Explore unique and appealing layouts (browse the NACIS Atlas of Design for inspiration), pick new color palettes using ColorBrewer or find some inspiration from archival maps. And lastly, make sure the message of your map is clear and concise. Here are some student map portfolios that are especially impressive: Chris Henrick, Aaron Dennis, and Carolyn Fish. To the right, you'll see an interactive map featured in the portfolio of Chris Henrick.

→ Build a Network

My last suggestion involves engagement with the broader geo community. They are an incredibly collaborative and supportive group, especially with regard to individuals working with open source or open data. The community is comprised of (but not limited to) a robust network of geo meetups, over 70 worldwide maritime chapters, a great GIS stack exchange network (over 30,000 members), energetic OpenStreetMap contributors, numerous high quality conferences and a strong and thoughtful Twitter presence.

I've found that nearly everyone I've met in this community is supportive, thoughtful and kindhearted. These are the type of folks that will offer to help solve a problem, contribute to OpenStreetMap for fun or volunteer their GIS skills for disaster relief.

Long story short: be active in the community and when you ask for help be sure to offer help next time you can.

FINAL THOUGHTS

The market for spatial jobs is competitive, especially for those at the entry level. Take the initiative to build your skills, showcase your work and contribute to the community. These efforts will result in lasting benefits beyond finding a solid career.

Lloyd Ngundu

COUNTRY : Zimbabwe

CONTACT : +263778117970
(lloydngundu@gmail.com)

CAREER : Currently a 3rd year student of Geo-informatics and Surveying at the University of Zimbabwe.

Experiences: Engineering and Cadastral Surveys and has been involved in a number of projects. Familiar with GPS, Total station & Leveling Instrumentation

I am interested in the political aspect of this profession which many tend to ignore. I believe the role of surveyors is beyond just determination of positions, property boundaries and mapping. I think *surveyors can understand more about land and its value not just from an economic or professional view but on a political base as well*.

This understanding will help the nation as a whole on some pressing land issues if well-spoken about. So it is my dream that one day I will be a registered Land Surveyor and serve my nation and be able to influence relevant authorities on how to make the most out of the land which our Great Nation of Zimbabwe has.



"...Surveyors can understand more about land and its value not just from an economic or professional view but on a political base as well"

You can send profiles for profiling on

admin@africansurveyors.net

OR



+263-71-8-870-810

09

Handsome Bongani Nyoni

COUNTRY : Zimbabwe

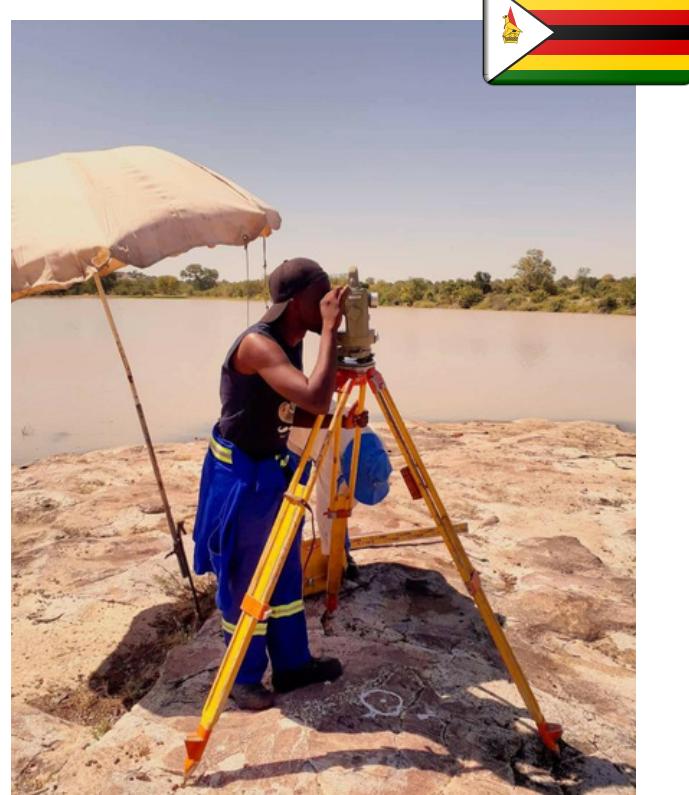
CONTACT : +263717929827 / +263783394549
Hbnyoni@gmail.com

CAREER : Recent Graduate class of 2020 with BSc Geography honors in Biogeosciences from the University of Zimbabwe with a 2.1-degree class.

Experiences: Worked as Engineering and Hydrological services -Data and Research Intern at Zimbabwe National Water Authority (ZINWA) Head Office

I am a dedicated, hardworking young man with experience in, and enthusiasm for, carrying out GIS, remote sensing, safety and environmental science related work. I am passionate about the application of GIS and Remote sensing to the disaster management, health and safety sector, water, energy, food, agriculture, environment, climate change and forestry sectors.

I also aspire to change the Zimbabwe and global village through the use of 21st GIS and remote sensing technology to do research and analysis that enhance livelihoods through maximum service distribution and delivery, targeted response and continuous monitoring and evaluation process.



"I am eager to impart knowledge acquired during university and work-related learning to enhance livelihoods and save the environment from the deleterious effects it is encountering"

You can send profiles for profiling on

admin@africansurveyors.net

10



+263-71-8-870-810

Talent Pool



The images shown in this section have been contributed by both students & professionals in the profession. Their efforts to uplift the name of the profession will go unnoticed.



Construction Rules

Follow these simple construction site rules to keep you and your co-workers safe.



BY AFRICAN SURVEYORS CONNECT

1 WEAR YOUR PPE ALWAYS



2

Do not start work without an induction



3 Keep a tidy site



4

Do not put yourself or others at risk



5 Follow safety signs and procedures

6 Never work in unsafe areas



7 Report defects and near misses

8 Never tamper with equipment

9 Use the right equipment

10

If in doubt, ask



f @AfricanSurveyorsConnect

t @africa_survey

o AfricanSurveyorsConnect

<http://www.africansurveyors.co.zw>



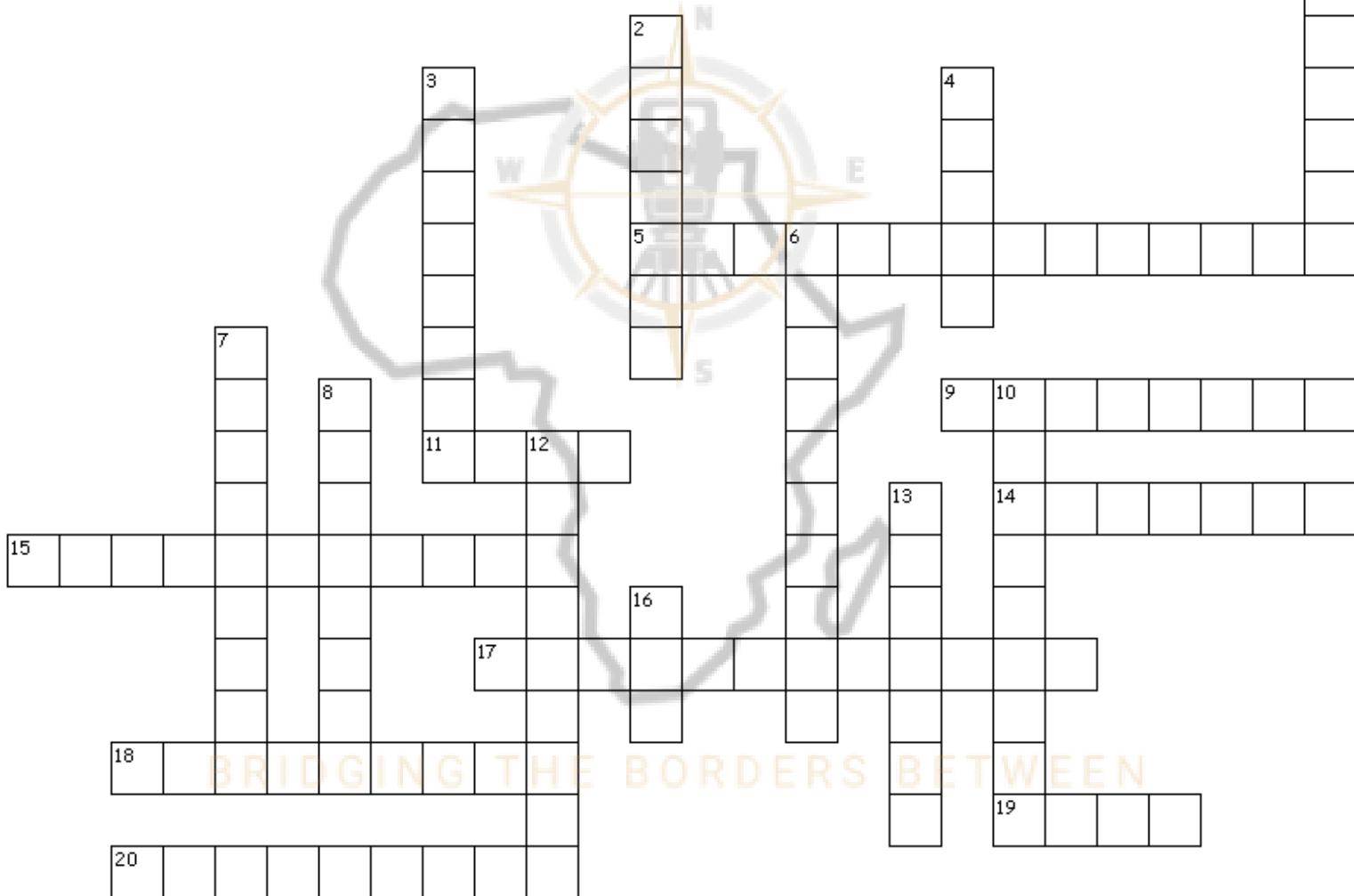
Image Source: Africa Odyssey

Bazaruto Archipelago

The Bazaruto Archipelago is a group of 6 islands off the coast of southern Mozambique. They lie within Bazaruto National Park and are known for their white-sand beaches. Bazaruto, with sand dunes, is the largest island. Coral reefs around Magaruque and Santa Carolina islands protect rare marine animals, like dugongs. The wetlands, forests and grasslands of Benguerra Island's interior are home to many bird species.

TIP: Take your potential business partners to a place like this & convincing them to invest in your business might not be that difficult after all

SPATIAL CROSSWORD



Across

- 5. Spatial Data _____ (SDI)
- 9. Spatial data has
- 11. Control position of curve can be set by
- 14. The latitude of a place expresses its angular position relative to the plane of _____?
- 15. Collection of elevation of points
- 17. Geodimeter carrier wave
- 18. Horizontal line departs from a level surface because of _____?
- 19. Pseudo ranging parameter
- 20. Position determination

Down

- 1. Signal strength in Remote Sensing depends on it
- 2. GIS data
- 3. Where points set by using method of tangents lie on
- 4. Negative latitude direction
- 6. Satellite signals
- 7. Triangulated _____ Irregular (TIN)
- 8. Data about data
- 10. Removing dongle nodes
- 12. Space related to GIS
- 13. African country
- 16. GIS output format (abbrv)



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AFRICAN SURVEYORS CONNECT

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We are a Community driven Organization for Geomaticians and Surveyors on the African continent. We are here to serve people of all age groups from dreamers, students and professionals.

Our focus is mainly on the African continent as we seek to establish networks within the community and encourage partnerships and development. Career development is one of our main aims with the young at heart and in mind.

We conduct & provide certain activities & services through our website found at

www.africansurveyors.net. Some of these activities

& services include but are not limited to:

- providing tutorials (through videos and text)
- provide basic guides & information
- provide platforms for community discussions and engagements
- carry out quizzes
- provide space for business development (e-commerce & classifieds section)
- profiling of students, professionals & organizations
- provide online applications for the profession

EARLY DEVELOPMENT

The journey started in November 2019. This is when all the work began. Over the months huge developments and improvements have been done in order to able to provide all the essentials that might be required for the audience.

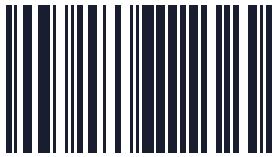
Our first website was more of statistic and basic leaving the community with minimal input but now we have changed that to allow room for improvements.

FORECAST

Its our hope & mission that we see the vision through. Engaging the community will go a long way in the process of building careers and development in Africa as the world depends on Geomatics for almost everything to be the way it is now.

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