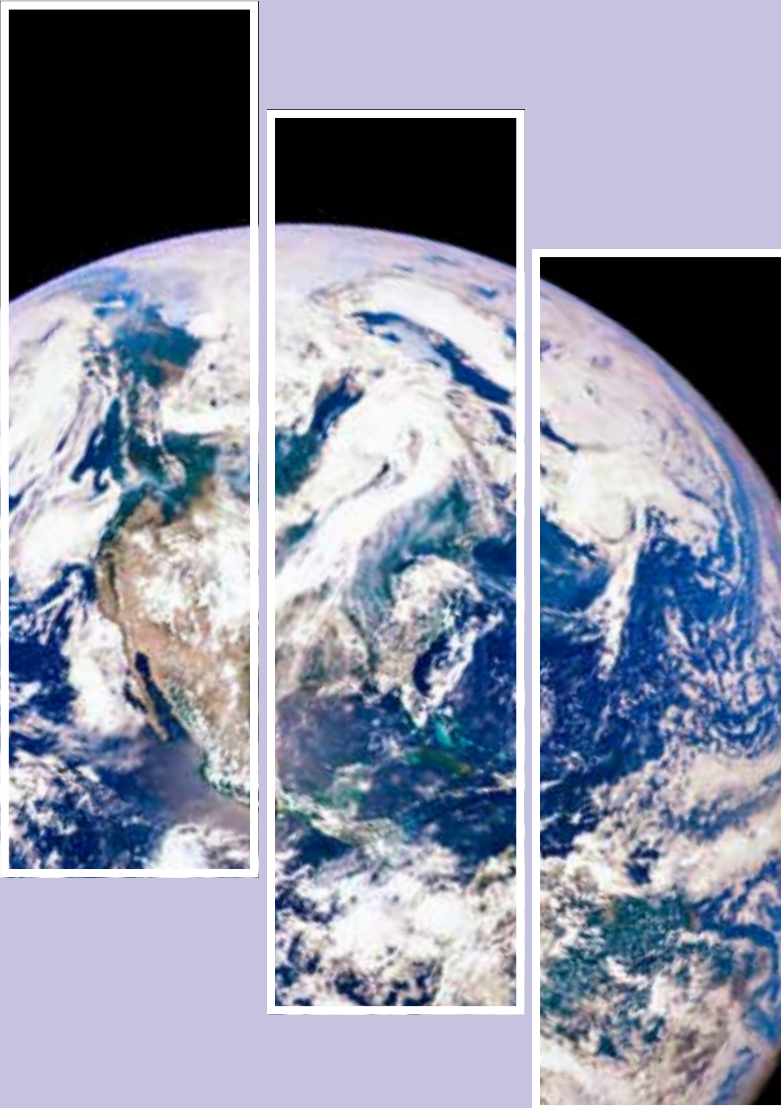


KENYA SPACE AGENCY
Possibilities beyond our skies

STRATEGIC PLAN 2020 - 2025



POPULAR VERSION



All rights reserved. No part of this Strategic Plan may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without written permission from the author or acknowledging the source except for the inclusion of brief quotations in a review.

Copyright © 2020 by Kenya Space Agency (KSA):

Kenya Space Agency (KSA) Strategic Plan is published in Nairobi, Kenya

ABOUT US

“ Our mandate is to promote, coordinate and regulate space-related activities to enhance utilization of space technology for socio-economic development.

The Kenya Space Agency was established and mandated under the Kenya Space Agency Order of 2017 to coordinate, regulate and promote the development of the space sector, and to provide leadership and advisory in policy, legislation and programmes related to space sector. It promotes, coordinates and regulates space-related activities to enhance utilization of space technology for socio-economic development. Therefore, the Agency is expected to position the country to tap into regional and global opportunities including entering into bilateral and multilateral agreements.

The Kenya Space Agency replaced the National Space Secretariat that was established via Gazette Notice No. 5563 of 5th June 2009.



Cabinet Secretary for Defence Amb Dr Monica Juma in a group photo with Kenya Space Agency Board Members and representatives from the Italian Space Agency and Italian Embassy

Vision:

To be premier space agency in promotion of access and effective utilization of space economy for national sustainable development

Mission:

To coordinate, nurture and develop Kenya's space sector to maximize the utilization of space opportunities

Our promise:

We will;

1. Strengthen the coordination of the Space Sector to increase its contribution to Kenya's socio-economic development.
2. Support the development of systems and applications to enhance the uptake and utilization of space derived data and information for decision making.
3. Develop and adopt requisite legislation in support of the growth of space sector and development of space related technologies.
4. Intensify capacity development and outreach programmes to increase the number of practitioners and inspire the next generation of professionals in the space sector.

Core values:

- Excellence
- Professionalism
- Integrity
- Commitment

(EPIC)

OUR HISTORY

Kenya's history of space activities date back to the 1960s with the establishment of a Satellite Launching and Tracking Base at Malindi, in collaboration Italy. Over twenty sounding rockets and nine satellites were launched from the facility between 1967 and 1988. Kenya also built the Longonot Earth Station which became operational in 1970 and provided international satellite communications to the entire East African Community. Other Earth station were later built in Kericho and Nairobi. Today there are several Earth stations in the country including submarine cables that facilitate international communications.

On 12th December 1970, the first satellite specifically designed for X-ray astronomy, Small Astronomical Satellite 1 (SAS-1), was launched from the San Marco Platform in Malindi. This National Aeronautics and Space Administration (NASA) satellite was christened "Uhuru" to commemorate the seventh anniversary of Kenya's independence and in recognition of the hospitality of the Kenyan people. Uhuru was a scanning mission that performed the first comprehensive survey of the entire sky for X-ray sources and ended in March 1973.

In 2009, the National Space Secretariat (NSS) was established as the precursor to the Kenya Space Agency, to be the central coordinating body for all space related activities. The Agency was eventually established in 2017 with the



Kenya's first satellite (1KUNS-PF)

mandate to promote, coordinate and regulate space related activities in Kenya.

Kenya's first satellite named 1st Kenya University Nano Satellite - Precursor Flight (1KUNS-PF) - was deployed into orbit from the International Space Agency on May 11, 2018. This is part of the capacity building and research programmes in space science and technology currently conducted in Kenyan universities.

Kenya's entry into the space arena is for socio-economic development and all the activities will be guided by existing international treaties. The strategic plan provides a clear roadmap and firmly anchors Space science, technology and related applications as key drivers for development in tandem with the national aspirations, political, social and economic goals.



Longonot Earth Station

FUNCTIONS OF THE KENYA SPACE AGENCY

The Agency seeks to implement the provisions of the Kenya Space Policy and the Kenya Space Strategy. To fulfil these expectations, the Agency is mandated to discharge the following functions in accordance with the Kenya Space Agency Order of 2017:

- Coordinate and regulate space-related activities in the country.
- Implement the Kenya Space Policy and any related programmes.
- Recommend and advise the Government on the development of relevant legislation to facilitate the successful implementation of Kenya Space Programme.
- Advise the Government on the legislative and other measures necessary for the implementation of the relevant Conventions, Treaties and Agreements that Kenya is a party.
- Recommend national space policies, strategies and programmes;
- Promote capacity building in space science and technology and its applications.
- Establish centres of excellence in space science.
- Enter into mutually beneficial bilateral and multilateral agreements with persons, agencies, governments or bodies in furtherance of its mandate.
- Identify, prepare and facilitate the implementation of inventions and innovations in space technologies.
- Provide leadership in coordinating and supporting research in space science and technology.
- Liaise with the relevant institutions and Government agencies to ensure funding and implementation of space programmes.
- Promote awareness and appreciation at all levels of Kenyan society on the relevance and benefits of space science and technology.
- Perform such other functions as the Cabinet Secretary may, from time to time, assign the Agency.

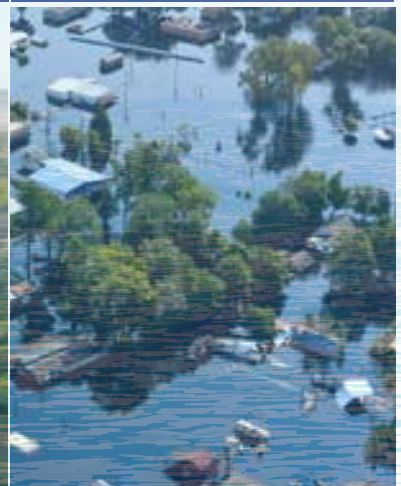
Agriculture



Resources Management



Disaster Management



KSA PRIORITY AREAS

KSA has prioritized four (4) core strategic areas for the period 2020-2025 in realization of its mandate:

- i. Delivery of Space Services.
- ii. Developing National Space Capability.
- iii. Sector Coordination and Leadership.
- iv. Corporate Positioning and Sustainability.

1. Delivery of Space Services

KSA will seek to enhance the access to Space services and grow the demand for the Space services through effective and efficient service delivery and industry coordination. The Agency has identified five (5) Space programmes of service including: Earth Observation, Navigation and Positioning, Satellite Communications, Space Operations and Systems Engineering and Space Science and Astronomy.

- **Earth Observation (EO)** programme entails monitoring Earth from Space using remote sensing techniques. This will help

us to monitor our environment, natural resources, disasters and understand the changes happening in our country.

- **Navigation and Positioning** programme entails determination of the route to a desired geographic location. This will help us tap into possibilities of precision agriculture, route mapping, addressing systems and other related geolocation services.
- **Satellite communications** programme entails the transmission of signals using the electromagnetic spectrum between ground receivers and transponders on telecommunication satellites. This will help us to provide communication redundancy in case of disasters, connect remote locations, support telemedicine and tele-education.
- **Space Operations and Systems Engineering** programme entails all the



Students demonstrating the operation of a nanosatellite during a capacity building workshop on Nanosatellite Technology

services related to the development, launch and operations of spacecrafts in space. The programme will entail satellite manufacturing, mission and operations control, telemetry, tracking and command services as well as launch services.

- **Space science and Astronomy programme** deals with scientific disciplines in Space exploration and study of natural phenomena and physical bodies occurring in outer space. This will help us observe outer space, provide services on space weather and astronomy

2. Developing National Space Capability

KSA will seek to develop national capability promoting space sector growth for sustainable national development. This will be implemented through assessment of space potential, investments in human capacity, acquisition of critical infrastructure, promotion of research and undertaking education and public awareness. It will also promote uptake of space science, technology and applications (SSTA). This will require that the Agency develops a capacity building framework to: develop human resource competencies; acquire critical assets and infrastructure; promote growth in research, innovations and applications in space science and technology; and promote public awareness of the Space sector activities and potentials including the relevance, benefits and opportunities.

3. Sector Coordination and Leadership

KSA will seek to establish sector coordination and leadership mechanism that will enhance synergy among stakeholders and enhance

service delivery. The national government and county governments have various activities that require the support of Space technology enabled services. Proper coordination and leadership will ensure that stakeholders are well guided for effective investments, impact and value for money. Among the key strategies the Agency will implement include: leadership, sector planning, developing an enabling policy and legal environment, creating networks and linkages, and establishing communications and knowledge management framework for effective and efficient coordination of the sector initiatives and activities.

4. Corporate Positioning and Sustainability

KSA will seek to undertake three (3) main initiatives namely: corporate positioning, resource mobilization and institutional sustainability. Staffing, asset acquisition and corporate competence development will involve corporate branding and corporate communication. Under resource mobilization, the Agency plans to establish a Space Industry Development Fund; develop resource mobilization policy and strategy; identify strategic partners for resource mobilization; identify various sources of financial support and respective programmes; identify sources of non-financial support including land, buildings, machinery, equipment and infrastructure provided in-kind, and technical support or expertise. On institutional sustainability the Agency will focus on: resource efficiency, risk management, regular monitoring and evaluation, generate internal revenue, strategic management of partnerships, staff retention and management of assets.

IMPLEMENTATION AND COORDINATION FRAMEWORK

KSA is seeking to establish a strong foundation to enhance implementation and coordination of programmes and activities for effective and efficient achievement of the targeted outputs and outcomes.

1. Organizational Structure

KSA has developed an organizational structure that has been informed by its mandate stipulated in the Kenya Space Agency Order (2017) and the strategic themes in this strategic plan. The structure comprises of the Board, Director General, 4 Directorates and 19 departments/units.

2. Human Resource Strategy

KSA will have a staff establishment of one hundred and forty-six (146). The Agency will endeavour to competitively fill these positions based on available funding in the next few years as it seeks to develop adequate human resource capacity to effectively delivery on its mandate.

3. Financial Strategy

KSA has conducted cost estimation assessment per each strategic theme derived from various activities, which will

be implemented to achieve the various strategic objectives, strategies and targets.

The agency will develop a financial resource mobilization strategy that will identify the sources and partners at local, regional and international levels, including Government and non-government sources to cover the projected cost estimates.

4. Capacity Development

KSA will assess the capacity needs for effective exploitation of the Space potential in the country. This assessment will cut across the human skill sets and gaps, financial deficits, infrastructure deficits, and critical systems. This will inform the resource requirements, priorities and guide decision making on mobilization strategies.

5. Risk Management

KSA has identified potential factors and events that could threaten the implementation of this strategic plan. KSA will conduct regular comprehensive risk assessment, ascertaining the likelihood of the risks and severity to inform decisions on the relevant controls.



6. Workflow and Responsibility

KSA will establish a quality assurance system for the purpose of service delivery, responsibility and accountability. The Agency will develop annual corporate plans reflecting the annual targets for respective years. The agency will seek for ISO certification in quality management during the plan period.

7. Resource Mobilization Strategy

KSA will put in place an effective resource mobilization strategy for financial and non-financial needs, human resource needs and infrastructure. Some of the sources of finance will include: funding from National and County Government space related services, income generated space related services, donations and/or grants from development partners as well as non-financial sources.

8. Communication Strategy

KSA will communicate its mandate and services to all stakeholders, for effective implementation of the plans and activities envisage in this plan. Effective and efficiency in communication will require that the Agency diversifies its channels of communication by exploiting technology and observing cost efficiency.

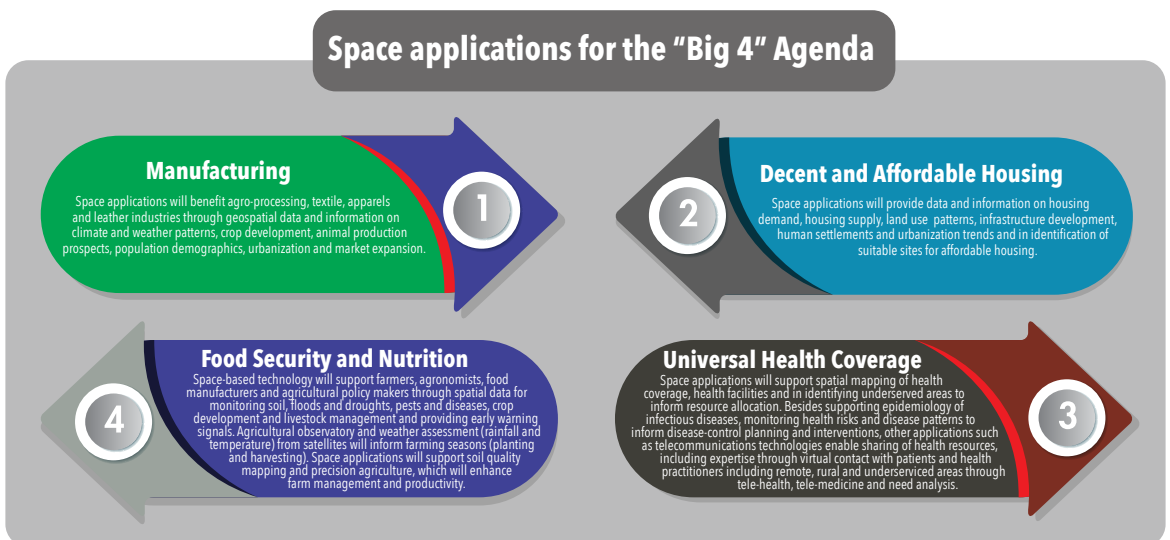
9. Institutional Linkages and Coordination

The mandate of KSA requires the Agency to take lead in coordinating the affairs of the Space sector. KSA is cognizant that the Space sector players operate at different levels in the value chain of the Space ecosystem, which are intertwined across international, regional, national and local fronts. KSA will ensure coordination and interlinkages with the international and regional Space industry and stakeholders as well as those in the private sector, civil society and non-government organizations.

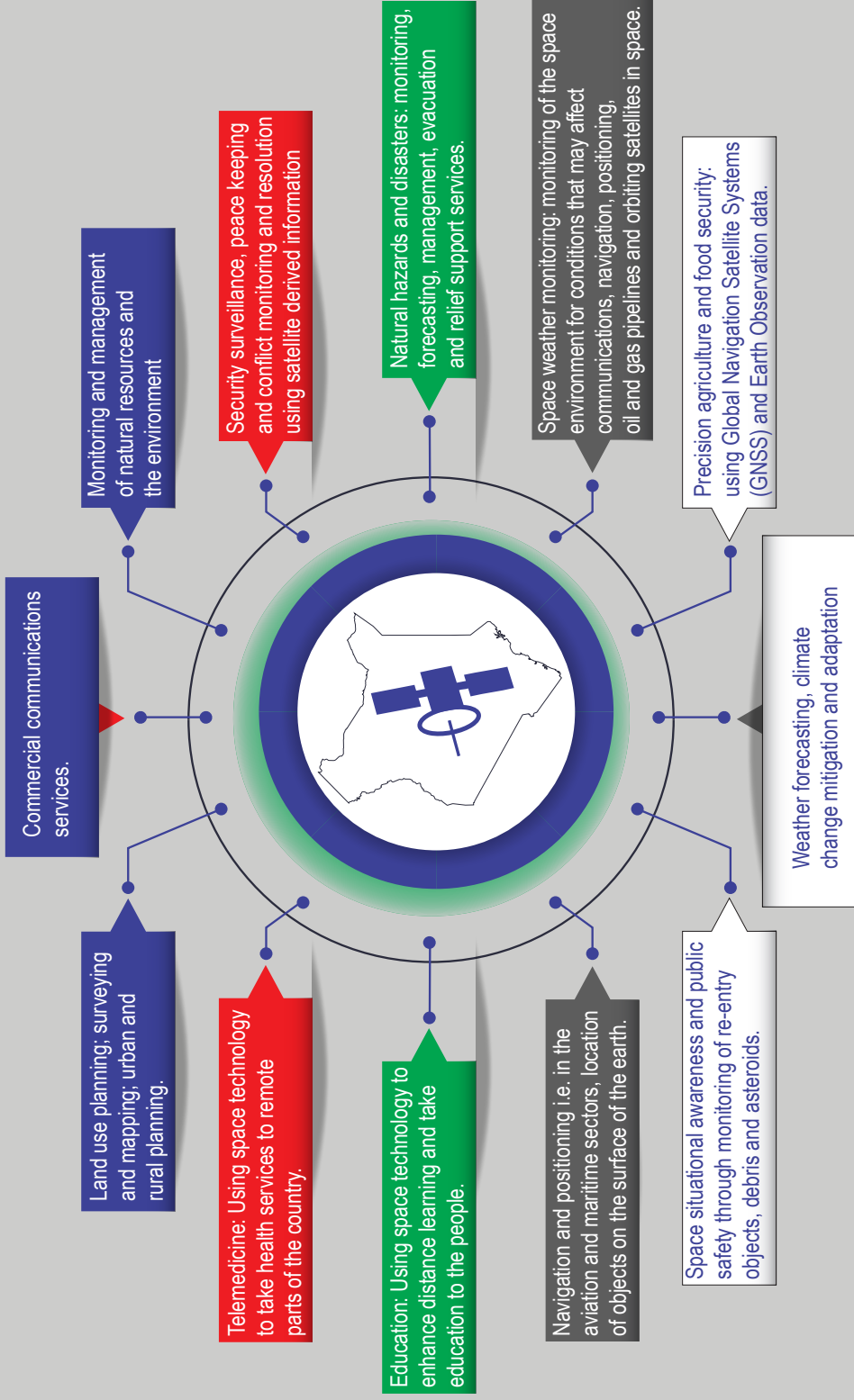
MONITORING, EVALUATION AND LEARNING

The Agency will establish a monitoring and evaluation (M&E) system as a central institutional platform for tracking progress in implementation

of this strategic plan. The M&E reports will be expected to enhance the learning curve on the implementation of various activities.



BENEFITS OF SPACE SCIENCE AND TECHNOLOGY





PUBLISHED BY KENYA SPACE AGENCY (KSA)

Pitman House, 4th Floor, Jakaya Kikwete Rd

P.o. Box: 7046-00200 NAIROBI, KENYA

Tel: +254 709 298200

Website: <https://ksa.go.ke>

Email: info@ksa.go.ke