



BRIEFING TO THE JOINT PORTFOLIO COMMITTEE MEETING

NATIONAL SATELLITE STRATEGY

20 NOVEMBER 2024



National Satellite Strategy Briefing

This presentation outlines the National Satellite Communication Strategy (SATCOM) to the Joint Portfolio Committee meeting. It highlights the strategy's objectives, progress, and future recommendations for enabling a connected and digitally transformed South Africa.

Contents

1 Presentation Purpose

The presentation aims to inform the Committee on the progress made in developing the National Satellite Communication Strategy.

2 Strategic Focus

The strategy prioritizes sustained economic growth and improved quality of life for all citizens.

3 Background and Problem Statement

The SATCOM Strategy addresses the need for a national communications satellite to benefit South Africa.

4 Situational Analysis

The strategy includes a comprehensive situational analysis and risk and risk management plan.

5 Progress to Date and Implementation Framework Framework

The presentation outlines progress made, key stakeholders involved, involved, and the implementation framework for the strategy. strategy.

6 Recommendations

The presentation concludes with recommendations for the successful successful implementation of the SATCOM Strategy.

- The highest priority of any government is to ensure (i) sustained economic growth and (ii) improvement in the quality of life of its citizens
- It is therefore imperative that investments in communications satellites be geared towards addressing these fundamental priorities

Outcomes	NDP [13]	Triple Challenges [3]	Economic Recovery Plan [5]	SDGS [17]
Rural and underserved communities provided with access to communications that unlocks economic opportunities and addresses social challenges	12	3	5	12
All South Africans to be digitally connected and able to access equitable business opportunities	10	3	5	9
Affordable communications serviced and controlled by locally owned technologies	10	1	5	10
Government priorities are expedited through improved service delivery via a communications backbone that promotes a capable state	12	3	4	14

Problem Statement



Capital outflows

Many public and private entities use satellite communications, which are priced in foreign currency leading to increased capital outflows.

Digital Divide

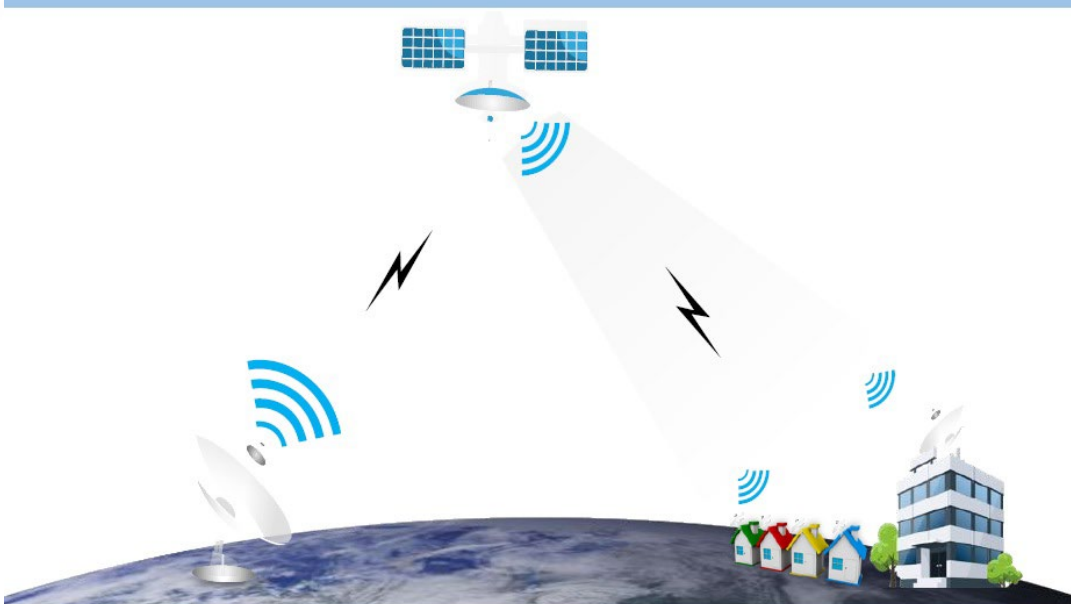
Existing terrestrial communication infrastructure does not adequately cover remote and underserved areas.

National Security

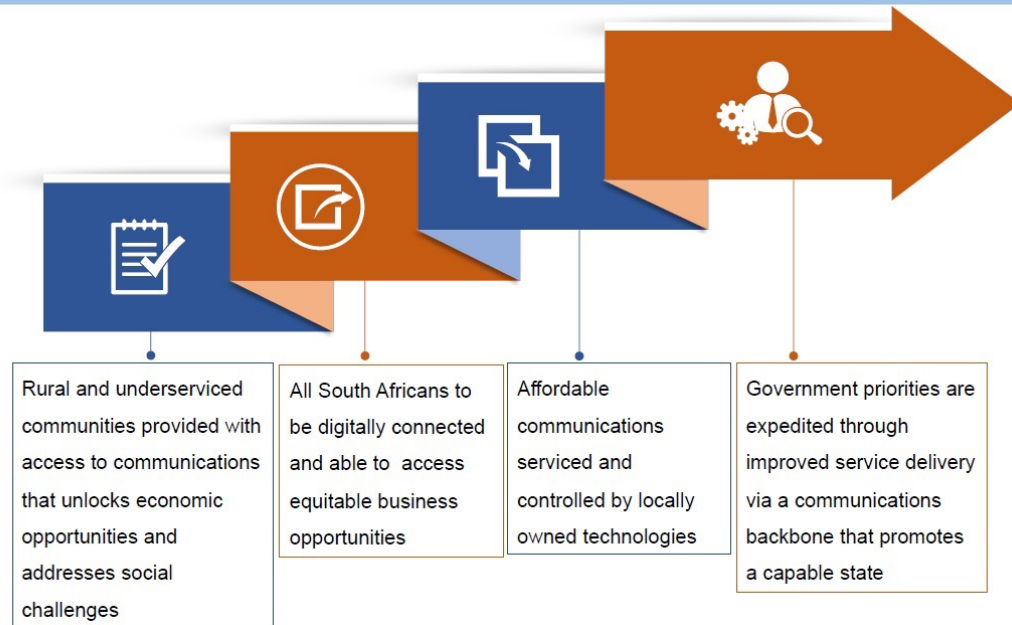
There is a significant digital divide between urban and rural areas. National communications satellite can enhance national security by providing reliable communication channels during emergencies and disasters.

- The SATCOM Strategy provides the context and need for a national communications satellite by highlighting some of the socio-economic and strategic benefits to the country.
- This satellite platform will not only address several government's priorities but will also ensure equitable access to communications to all South Africans thus improving our quality of lives and creating economic opportunities especially to communities that have been historically marginalised.

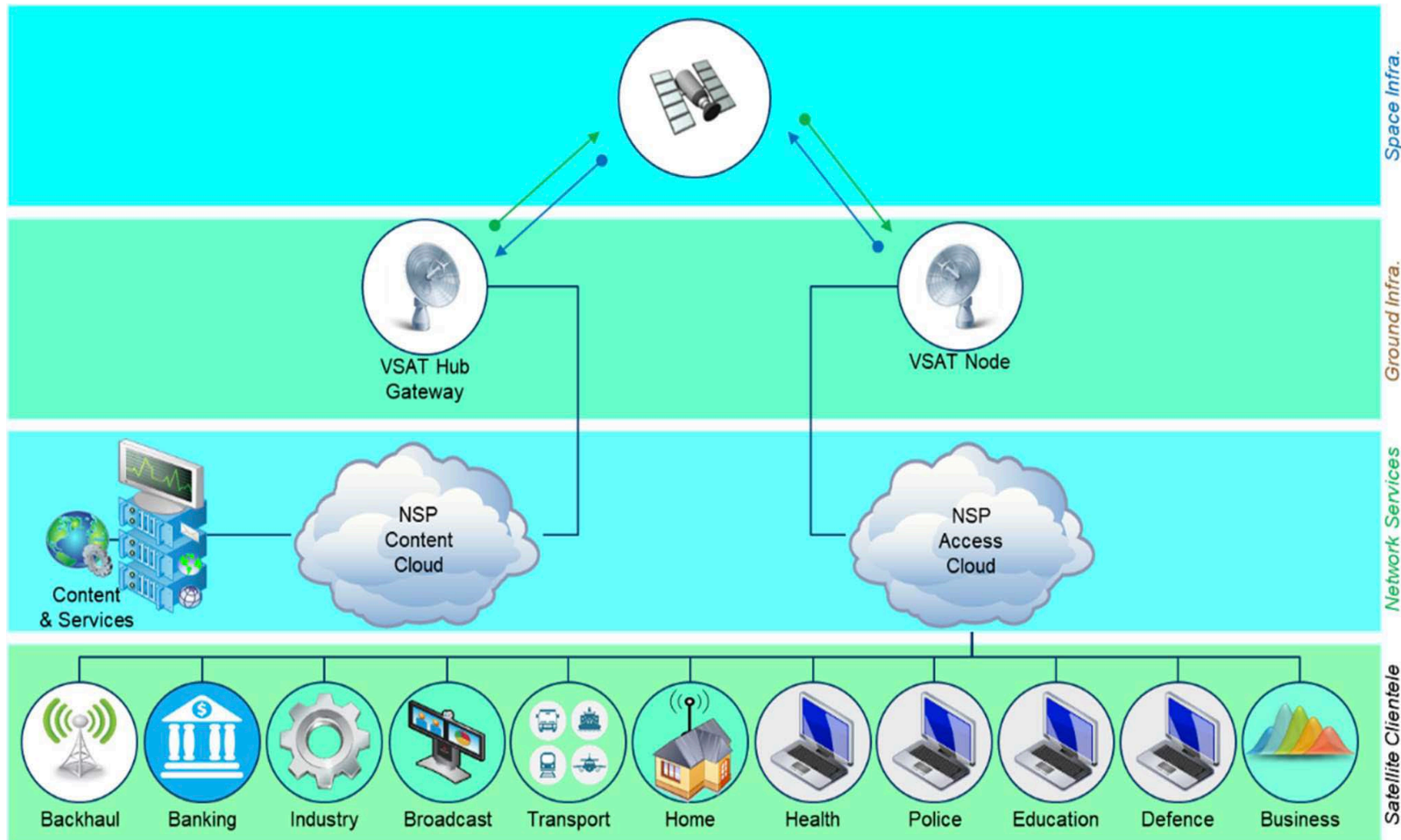
Non-Technical Description



Strategic Context: Expected Outcomes



SATELLITE VALUE CHAIN



- **Space Infrastructure:** satellites and space stations
- **Ground Infrastructure:** satellite control facilities, teleports, gateways, hub stations ground equipment and remote site equipment
- **Launch Infrastructure:** launch facilities available for placing satellites in orbit
- **Telecommunications Applications:** fixed (non-mobile communications systems), broadcasting and mobile services; direct to home (DTH) television and radio services; very small aperture terminals (VSAT), broadband and Internet services
- **Support Services:** legal, licensing, finance, insurance and consulting services, and
- **Research and development:** related to communications applications and satellites.



Why the need for a national Communication Satellite?

Socioeconomic Benefits

The SATCOM Strategy highlights the socioeconomic benefits of a national communications satellite, such as improved access to education, healthcare, and financial and financial services in remote areas.

Equitable Access

The strategy aims to ensure equitable access to communication services for all South South Africans, regardless of their location or socioeconomic background.

1

2

3

Strategic Benefits

The strategy emphasizes the strategic benefits of a national communications satellite for national security, disaster management, and scientific research.

Strategic Focus

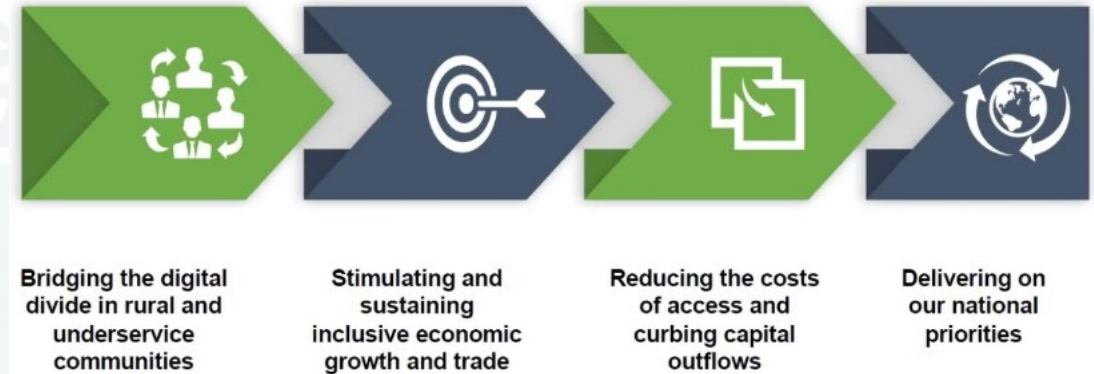
Establishing a national satellite will position South Africa in the ICT and Satellite space, reduce the costs of satellite services, curb cash outflows, improve information security, and enhance South Africa's technological sovereignty.

Economic Growth

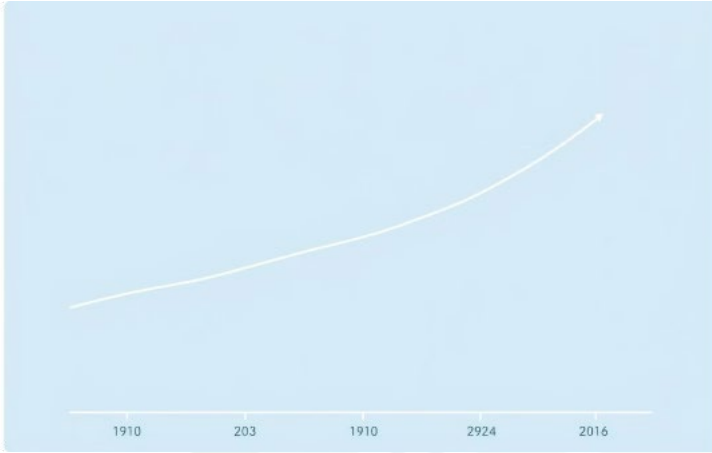
The SATCOM Strategy aims to stimulate economic growth by providing providing access to essential communication services, particularly in remote and underserved areas.

Improved Quality of Life

The strategy promotes the equitable distribution of communication communication services, fostering social inclusion and improving the improving the quality of life for all South Africans.



Strategic Outcomes



Sustained Economic Growth

The government's top priority is to ensure continuous economic progress that benefits all citizens.



Improving Quality of Life

Investments in communications satellites aim to enhance the daily lives and well-being of the population.



Enabling a Connected South Africa Africa

The strategic focus is to position the country as a leader in digital transformation transformation through satellite technology. technology.

Situational Analysis

1

Market Analysis

The situational analysis includes a comprehensive market analysis of the South African African telecommunications sector, identifying key players and trends.

2

Competitor Analysis

The analysis assesses potential competitors, including international satellite operators, and their operators, and their impact on the development of the national SATCOM Strategy.

3

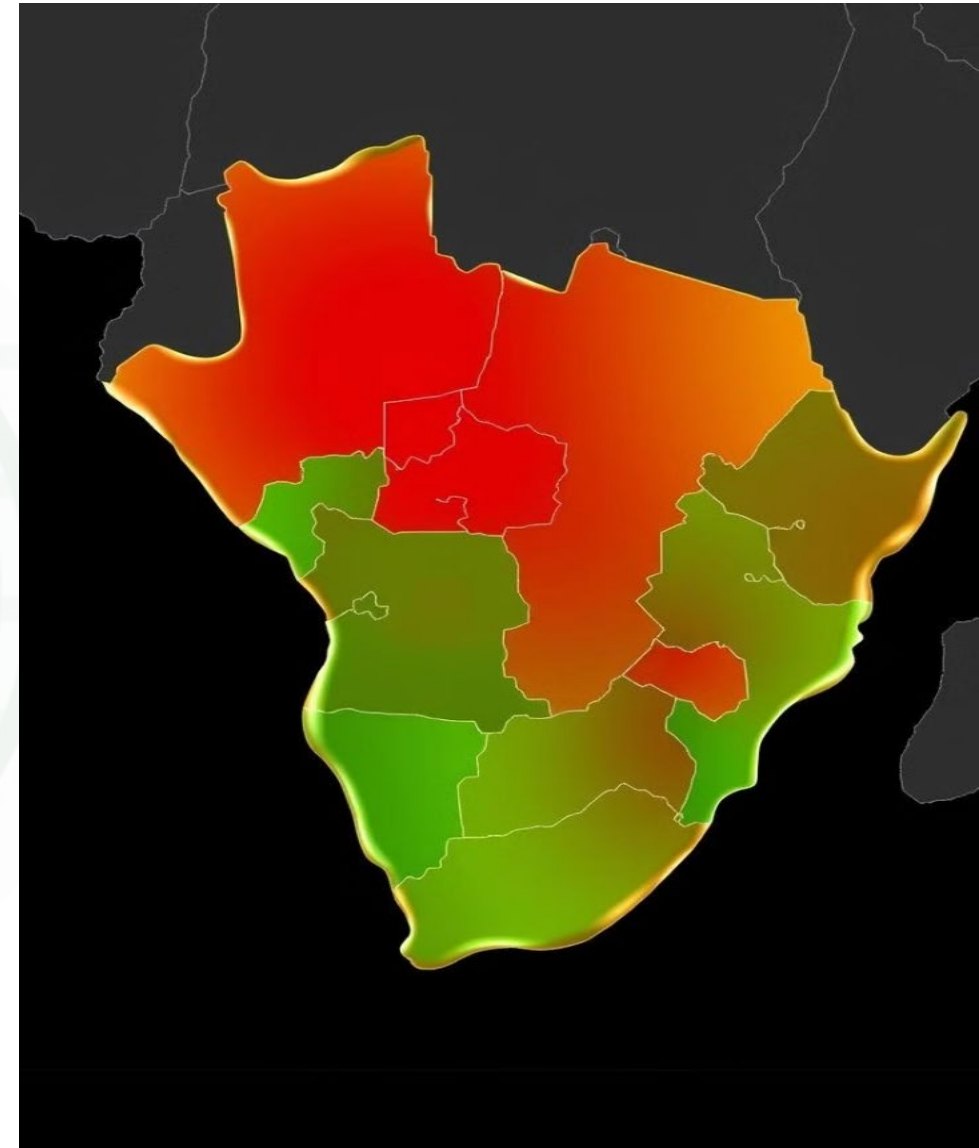
Regulatory Landscape

The analysis examines the regulatory landscape for satellite communication services in South Africa, identifying potential challenges and opportunities.

4

Risk Management

The strategy incorporates a robust risk management plan to mitigate potential risks and ensure and ensure the successful implementation of the SATCOM Strategy.





Risk Analysis

Risk Description	Root Causes	Consequences	Control Actions
Uncertainty to secure an orbital slot and effective spectrum allocation for the satellite	- South Africa has two orbital slots that are not optimal for operations. - The ITU processes are onerous and quite lengthy and could up to five years or more to secure an orbital slot. - Certain geosynchronous locations are crowded and may not be conducive for usage. - Allocation for the appropriate spectrum allocation is a regulatory process and is a lengthy consultative process.	- Inability to secure an appropriate orbital slot in time for the launch of the satellite, which leads to delays in the satellite mission. - Inability to secure the appropriate spectrum allocations, which will hamper the operational phase of the satellite mission.	- Look for opportunities to secure and operate satellite transponders on an existing satellite for national use whilst the full satellite build is embarked on. - Initiate the ITU process early in the implementation phase to secure an appropriate orbital slot - Work with ICASA to ensure the appropriate spectrum allocation is assigned ahead of the satellite mission.
Uncertainty to access funding for the satellite mission	- Government fiscus is currently constrained. - Global financial market is in severe recession, due to the global COVID-19 pandemic. - Access to investor capital is limited and where possible, this may come at an exorbitant cost.	The inability to finance the procurement of the satellite.	- Ensure a robust bankable feasibility study and market analysis to attract investor funding. - Look for opportunities to secure and operate satellite transponders on an existing satellite as a more cost-effective initial option, whilst the financial markets settle.
Undue influences on the procurement processes	- Exploitation of the procurement process by unscrupulous individuals looking to influence and secure short term personal gains. - Preferring political alliances over technical specifications and merit in the procurement phase of the satellite mission.	- Inappropriate usage of the funding earmarked for the satellite mission, which impedes the return/value on investment. - A satellite mission that does not meet the full user specifications due to technical shortcomings.	- Ensure that internal controls are in place to circumvent any abuse of the procurement process. - Follow strict acquisition management and system engineering processes in the procurement phase of the satellite mission.
Skills deficit that may hamper the operations and usage of the satellite	- A shortage of engineering and technical skills to optimally operate the satellite. - A shortage of expertise to produce downstream products and services needed to respond to the various market segments.	- A satellite mission that is poorly operated and maintained - The downstream products and services are sub-optimal and do not meet the user requirements, which therefore negates the return/value of investment	- Institute a dedicated skills development programme to ensure that the requisite expertise is in place prior to the acquisition of the satellite mission. - Work with international partners to plug the skills gap, where this capacity does not exist within the country.

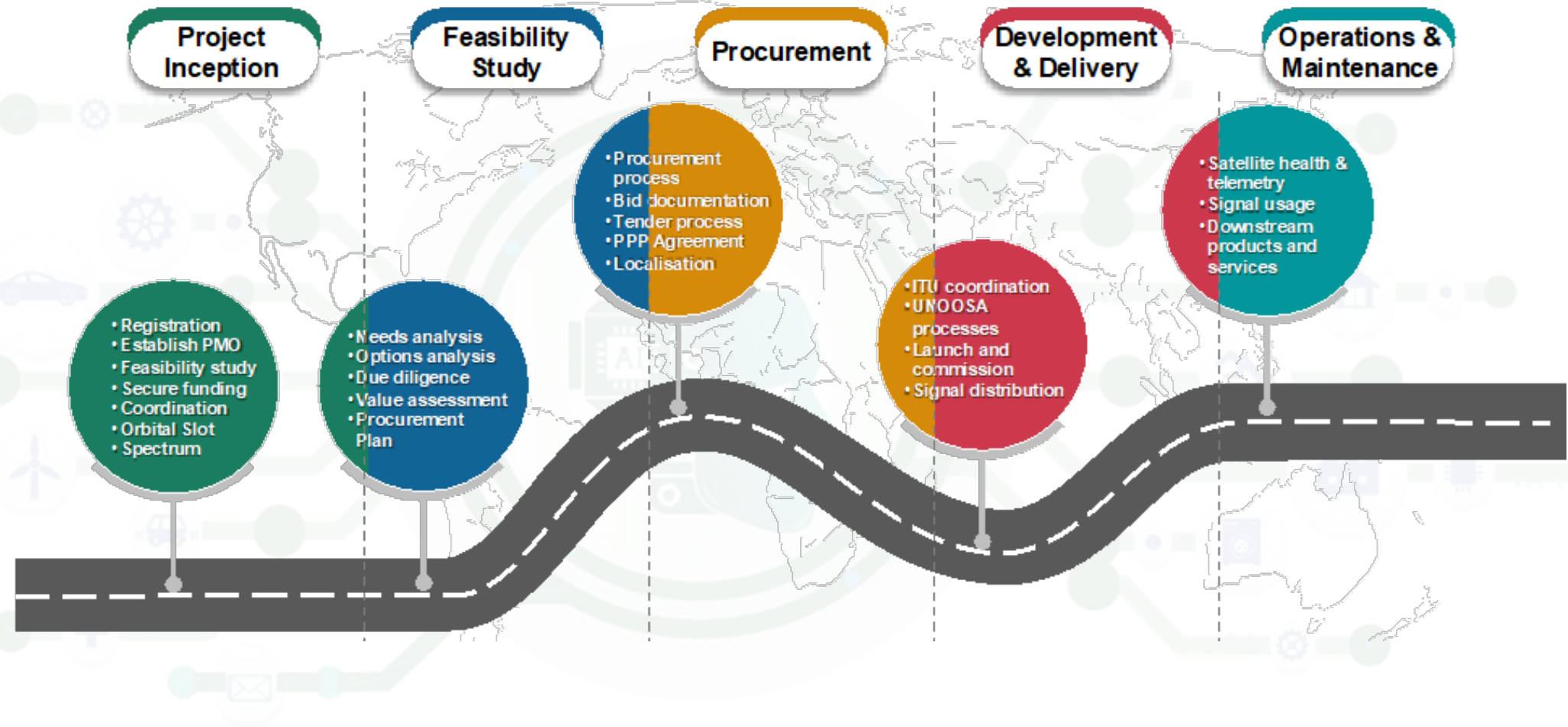
IMPLEMENTATION FRAMEWORK AND KEY ROLE PLAYERS



Value Chain Segment	Proposed State Institution	Roles and Responsibilities	Change Intervention
Upstream	SANSA/SENTECH	☐ Acquisition Management ☐ System Engineering ☐ Satellite specifications and design ☐ Industry development and localisation	☐ Establishment of a joint Programme Management Office ☐ Industry Development Framework
Midstream	SANSA	☐ Launch and commissioning of the satellites ☐ Operating the satellites ☐ Decommissioning the satellites at the end of useful life	☐ Ground infrastructure ☐ License to launch and operate from SANSA ☐ Handshake protocols between SANSA and SENTECH
	SENTECH/ICASA	☐ Spectrum management ☐ Signal distribution	☐ Licensing arrangement with ICASA ☐ Commercialisation and Distribution Framework
Downstream	SITA	☐ Last mile IT infrastructure ☐ Platforms for e-Government services	☐ Downstream IT Strategy and Rollout Plan ☐ Integration of Government services platform



IMPLEMENTATION FRAMEWORK AND KEY MILESTONES



Progress Update (1)

1 Stakeholder Engagement

Key stakeholders, including government agencies and state-owned enterprises, have been consulted and their inputs have been incorporated into the strategy.

2 Social Economic Impact Assessment System (SEIAS)

The strategy underwent the SEIAS process, driven by the Presidency, to ensure alignment with national development priorities and stakeholder interests.

3 Public Consultation

The strategy will be subject to public public consultation to gather feedback from diverse stakeholders stakeholders and ensure broad buy-buy-in.

4 Cabinet Approval

The annual target is for the National National Satellite Communication Communication Strategy to be approved by Cabinet.

Progress Update (2)



Orbital Slot

DCCDT, ICASA and SENTECH collaborated to identify and file an application for an orbital slot to replace the current degraded ITU national allotment.



Strategy Development and Review

Satellite project was included in the 2050 infrastructure plan, and a National Satellite Communications strategy was developed DCCDT, DSI, SANSA, and SENTECH, and peer-reviewed by a panel of industry experts



Secure Funding

SENTECH held preliminary stakeholder engagements with funding Institutions, government departments and other SOEs to solicit support for the National Satellite Communication Project



Business Plan

Sentech completed a review and update of the 2018 SATCOM business plan. The business plan is ready for submission to potential partners and funding institutions.

Recommendation

It is recommended that the Joint Committee meeting:

- notes progress on the SATCOM Strategy development



