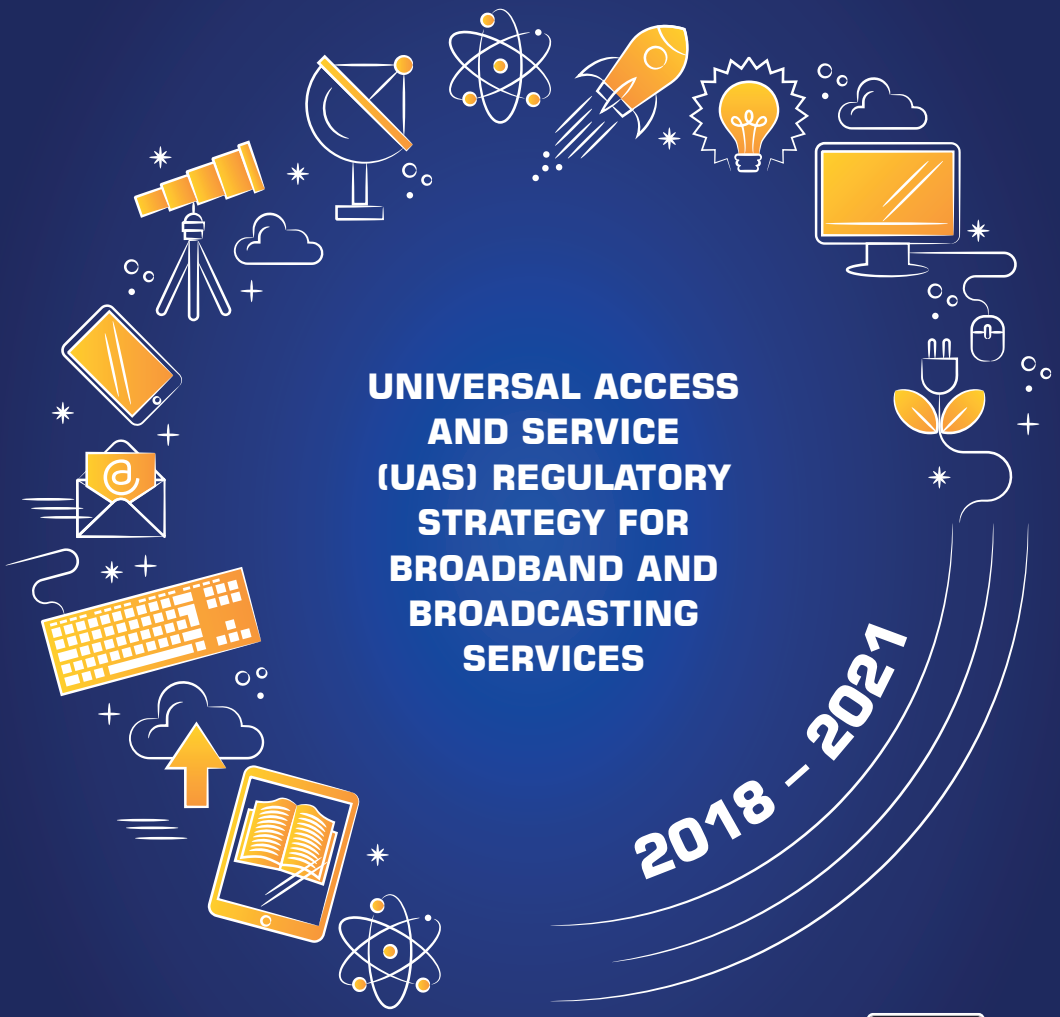

UNIVERSAL ACCESS AND SERVICE (UAS) REGULATORY STRATEGY FOR BROADBAND AND BROADCASTING SERVICES

2018 – 2021

ESCCOM

ESWATINI COMMUNICATIONS COMMISSION

Contents

Abbreviations

Abbreviation	Definition
BTS	Base transceiver station
CAPEX	Capital expenditure
CDMA	Code division multiple access
CEO	Chief Executive Officer
EDAC	Eswatini Digital Access Centres
EEC	Eswatini Electricity Company
EPTC	Eswatini Post and Telecommunications Corporation
ESCCOM	Eswatini Communications Commission
ICT HUB	Information and communications technology
ITU	International Telecommunications Union
M&E	Monitoring and Evaluation Plan
Mbps	Megabits per second
MTN	Mobile Telephone Networks (Pty) Ltd
NGO	Non-governmental organisation
OFN	Optic fibre network
OPEX	Operating expenditure
PPP	Public-private partnership
RSTP	Royal Science and Technology Park
SMME	Small-, medium- and microenterprises
TBS	Transportable base station
TV	Television
UAI	Eswatini Universal Access Initiative
UAS	Universal Service and Access
USOF	Universal Service Obligations Fund
USOF Committee	Universal Service Obligations Fund Committee (ESCCOM)

1 Introductory comments on ESCCOM regulatory strategy for UAS

One of the core long-term strategic objectives for ESCCOM is to fulfil and achieve universal access and service to high-speed, high-capacity, high-quality, reliable and affordable broadband internet in Eswatini. Achieving this will take longer than the span of a three-year strategy. Some strategy tools will have medium-term effects (three years), while others will have long-term effects (five years and longer).

Based on the extensive review and baseline report on the state of access and service in Eswatini, undertaken in 2017, the following section outlines the ESCCOM UAS strategy for the initial three-year period, including the following components:

- The strategic objective for ESCCOM during the life cycle of this initial UAS strategy for broadband, 2018 – 2021.
- The foundation framework, goals and principles, including key regulatory initiatives with respect to UAS.
- The UAS three-year programme 2018 – 2021, including a set of key interventions.
- An action plan and budget for the UAS three-year programme.

The foundation framework outlines the initial focus of ESCCOM in preparing the foundation for achieving the long-term goals of UAS. It includes a set of key regulatory and related interventions that ESCCOM can lead, guide and facilitate for the sector over the next three years (2018 – 2021). The aim is: (i) to facilitate increased competition in the ICT sector and create an environment where market forces push operators to compete on price and quality in order to extend the market efficiency frontiers towards the sustainability; and (ii) to develop business models for basic connectivity of voice and data access and internet usage between the sustainability and the universal access and service frontiers.

To achieve this, the Commission will need to focus on a few key initiatives, including ensuring universal access to telecoms, broadcasting and postal services; harmonising existing licences; creating the universal broadband initiative and forming strategic partnerships in relation to this; levelling the playing field for competition; strengthening broadband backbone infrastructure and facilitating access to this; funding the UAS programme; and developing mechanisms to ensure transparency.

2 Strategic framework

Swot analysis

The Universal Service Strategy articulates the vision and programmes for Eswatini 's Universal Access and Service. Within the strategy are some strengths and weaknesses that have been identified; as well as Opportunities and Threats. The analysis of these four dynamics is elaborated on below.

Strengths

- UAS has funds available to start programmes
- Support from international and local organisations and projects
- Regulatory framework which promotes the Universal Service and Access
- Initial UAS research to support an evidence-based approach to the strategy

Weaknesses

- Lack of technology awareness
- Slow uptake of the current technologies
- High cost of connectivity

Opportunities

- Utilise the local players to deploy some of the services
- Partner with some of the international organisations which already support USA programmes to try to bridge the digital divide
- Usage of prevailing cost-effective technologies to bridge the digital divide

Threats

- Decrease in revenue from operators due to ailing economy
- Misuse of equipment and service provided under the Fund
- Lack of buy-in from stakeholders to run and manage the Fund post the subsidy phase

Strategic framework (continued)

Strengths

The UAS has funds that are available, which funds have accumulated over eight years. Initially, the fund contributions were paid to EPTC and was then transferred to ESCCOM, and licensees continued to make contributions to ESCCOM as per their license conditions. The UAS Fund is therefore geared to "hit the ground running" and start delivering on the programmes set out in the strategy with the funds available.

In 2017, ESCCOM conducted a market study which included a Universal Access and Service market analysis. This market analysis included an international benchmark exercise, which has resulted in a strategy that is supported by research and can be realistically implemented. Furthermore, potential international and local partnerships have already been identified on which to start the programmes.

ESCCOM's regulatory framework promotes and supports the programmes of the Universal Access and Service strategy. The regulatory alignment ensures that the strategy is sound and that the UAS Committee and ESCCOM are accountable to the stakeholders of the industry.

Weaknesses

The UAS will face three perceivable weaknesses; this is not an exhaustive list of weaknesses as some weaknesses will arise as the strategy is implemented.

The first weakness identified is the lack of technology awareness in the Kingdom of Eswatini; this includes changes and progressions in technology and existing technological trends. The lack of technology awareness could lead to poor uptake of technological development which the industry has invested in.

The slow uptake of current technologies is largely due to the first weakness which relates to poor technology awareness. It is also linked to the high cost of communications, and specifically connectively in Eswatini.

The weaknesses that have been identified will be tackled through the UAS programmes, and also through regulatory measures taken by ESCCOM. This strategy deals only with areas in which the UAS can play a role in addressing these challenges.

Opportunities

There is great opportunity to utilise the local Internet Service Providers (ISPs) and operators, as contributors to the Fund and key industry stakeholders, to deploy the infrastructure and services that are included in the programmes set out in this strategy.

The UAS has opportunities to partner with international organisations which support Universal Service and Access programmes to further bridge the digital divide. Lastly, this will be premised on the Fund's usage of the prevailing cost-effect technologies to bridge the digital divide.

Strategic framework (continued)

Threats

The biggest threat facing the Fund, as well as the Kingdom of Eswatini, is the ailing economy which would lead to a decrease in revenue for the operators, which would have a direct impact on the size of contributions the Fund receives annually. This is a threat that is larger than the immediate impact of the Fund but affects the whole nation's quality of life a mitigation to this is a matter of national importance.

Closely related to the weaknesses identified is the real threat of the equipment and services being abused and misused for purposes other than what they were intended for. This can be mitigated through rigorous monitoring and evaluation after implementation, as well as community accountability.

Lastly, the success of the Fund rests largely on the buy-in from relevant stakeholders, the absence of which could amount to decreasing return on investment. The threat of stakeholders not taking ownership of programmes to run and manage the implementation of these programmes could lead to the investment not yielding the intended and envisioned results.

MISSION

To provide a facilitative regulatory framework that enables the use of the Communication services to enhance the socio-economic prosperity of the Eswatini citizens.

VISION

To be a vibrant communications regulator that facilitates the delivery of universally accessible, affordable and quality services.

VALUES

Accountability – We will take responsibility for all of our work and demonstrate the ownership necessary to achieve our desired results.

Innovation – We will strive to adopt innovations and continuously improve in our service delivery and execution of our mandate.

Integrity – We will conduct all our activities and engagements with the highest levels of professional integrity and ethical standards.

Team work – We will always work collaboratively, amongst ourselves and with our stakeholders, in the execution of our duties. We are one in our desire to achieve our mandate and as such we act professionally, treat each other respectfully, recognise and reward our collective and individual successes in the execution of our functions.

Transparency – We will conduct all our activities and engagements in complete and open transparency to build trust among our stakeholders.

3 Strategic objectives

1 Medium-term (three-year)

To develop and strengthen the principles and foundation framework essential to achieving the long-term goal of universal access and service (UAS) for broadband internet, broadcast and postal services in Eswatini's four regions, including UAS for individuals, households, SMMEs, schools and health facilities.

2 Long-term goals (year three and beyond)

To achieve universal access and service to high-speed, high-capacity, high-quality, highly reliable and affordable broadband internet for telecoms, broadcast and postal services throughout Eswatini.

In the absence of national broadband targets, which are pending the finalisation of the National Broadband Plan and Strategy, the SADC Broadband Targets for 2025, as adopted by the Meeting of SADC Ministers Responsible for ICT, will be used for Eswatini. Namely, the UAS will be used to support the attainment of the following strategic objectives as adapted for Eswatini:

(i) By 2025, entry-level broadband services (SADC Definition) should be made affordable, at less than 2% of monthly gross national income per capita.

(ii) By 2025, entry-level terminals and household installation for fixed or mobile broadband should be made affordable, at less than the equivalent of US$50 or 2% of yearly gross national income per capita.

(iii) By 2025, 80% of the population should be covered by broadband services. In particular, at least 80% of rural areas should be within the reach of entry-level broadband services, be it fixed or mobile.

(iv) By 2025, 50% of the households should be connected to broadband.

(v) By 2025, 60% of youth and adults should have achieved at least a minimum level of proficiency in sustainable digital skills.

(vi) By 2025, un-connectedness of micro, small and medium-sized enterprises should be reduced by 50%, by sector.

(vii) By 2025, 40% of the population should be using digital financial services.

(viii) By 2025, gender equality should be achieved across all SADC broadband targets.

Whereby:

(i) Entry-level terminals shall mean devices that facilitate connectivity and they include mobile phone devices, modems and other customer premises equipment;

(ii) Entry-level broadband shall have the following definitions:

- Mobile broadband: at least 1 Mbps (downlink).
- Fixed broadband: at least 4 Mbps (downlink).

This strategy will cover the period 2018 to 2021, and therefore it is the target of ESCCOM to have achieved at least 65% of the targets set by SADC and reflected above by 2021. This is a stretch target taking into account the readiness of the UAS, the ambitions of Eswatini and our desire to facilitate achieving the SADC goals ahead of schedule.

4 Strategic pillars

These strategic areas form the four pillars that support the realisation of the strategy as follows:

Affordability

To increase affordability of communications through enhanced competition and effective regulation

Accessibility

To prioritise increasing the access in new locations and facilities; and to improve the quality of access locations and facilities that already have access by upgrading internet quality to broadband

Subsidisation

To use the Fund to create key interventions to address the market access gap

Research

To ensure an evidence-based strategy, programmes and projects to facilitate tangible and quantifiable outcomes, and to enable ESCCOM to have baseline information to achieve and measure progress on the strategic objectives and targets

It should be noted that all strategies are “rolling” mechanisms; so they require routine monitoring, and review and updating to take account of changing environment and the successes already achieved.

5 Goals

The core strategic objective is based on creating a foundation for increased access to ICTs in Eswatini, with a key focus on broadband development. This implies the following goals:

- To promote that licensed operators increase the level of ICT and broadcasting service in households through the existing infrastructure and additional infrastructure.
- To increase the level of ICT and broadcasting access in identified facilities, namely health facilities, education facilities and e-government facilities.

6 Foundation framework

Market liberalisation: Telecoms, broadcast and postal services

ESCCOM will continue to regulate the ICT and broadcasting sectors in the public interest through the development and enforcement of regulations and licence conditions that support competition and its associated benefits, ie lower prices, better quality and more choice for consumers. These will in turn positively impact Eswatini's ability to meet UAS targets and specifically increase availability, accessibility, affordability and awareness of telecoms, broadcasting and postal services.

Eswatini Universal Access Initiative (UAI)

ESCCOM will clearly define what is required for an Eswatini Universal Access Initiative (UAI) from the regulatory perspective. To this end, ESCCOM should start a process of consultation, beginning with a consultation paper to be drafted by ESCCOM and delivered to operators and government stakeholders for the first stage in a consultation process. This strategy begins the definition process and:

- Defines universal access and service with respect to broadband for the period 2018 – 2021 at an initial minimum speeds of 1 Mbps (downlink) for mobile broadband and 4 Mbps (downlink) for fixed broadband access as per the SADC targets;
- Identifies the post office as a key partner in rolling out universal access to ICTs for the period 2018 to 2021;
- Sets out the regulatory approach to advancing competitive broadband markets;
- Sets out the process for formulating a national broadband backbone implementation plan through the use of regulatory incentives to operators; and
- Establishes ESCCOM as the strategic regulatory partner to advance implementation of the Eswatini e-government programme.

The UAS's mandate includes postal and broadcasting services. Partnerships with the post office are envisaged in fulfilling its mandate as set out in this strategy. However, the broadcasting elements of the strategy will only be operationalised once the policy and legal framework for same is in place.

Build strategic partnerships that support the UAI

ESCCOM will focus on building strategic partnerships to promote access to broadband and support the implementation of the e-government programme across the country, working within its regulatory mandate. This includes:

- Creating the Eswatini Universal Access Initiative aimed at highlighting and finalising the required regulatory interventions, in conversation with the Office of the Prime Minister; the Ministry of ICT; the Ministries of Finance, Education and Health; the RSTP, industry and other stakeholders;
- Positioning ESCCOM as the facilitator for all regulatory matters required for success of the e-government programme, a key beneficiary of a successful UAS strategy; and
- Positioning ESCCOM to establish the regulatory environment required for digital innovation, such as the initiatives hosted by the RSTP for the development of applications and content that will support the e-government programme and other commercial start-up activities.

7 UAS programmes

The UAS programme defines the types of activities that ESCCOM will fund over the three-year period based on its existing financial resources, estimated at SZL32 million.

It is noted that collections will vary from year to year, as will project costs as such, the budgets set out herein are indicative.

The UAS programme consists of five parts:

Programme 1:	Connectivity for facilities, such as community centres, schools and health facilities (demand-side measures)
Programme 2:	Management of the Universal Service Committee (USC)
Programme 3:	Network infrastructure enhancement for backbone and last-mile access to broadband internet (supply-side measures). This sub-programme will prioritise Lubombo and Shiselweni regions.
Programme 4:	Development of Eswatini Digital Access Centres (EDACs)
Programme 5:	Universal Broadcasting Access

Programme 1: Connectivity for facilities

Objective

The objective of this sub-programme is to facilitate broadband connectivity for health facilities and schools, and government-wide connectivity for future e-government projects and programmes using the most efficient last-mile technologies with broadband access with a minimum of 1 Mbps (downlink) for mobile broadband and 4 Mbps (downlink) for fixed broadband.

The goals are threefold:

- To facilitate connectivity for schools and health facilities that are currently not connected to the network.
- To upgrade to broadband and improve the connectivity already existing for health facilities, schools and future e-Government centres.
- To encourage preferential cost-based rates for broadband connectivity for all facilities through regulatory incentives and the e-rate which is already provided for in the UAS Regulations and applicable to all schools, health facilities and other government facilities that require connectivity.

The above objective should take into consideration the use of the most cost-effective and high-quality last-mile technologies for broadband access with minimum download speed of 1 Mbps (downlink) and 4 Mbps (downlink) for mobile and fixed broadband respectively.

UAS programmes (continued)

Description

The ESCCOM/UAS Committee and the key ministries for ICT, health, education and identified e-government services should collectively negotiate a long-term cost-based, wholesale competitive price contract for connectivity with operators, including EPTC, MTN and other existing operators, as well as qualified public-sector providers of capacity such as Eswatini Electricity Company (EEC). A last cost bid may be issued by the ESCCOM/UAS Committee to objectively and transparently determine the provider of connectivity.

The related ministries will be encouraged to revise the budget component in each of their facilities related to the provision of ICT services and solutions to these facilities, whether for the public or their staff, to reflect costs related to (i) broadband connectivity; (ii) computer and other related equipment; and (iii) an ICT skilled technician.

The UAS programme will fund selected facilities in coordination with the Ministries of ICT, Health and Education, and ministries responsible for identified e-government services to increase and improve broadband connectivity through a limited subsidy. This limited subsidy will include provision for:

(a) Computer equipment;

(b) Last-mile connectivity equipment;

(c) Monthly connectivity charges; and

(d) A limited OPEX budget over three years.

The UAS programme will specify the number of schools, and health and other government facilities that can be covered during this time of the strategy on an annual basis. It will also be identified with other government facilities that support the e-government strategy and are eligible on an annual basis.

Programme 2: Management of the USC

Objectives

In line with legislation, the UAS Fund, managed by the USC, will cover the costs of management of the funding programmes out of the funds provided to the UAS by operators. The administration of the UAS Committee will be funded directly by ESCCOM rather than by the Fund. The UAS Committee will manage the UAS programme and budget, and will be responsible for the related monitoring and evaluation activities, which will take place every year.

The goals are as follows:

- To form a core organisation for the UAS Committee to be effective in performing its tasks. This core organisation includes a director for the programme, a part-time engineer, part-time legal adviser and an administrative assistant.
- To cover the cost of hiring highly motivated professionals to run the UAS Committee and all Eswatini UAS programmes.
- That ESCCOM facilitates resources to cover the additional costs for the USC, including research to determine the baselines for achieving the targets as agreed among SADC member states.

UAS programmes (continued)

Description

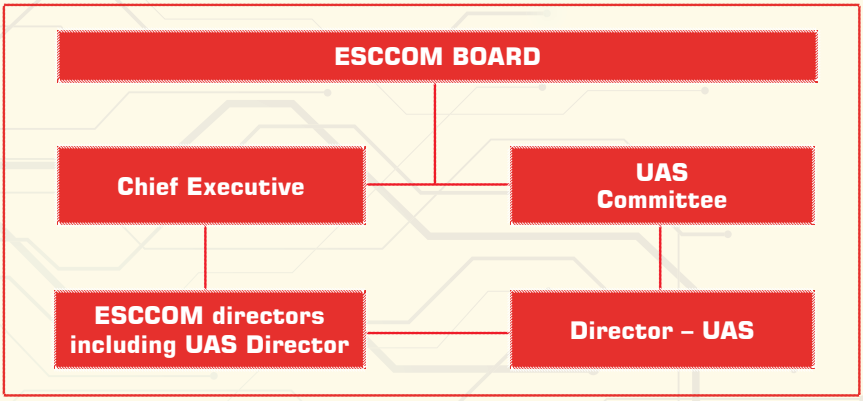

Figure 1. Organisation

ESCCOM will appoint a Director for the UAS Committee, who will manage and oversee the successful execution of the strategic programme and will promote universal access throughout the country. The Director will be part of ESCCOM Executive management.

ESCCOM will appoint and pay for an additional professional support staff member as an office administrator to assist with the office work and some of the project work.

The UAS will be a department at ESCCOM and will be supported technically by the various departments of the Commission. Some of the support that it will receive is listed below:

(i) Technology support for project management and technology support.

(ii) Strategy support for communications, pricing, strategy drafting, market survey and customer insights.

(iii) Legal support for all legal-related matters, contract drafting and management and board/committee matters.

(iv) Finance support for all financial management, tenders and procurement.

(v) Human capital support for administration-related matters.

ESCCOM will also cover the following expenses of the UAS Committee through its own existing resources:

(a) Cost of the office space at ESCCOM headquarters, office computer equipment facilities, transport, connectivity and other office expenses.

(b) Cost of national promotional campaigns, documentation and public relation programmes by the UAS aimed to make projects that promote increased access to ICTs more visible.

(c) Other costs of the UAS that are not within the budget allocated from the UAS Fund.

(d) Costs of research to assist with determining the baseline for the targets as set out in this strategy, and research to continuously monitor and evaluate progress.

UAS programmes (continued)

Programme 3: Network infrastructure enhancement

Objective

The objective of this programme is to strengthen the network backbone infrastructure, fixed and mobile, based on a technology-neutral approach, to increase network reliability and redundancy.

The programme goals are as follows:

- To establish the network infrastructure baseline by conducting a complete audit of existing backbone infrastructure in Eswatini.
- To increase coverage through subsidisation of network extension.
- To increase coverage through the subsidisation of the optimisation or enhancement of existing networks.

Description

(a) The ESCCOM/UAS Committee will interact with the different relevant ministries to conduct a complete audit of existing backbone infrastructure, as some mentioned in this report. The OFN implemented by the EEC is of particular importance.

(b) ESCCOM will regularise the licensing of any past, present or future network infrastructure private or government owned who have built any backbone or backhaul infrastructure. ESCCOM should maintain a full audit of these assets through GIS maps and other information.

(c) The construction of infrastructure may be outsourced to the private sector under competitive bidding procedures in line with Eswatini legislation and procurement procedures applicable for the implementation of disbursement of funds from the USC.

(d) Existing BTS will be upgraded and BTS capacity will be increased. The geographic focus for the first three years of the strategy for this programme will be the regions of Shiselweni and Lubombo.

(e) Network infrastructure (supply-side) enhancement project financed by the UAS will require, in addition to the actual network infrastructure to be deployed, inclusion of broadband connectivity to basic facilities (demand-side) such as schools, health facilities or ICT HUBs. This additional connectivity will be funded by the UAS Fund, along with the backbone infrastructure project. The UAS will cover OPEX over the first three years. The number of facilities will vary with each project but it is budgeted for up to three basic facilities. The operator that bids for an infrastructure project to be funded by the UAS will include in its business plan (i) the cost for the network infrastructure – whether OFN, wireless, a BTS or other; (ii) the cost of last-mile connectivity to the basic facility; and (iii) the cost of OPEX for these basic facilities for a period of three years.

(f) Any adhoc requests for funding from the UAS from any operator will be accepted but will be subjected to open competitive bidding based on the principle of the least subsidy allocation model, utilising the basic transparency model for public-private partnerships (PPPs).

(g) The least-cost subsidy model implies that the UAS will not fund 100% of the project but only the portion of the project that makes the project cost recoverable and sustainable to the operator. The bidder that requires the least amount of subsidy, based on similar technical parameters for implementation, will be awarded the project, being subject to the Eswatini procurement rules that are applicable.

(h) Each infrastructure enhancement project will have a number of minimum of specific technical parameters to be fulfilled or exceeded by the bidder operator to ensure quality of service.

(i) There should be at least two bidder operators per project and the bidder selected is the one who will request the least subsidy from the UAS in order to implement that project.

(j) Each project will be subject to a monitoring and evaluation (M&E) plan to be conducted by the UAS Committee annually.

(k) Each one of these projects, whether initiated from an operator request or originated by the ESCCOM/UAS Committee, will have a series of targets in terms of time of construction for the site, time of construction and/or refurbishment of the basic facility, as well as penalties for not fulfilling the contractual obligations on time. These targets will be specified during the bidding process and can be improved in the bidding process by the operators bidding.

Programme 4: Development of Eswatini Digital Access Centres (ICT HUBs)/ICT Hubs

Objective

To support the creation of regional ICT entrepreneurial activity assisted by local, regional or national educational institutions, NGOs, government and others under the leadership of the ESCCOM/UAS Committee.

The goal is to rollout one fully functional ICT HUB per region (4 ICT HUB) over the next 3 years.

Description

(a) The ICT HUBs are community centres that serve students, local ICT start-ups (ICT services SMMEs) and the general public by offering physical space for connectivity, basic office space for start-up development, conference rooms enabled for video-conferencing, and a multimedia room with facilities. It will provide technical courses and certified training on ICT-related courses and training in marketing, finance and company management. The ICT HUBs will be enabled to provide access to portals in education, health and e-government.

(b) The four ICT HUBs under this UAS programme, one per each region, will be several steps above a regular telecentre or community access centre, and are to be the prototypes to test and explore ICT service delivery and basic training in the future, beyond the three years of the strategy.

(c) ICT HUBs are multi-sector-oriented centres, aligned with the e-government programme, and as such a partnership should be sought with the office of the Prime Minister under whose leadership lies the Eswatini e-government programme.

(d) The ICT HUBs will support local ICT-based innovation entrepreneurial activity and will also be a conduit for developing a number of ICT awareness activities in their respective regions.

UAS programmes (continued)

(e) The ICT HUBs will be distributed across the four regions: Hhohho, Lubombo, Manzini and Shiselweni. This will facilitate monitoring and evaluation as well as cross-learning between the different projects. Given the limited estimated budget at present, the UAS programme will support one project per province in the period 2018/2019 to 2021/2022 (thus a total of four projects). Each ICT HUB will be connected to backbone infrastructure that can support at a minimum of broadband over 10 Mbps and ensure reliable broadband internet access to all its users.

(f) The UAS Committee will develop a website portal for all and each centre coordinating information-sharing between the different ICT HUBs .

(g) The order of implementation is recommended in this order: Hhohho, Manzini, Lubombo and Shiselweni. The reason for this order is to take advantage of the educational resources and market for ICTs already existing in these denser regions, in order to test the model and provide lessons for when the other centres are implemented in more economic and social challenged regions and also in terms of educational resources and market for ICTs.

The recommended timing for implementation is as follows:

ICT HUB Programme Schedule of Implementation

	Months into the programme					
	Year 1		Year 2		Year 3	
	0 – 6	7 – 12	13 – 18	18 – 24	25 – 30	31 – 36
Feasibility study and implementation plan			**All ICT HUBs**			
CAPEX						
Site preparation		**Site 1**	**Site 2**	**Site 3**	**Site 4**	
Acquisition of equipment		Site 1	Site 2	Site 3	Site 4	
Last-mile connectivity and media equipment		Site 1	Site 2	Site 3	Site 4	
OPEX						
Facility lease/rental if applicable			Site 1	Sites 1, 2	Sites 1, 2, 3	Sites 1, 2, 3, 4
Other OPEX			Site 1	Sites 1, 2	Sites 1, 2, 3	Sites 1, 2, 3, 4
Monthly broadband connectivity			Site 1	Sites 1 ,2	Sites 1, 2, 3	Sites 1, 2, 3, 4
Manager and other personnel			Site 1	Sites 1, 2	Sites 1, 2, 3	Sites 1, 2, 3, 4
Monitoring and evaluation and end of this period			Site 1	Sites 1, 2	Sites 1, 2, 3	Sites 1, 2, 3, 4
Feasibility design ICT HUB follow-up programme phase after year 3						*

UAS programmes (continued)

The UAS will focus on the following areas in supporting these centres:

- **Location and funding of the premises:** Projects should ideally be established close to existing community facilities in education or health. It should be ideally supported by a local community hub, or within the existing building facilities in an existing university or technical institute.
- **Equipment provision** when this is not available, or when this needs to be upgraded to provide the complete operational requirements. This includes PCs and laptops, telephones, last-mile broadband connectivity, television(s) and a multimedia room.
- **Broadband connectivity:** The Fund will contribute to uninterrupted broadband connectivity more than 10 Mbps or more at the ICT HUB. The UAS Committee will negotiate preferential bulk access to the internet and will provide its own last-mile solution, unless EPTC or another operator offers a better alternative.
- **Promoting coordination:** An internet portal will be developed for the UAS Committee-funded regional ICT HUBs to promote coordination and sharing of information and resources. Interaction and communication will also be facilitated through hosting of occasional national awareness and promotional events.
- **Key salaries:** A highly qualified ICT-skilled individual and an operational manager will be the basic requirements for each ICT HUB. Each ICT HUB is estimated to need at least two additional part-time support staff members with knowledge of ICTs, in order to support the administration and management of the centre.

ICT HUB associated activities

- Each ICT HUB will seek to create alliances with local technical institutes and universities, whether regional, national or even international, for the teaching of common or specialised ICT courses.
- Specific activities: Each centre will teach a basic ICT curriculum aimed at the public. Students will need to fulfil basic criteria to be accepted and there will be a nominal fee for each course – especially when these courses are offered for certification.
- The ICT HUB will promote access to international online courses, some of which can be attended without accreditation at a minimal cost or at no cost. Offered ICT curriculum classes can be as simple as a two-hour seminar on a specific skill, or a short-term course of several weeks with certification (such as Microsoft or Google).

Programme 5: Universal Broadcasting Access

Objective

Universal access to broadcasting has become a critical aspect of the promotion of basic human rights. This is due to a need to facilitate dissemination of information to all citizens. Universal access to information, education and entertainment requires universal coverage, which is the role of broadcasters and their signal distributors. This forms part of the supply-side for the broadcasting service and is relevant to both radio and television. To complete the loop, focus needs to be directed to the user/audience side.

The UAS will support the transformation and expansion of the broadcasting sector, to complement the provision of universal access to multimedia forms of communication and information. There will be two related components to the broadcasting support programme: Television set-top boxes and community broadcasting.

Description

(a) **Community broadcasting** – urge ESCCOM to implement the broadcasting licensing framework as it is a vehicle for delivering universal access for special-interest communities and geographic areas not yet covered completely by the current broadcasters in terms of dedicated local language content – this programme can only be implemented once that is in place.

(b) **The USF commits to support the establishment of community broadcasting at subsidy level for initial costs** – this extends to establishing broadcast studios and transmission facilities. The USF will provide support for all four regions to have a local/provincial community television and/or radio channel and radio stations. Support will be given to specific communities identifying a gap that can only be filled by providing localised broadcasting service drive community broadcasting. This is due to demand for broadcasting services in the languages of the local communities and discussing issues relevant to the local communities.

8 Related processes

ESCCOM will adopt the following processes and procedures to implement the strategic programmes, in addition to staffing and resourcing the unit.

Develop a fund manual

Develop a fund manual to ensure transparency and fairness in the allocation of funds. See attached document for approval of the UAS Committee.

UAS subsidy models

ESCCOM will consider the appropriate use of a number of available UAS subsidy models.

Competitive procurement

Open bidding by competing private-sector providers to provide designated infrastructure, services and facilities. Whenever possible, ESCCOM will seek to develop projects that can be implemented through open, competitive procurement processes in partnership with the private sector. In particular, projects involving development of public network infrastructure and services shall be awarded to contracting firms through a public bidding process. The key features of competitive procurement will include the following:

- The rules followed will generally be the same as for standard government procurement. All ESCCOM contracts and bidding procedures will comply with all relevant laws and regulations.
- Where standard procurement rules are inadequate to achieve the programme objective, the bidding terms and conditions will be clearly elaborated well in advance and made available simultaneously to all potential bidders.
- All bidding documents (standard terms and conditions, service specifications, any special conditions and the templates of the contracts to be signed by the winning bidders) will be posted on the ESCCOM website.
- ESCCOM will not specify what technology contractors should use to deliver the desired services, observing technology neutrality. In exceptional cases, where some technical specifications must be given, internationally accepted standards defined by the International Telecommunication Union (ITU) will be used.
- All projects/procurement will be advertised in at least two prominent national newspapers. Additionally, the advertisements will be placed on ESCCOM's own website, if available the UAS website and, where appropriate, on other relevant government websites.
- All questions received from the bidders, and the written submissions (bids), will be shared with all registered bidders. These questions and answers and any further clarifications will also be posted on the relevant websites for the purposes of transparency.
- Bids will be accepted at the announced bid submission date and time in the presence of all attending bidders, and the major contents of the bids (especially bid-bonds) will be checked in front of all then present.
- Where a technical short-listing is done following a technical bid evaluation, the short-listed bidders will be called again to witness the opening of sealed financial bids.
- Only qualified bidders submitting the **lowest** subsidy request price bid, for an acceptable workable technical solution, will be awarded contracts.

Related processes (continued)

At the conclusion of every bid process, the bid evaluation summary will be made publicly available on the ESCCOM and, if applicable, UAS website, including details of the bidding process, its history, bid amounts and the bidding result.

Strategic partnerships

Partnerships with key agencies will be used to provide co-financing for projects, where appropriate. Many of these partnerships may be primarily managed by the partner organisations, with ESCCOM being the regulatory and UAS funding partner.

Demand/affordability support

- Funding to support discounted services or equipment for qualified end-users will typically be delivered in collaboration with suppliers. The UAS and ESCCOM should negotiate a favourable rate of discount for connectivity to broadband, for each one of its projects, in advance. This should be made in contractual form.
- Promote national development of and access to backbone network infrastructure

Improving access and affordability

ESCCOM will prioritise improving access and affordability with respect to the backbone network infrastructure through regulation of competition and open-access approaches. Initiatives under consideration include:

(a) Putting in place regulatory measures to advance access to and quality of service of the EPTC national backbone OFN, wireless and CDMA networks.

(b) Initiating and facilitating a conversation for an efficient and effective backbone market with respect to the roles and contributions of all existing independent specialised backbone networks, such as those with the Eswatini Electricity Company (EEC), the fire department, correctional services, the police network, and those entities seeking to develop alternative independent specialised networks such as the RSTP and the Ministry of ICT. It is important that all backbone network initiatives be licensed through ESCCOM.

(c) Publishing regulatory measures for encouraging further investment and access to backbone network infrastructure, through applying the principles of competition where appropriate and the principles of open access where appropriate, wherever there are no overriding principles concerning security or military priorities.

(d) Providing the relevant licensing framework for (c) above.

(e) Designing and adopting a cyber-security regulatory framework for Eswatini that covers access to all backbone network infrastructure.

(f) Designing and introducing regulatory measures to encourage private-sector and donor investment participation in the provision and expansion of affordable last mile access technology solutions for households, schools and health facilities.

9 Funding the UAS programme

The following interventions will be pursued to secure funding for the UAS programme:

- Conduct an open financial audit of the existing UAS to determine the exact amount of funds currently available for programmes during the three-year period of the strategy.
- Funding a UAS broadband programme prototype focused on selected e-government initiatives, in partnership with USA partner institutions in each of the four regions.
- Providing funding for equipment and other capital expenditure (CAPEX) programmes and connectivity and other forms of operating expenditure (OPEX) for prototype sustainable community-based ICT access in support of e-government objectives in relation to education and health. This will include addressing training needs to facilitate community involvement.
- Fund and promote initiatives that focus on both the supply side and the demand side for ICT services, and that will encourage participation of SMMEs in the digital economy.
- Increasing the contributions to the UAS to international best-practice levels ie at least 1,0% of turnover by year three of the strategy (2019/2020 financial year).

10 Sustainability, transparency, accountability

- ESCCOM will support interventions and initiatives that facilitate the sustainable provision of ICT and internet-based services.
- The ESCCOM UAS strategy will be updated by the end of 2019, to be ready for the next strategy round 2020 – 2022.
- ESCCOM will remain highly transparent and accountable to the citizens of Eswatini and its partners in government, the private sector and civil society.
- ESCCOM will support the use of the most appropriate proven technology-neutral solutions under common international standards.

11 Monitoring and evaluation framework

Key issues for monitoring and evaluation

A monitoring and evaluation programme for ESCCOM and the UAS Committee must be aligned with the existing tools for performance information measurement developed by the Department of Finance. By aligning itself with the Finance Department and any other public-sector guidelines on monitoring and evaluation (M&E), ESCCOM and the UAS Committee will enhance their institutional profile and place themselves in a position to use generally accepted government internal resources and tools for implementation.

When effective, performance information will become a very important and useful management tool for the purposes of planning, budgeting, implementation, monitoring and reporting. Performance information also facilitates greater accountability, enabling legislators, members of the public and other interested parties to track progress, identify the scope for improvement and better understand the issues involved. The use of the Framework for Managing Programme Performance Information is particularly important because:

- It will become an important and effective management tool for ESCCOM and the USC;
- It links with the Government-wide Monitoring and Evaluation System;
- It facilitates the linking of ESCCOM and the USC's planning, budgeting and reporting to its own performance in indicators and results;
- It enhances the development of performance in indicators;
- It in indicates the level of capacity required to run an effective monitoring and evaluation management system;
- It informs other government institutions' role in performance information management; and
- It enables ESCCOM and the UAS Committee to perform their reporting requirements more effectively, especially to Parliament.

Key performance indicators

The following five key performance indicators in indicator concepts are required for an effective monitoring and evaluation system for UAS:

- Inputs
- Activities
- Outputs
- Outcomes
- Impacts

Monitoring and evaluation framework (continued)

Figure 1 below illustrates the relationships between the concepts and measuring impact:

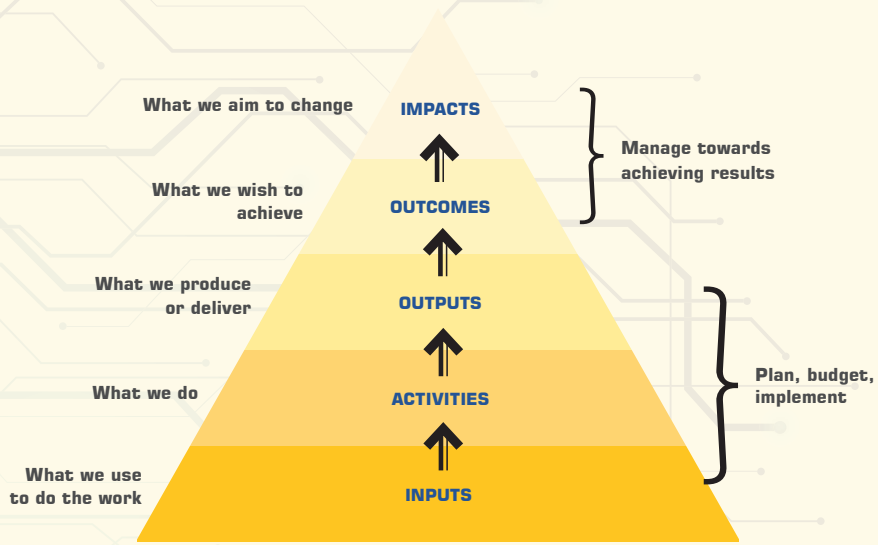

Figure 1: Key performance indicators

ESCCOM will need to determine what indicators it will use to measure the effectiveness of its UAS strategy and, where necessary, do baseline research to measure progress. Many benchmarks have been already set out in the 2017 UAS report, such as the current extent of universal access and service across the four regions.

Monitoring and evaluation framework (continued)

Programme and project input, output and outcome evaluations

ESCCOM and the UAS Committee should undertake to perform annual surveys in each location of implementation, according to the series of indicators shown in the table, and report to the Board of Directors and CE of ESCCOM on its findings. Each survey should require the following:

- Number, scope, size and expected benefits of projects that have been funded by the Fund, in terms of the requirements set.
- Budget and financial inputs, activities and outputs for each location, including the operational expenses subsidy, in order to determine the financial health of the centres in each location and the degree of success, or lack of success.
- Non-financial inputs, activities and outputs of the UAS initiatives under the Fund.
- A series of survey questions for the managers of each centre, to ascertain the challenges and difficulties encountered, as well as the success stories (outcomes).
- A series of survey questions for the users of each centre, in each location, to determine the level to which service delivery has improved, worsened or stayed the same, as well as to understand the user perspective in terms of price and the product offering (future demand analysis for enhancing the services provided by each centre) (outcomes and, over the longer term, impact).

Fund programme impact evaluations

The annual surveys will provide ESCCOM and the UAS Committee with evaluation information of the immediate outputs and the longer-term outcomes and socio-economic impact of Fund projects in the communities they serve and the society as a whole. Those results will serve as the basis for future programme design.

Institutional requirements

To successfully perform the M&E requirements, ESCCOM and the UAS Committee will need to deploy a small team of professionals, including at least one economist, one engineer or technologist, and one statistician, that will visit each location and provide ESCCOM and the UAS Committee with ready feedback when required. As more centres are built and subsidised, the cost requirements for M&E will increase.

The M&E team will present formal mid-year and annual reports to the USC, shared with ESCCOM, with a summary of findings, and should be ready to respond to questions by the UAS Committee and ESCCOM on the status of each centre. The M&E team will present an annual summary of findings to the Board of Directors of ESCCOM. ESCCOM and the UAS Committee can host this function in-house or outsource this function.

Monitoring and evaluation framework (continued)

A detailed monitoring and evaluation section is included in Appendix A. In summary, there are a range of components to the monitoring and evaluation process, given the complexity of the process of increasing universal access and service. These components include:

- **Monitoring and enforcing compliance with requirements by licensees:** ESCCOM must ensure that licensees adhere to regulations and licence conditions. ESCCOM will also need to assess whether the mechanisms to facilitate fair competition are adequate and proactively address challenges that arise. As highlighted earlier, establishing an ideal environment for fair competition will result in an extension of UAS, pushing access beyond the market efficiency frontier, closer to the sustainability frontier. Ongoing research will be required to assess progress at these frontiers.
- **Oversight of UAS and UAS Committee:** Performance contracts with UAS Committee appointees and UAS staff, binding them to outputs and outcomes identified in the strategic plan, will assist in this process. Establishment of reporting cycles will assist ESCCOM and the UAS to report back to the public and key stakeholders on progress.
- **Ensuring service providers fulfil obligations:** As indicated, many of the projects will be outsourced to service providers. ESCCOM will need to ensure that contractors are legally and contractually bound to fulfil work they have been contracted to do, within budget and time frames and fulfilling all set quality requirements.

Corporate information

Registered name
Eswatini Communications Commission

Registered office address
4th Floor, Sibekelo Building, North Wing

Postal address
PO Box 7811
Mbabane
H100

Telephone number
+ 268 2406 7000

Email
info@sccom.org.sz

Website
www.sccom.org.sz

Auditors
Kobla Quashie & Associates

ESWATINI
COMMUNICATIONS
COMMISSION