Implementation Plan for a Universal Service Infrastructure Project in Trinidad and Tobago

Telecommunications Authority of Trinidad and Tobago

Maintenance History		
Date	**Change Details**	**Version**
October 23, 2019	Approved version	1.0

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Abbreviations

BoM	bill of materials
CPE	customer premise equipment
CROP	Consumer Rights and Obligations Policy
CUSI	Contractual Universal Service Initiative
GoRTT	Government of the Republic of Trinidad and Tobago
ICT	information and communications technology
ISP	Internet service provider
MPA	Ministry of Public Administration
OBA	outcome-based assessment
PPP	public private partnership
SDGs	sustainable development goals
THA	Tobago House of Assembly
USF	Universal Service Fund
USR	Universal Service Regulations

1 Introduction

1.1 Rationale

Broadband Internet access availability, affordability and accessibility is the foundation for ICT-enabled socio-economic development. Many countries have adopted this position and have begun aggressive programs to encourage the build out of broadband networks and services.

The last digital divide survey conducted by the Telecommunications Authority of Trinidad and Tobago (the Authority) was in 2013. The results revealed that there are many underserved and unserved areas in Trinidad and Tobago. To advance the goals of the *National ICT Plan ICT Blueprint 2018-2022,* which is aligned with the Vision 2030 plan of the Government of the Republic of Trinidad and Tobago (GoRTT), these access gaps must be bridged, in order to create more opportunities for all citizens to participate in the digital society and economy.

Considering the foregoing, the Authority proposes to leverage the Universal Service Fund (USF) to embark on a contractual universal service initiative (CUSI) aimed at making telecommunications access infrastructure and broadband Internet services available to identified underserved/unserved areas in Trinidad and Tobago. The initiative will commence with two geographically remote areas, one in Trinidad and the other in Tobago, with the ultimate goal of bridging the digital divide throughout the nation.

1.2 Purpose

This document, *Implementation Plan for a Universal Service Infrastructure Project in Trinidad and Tobago* (Implementation Plan), describes the execution of an infrastructure project for two remote areas, one in Trinidad and one in Tobago. The aim is to provide broadband Internet access service in these two selected areas via the USF, in accordance with the Telecommunications Act, Chap. 47:31 and the Telecommunications (Universal Service) Regulations, 2015 (USR), as amended.

This Implementation Plan is to be submitted by the Authority to its line Minister for approval. The process employed for this CUSI will serve as a model for future USF projects of a similar nature.

1.3   Background

GoRTT has recognised the socio-economic benefits to be derived from ICTs and particularly the country-wide benefits of broadband access. ICT has been identified as a discrete sector and a crucial enabler to many other sectors, contributing to the diversification of the national economy and the strengthening of the country's competitiveness and viability in the global arena.

The following excerpt from the *National ICT Plan 2018-2022* reflects government's view of the country's development vis á vis the role of ICT:

"Our vision of Empowered People is one where the citizens of Trinidad and Tobago:
   o   have pervasive access to ICT;
   o   are connected to broadband infrastructure which provides a variety of services that   are affordable, of high quality, safe, and secure; and
   o   are deriving high value from the use of ICT, benefitting themselves and society."

The aspiration is to achieve the following key target for Trinidad and Tobago, by or before 2022:
- "85% broadband access of the minimum download speed detailed within the Telecommunications Authority of Trinidad and Tobago's National Broadband goals".

Consistent with the vision of the *National ICT Plan ICT Blueprint 2018 – 2022*, the Universal Service Regulations (USR) obliges concessionaires to implement CUSIs, which should focus on or consider:

   i.   infrastructure development within the access gaps, as identified by the Authority.

   ii.   resolving structural deficiencies in the national telecommunications grid.

   iii.   projects that can be implemented by similarly situated concessionaires in a given market or sub-market.

1.4   Objectives

This document:

    i.   identifies one underserved community (as regards the availability of broadband Internet access service) in Trinidad.

    ii.   targets one underserved community within the Parish of St. John in Tobago.

    iii.   describes the implementation of an infrastructure project in each community to provide broadband Internet access services via the USF.

    iv.   details the methodology that will be utilised to execute the projects.

    v.   provides the Authority with a model to execute other CUSIs of this nature.

1.5   Relevant Legislation

The Authority, pursuant to section 3(b) and (c) of the Act, is charged with the responsibility to establish conditions for:

"…(b) the facilitation of the orderly development of a telecommunications system that serves to safeguard, enrich and strengthen the national, social, cultural and economic wellbeing of the society;

(c) promoting and protecting interests of the public by –
    (i)   promoting access to telecommunications services;
    (ii)   ensuring that services are provided to persons able to meet the financial and technical obligations in relation to those services…
    (iv)   promoting the interests of customers, purchasers and other users in respect of the quality and variety of telecommunications services and equipment supplied;"

In relation to universal service, section 28 of the Act mandates the Minister with responsibility for telecommunications to establish the policy for universal service. It further provides that the Authority shall, in accordance with such a policy, determine the services in respect of which the requirements of universal service shall apply and shall determine the manner in which such services shall be provided and funded to meet the requirements of universal service.

Section 18(1)(c) of the Act provides for the Authority to determine universal service obligations throughout Trinidad and Tobago, pursuant to section 28, and to ensure that such obligations are realised.

The USR established the framework for the operationalisation of the USF and created the mechanisms for the implementation of mandatory and contractual universal service initiatives.

For the purposes of this project, the process established under Part V of the USR will be utilised. (See Appendix I for Part V of the USR).

1.6   Other Relevant Documents

The following documents make provisions which were helpful in the preparation of this Implementation Plan:

i.   *Trinidad and Tobago's National ICT Plan ICT Blueprint 2018-2022*

ii. The *Universal Service Framework for Telecommunications Services in Trinidad and Tobago* (June 2012)

iii. *Authorisation Framework for the Telecommunications and Broadcasting Sectors of Trinidad and Tobago* (ver. 0.5, 2005)

iv. The Digital Divide Survey Trinidad and Tobago, 2013

2 Project Definition

2.1 Project Goal

The goal of this project is to provide broadband Internet access service to two underserved areas in Trinidad and Tobago — one in Trinidad and one in Tobago.

Upon completion, residents of these communities will be able to subscribe to broadband Internet access service commonly available in well-served areas[1]. The advantages of this service include: full access to government online services, remote working capabilities, improved productivity, online bill payment and applications, ease of access to information that can enhance educational pursuits, entertainment opportunities and other social benefits (e.g., online shopping).

2.2 Project Scope

The project aims to deploy telecommunications access infrastructure that will facilitate the provision of broadband Internet access services in the specified areas.

The infrastructure will be implemented through a reverse auction, inclusive of a request for proposal (RFP) process, in accordance with Telecommunications Tenders Rules or any other applicable law.

The USF subsidises the uneconomic cost of deployment of broadband Internet access infrastructure and service to the prescribed communities.

An initial step of this project involved a needs assessment which informed the overall scope of the project. These activities included:

   i.   Stakeholder identification and engagement

   ii.   Analysis and identification of suitable geographic areas with access

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[1] A well-served area is afforded access to a wide range of broadband packages from ISPs.

Other activities within the project scope will include:

i. Service provider selection:

    a) Creation of RFP to submit to qualified service providers

    b) Issuance of RFP

    c) Conducting reverse auction (if more than one bid is submitted via the RFP process), followed by awarding the contract to the winning bidder

ii. Project management and monitoring:

    a) Review of project reports from service provider on the progress of the project

    b) Ensuring implementation is aligned with proposal in submitted bids

iii. Project evaluation

    a) Collection of data to determine project effectiveness, e.g., digital divide survey and a feedback survey

2.3   Assumptions

The successful implementation of this project will depend on the Authority gaining full cooperation from the relevant stakeholders. The following are some assumptions, upon which the success of this project depends:

i. The deployment of broadband Internet access infrastructure is technically feasible in the identified areas.

ii. The eligible service providers are interested in providing broadband Internet access services to the identified areas.

iii. Timely approval of the plan by the Universal Service Committee

iv. Timely approval of the plan by the Board of the Authority

v. Timely approval of the recommended Tobago location by the Tobago House of Assembly (THA)

 vi. Timely approval of the proposal by the Authority's line Minister

 vii. Full support and assistance from the Authority's line Ministry in the implementation of the project

 viii. The project cost is within the limits afforded by the available funds.

 ix. Timely approvals from other government agencies, to permit the deployment of infrastructure in the identified areas

 x. Available foreign exchange to fund the deployment of infrastructure

2.4 Critical Success Factors

The successful implementation of this project is dependent on the factors listed in Table 1.

Table 1: Critical success factors for achieving project objectives

Objectives	Critical Success Factors	KPIs
Identify two possible underserved communities	i. confirmation of location in Tobago with the assistance of the Tobago House of Assembly ii. ministerial approval of locations in Trinidad and Tobago	Timely confirmation of the location in Tobago
Reduce the gap in availability of broadband Internet access in the two identified areas	i. interest by service providers in accessing the USF via reverse auction process to	Participation in the reverse auction process, if applicable, by qualified service providers.[2]

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[2] In the case where there is no participation, the Authority can mandate a suitable service provider to implement the project.

Objectives	Critical Success Factors	KPIs
	implement network infrastructure in the two identified locations.	
	ii. approvals by the relevant agencies, e.g., the Ministry of Works, for whatever necessary infrastructure works must be undertaken in the two identified areas	Timely approvals of the necessary infrastructure works granted
	iii. access to the necessary foreign exchange by service providers to procure the requisite network equipment	Timely access to foreign exchange
	iv. timely engagement of a project manager	
	v. acceptance of the necessary infrastructure works and availability of new broadband Internet services by the residents in the two identified communities	Customer uptake of service

3 Strategy for Implementation

3.1 Key Stakeholders

The engagement and involvement of key stakeholders will be critical to the success of this initiative. The key stakeholders identified for this initiative are the Ministry of Public Administration (on behalf of GoRTT), the THA, the Authority and the national domestic fixed concessionaires who currently operate as fixed ISPs, the Trinidad and Tobago Electricity Commission, the Trinidad and Tobago Police Service and regional corporations of the specific municipalities.

Identification of stakeholder roles and responsibilities, along with their purpose of engagement and expected contribution, will also be critical to the successful completion of the project. These roles and responsibilities are identified in Table 2.

Table 2: Stakeholder roles and responsibilities

Stakeholder	Role	Responsibilities
Ministry of Public Administration (on behalf of GoRTT)	Policy direction Facilitation of engagement with other Government Ministries and agencies, in support of the Authority	i. Approval of implementation plan ii. Assistance to the Authority, where required
Tobago House of Assembly	Facilitating with the Tobago location	i. Assist the Authority, where required, with obtaining a location in Tobago to deploy specified solution
Telecommunications Authority of Trinidad and Tobago	Universal Service Contractual Initiative coordinator Coordination with other Government Ministries and agencies, with support from the MPA	i. Develop the implementation plan to execute the CUSI ii. Liaise with relevant concessionaires to implement CUSI

Stakeholder	Role	Responsibilities
	Coordination with other stakeholders to facilitate timely approvals for infrastructure deployment Fund administrator	iii. Manage initiative under *Universal Service Governance Framework* established by the Authority (see Appendix IV) iv. Recommend target location for the project and seek approval v. Define the parameters of the target location and service area. vi. Issue the RFP to fixed concessionaires vii. Evaluate the respective bids from the RFP and choose the best bidder viii. Hire and assign a project manager ix. Facilitate communication with, and timely approval from, agencies that may be needed to allow for infrastructure deployment, based on escalations from ISP(s) x. Manage the disbursement of the USF based on targeted outcomes xi. Ensure that quality of service targets are met

Stakeholder	Role	Responsibilities	
		xii.	Conduct post audit of project implementation and identify any deficiencies to be addressed
National public domestic fixed concessionaires who currently operate as fixed ISPs	Telecommunications service provider(s) with contractual universal service obligation who were awarded the contract	i.	Installation of infrastructure to provide broadband Internet service to the two identified communities, in accordance with the scope of the initiative
		ii.	Provision of broadband Internet access service to the two identified communities, in accordance with the requirements and quality of service parameters, as specified by the Authority
		iii.	Obtaining the necessary permits and approvals from other government agencies in order to deploy infrastructure
Trinidad and Tobago Electricity Commission	Providing pole usage for aerial fibre	i.	ISP(s) may need to rent poles to run aerial fibre along roadways to provide the service
Trinidad and Tobago Police Service	Management of road traffic	i.	Granting permission for and managing road traffic in cases where infrastructure work t will obstruct traffic flow
Regional corporations of the varying municipalities	Providing consent in areas that are under their jurisdiction for infrastructure deployment	i.	Providing consent, where necessary, to allow ISP(s) to deploy infrastructure e.g., planting of poles

3.2 Project Implementation

3.2.1 Implementation Approach

The Authority is required to conduct a reverse auction for the build out of infrastructure and the provision of services to identified areas in Trinidad and Tobago. The winning bidder(s) will be the service provider(s) satisfying the criteria for the project at the least (USF subsidised) cost.

Key elements of the Authority's approach will include:

i. preparation of an RFP for eligible service provider(s) to build out infrastructure and provide broadband Internet access service to the targeted areas.

ii. identification by the service provider(s) of participation in bidding at both locations or one location within the RFP.

iii. confirmation that the geographical footprint being served by the solution is aligned to the specifications provided by the Authority.

iv. indication of the broadband Internet access speed that must be supported, in conformance with the RFP specifications, at a minimum.

The Authority also recommends that only wired access infrastructure, preferably fibre or hybrid fibre coaxial access networks, be utilised for these areas. Based on the information (ISP Internet access packages and speeds) presented in Appendix VI, it is apparent that currently, within the expected deployment timeframe of this initiative, wireless ISPs in Trinidad and Tobago offer less cost-effective packages to the consumer and provide significantly lower Internet access speeds. A wired access solution is a scalable long-term solution, although the capital expenditure is greater and rollout timeframe longer. Current wireless ISP solutions may also encounter problems with heavy vegetation in the areas earmarked for these projects, leading to customer quality of service issues.

3.2.1.1 *Proposed Organisation Structure for the Project*
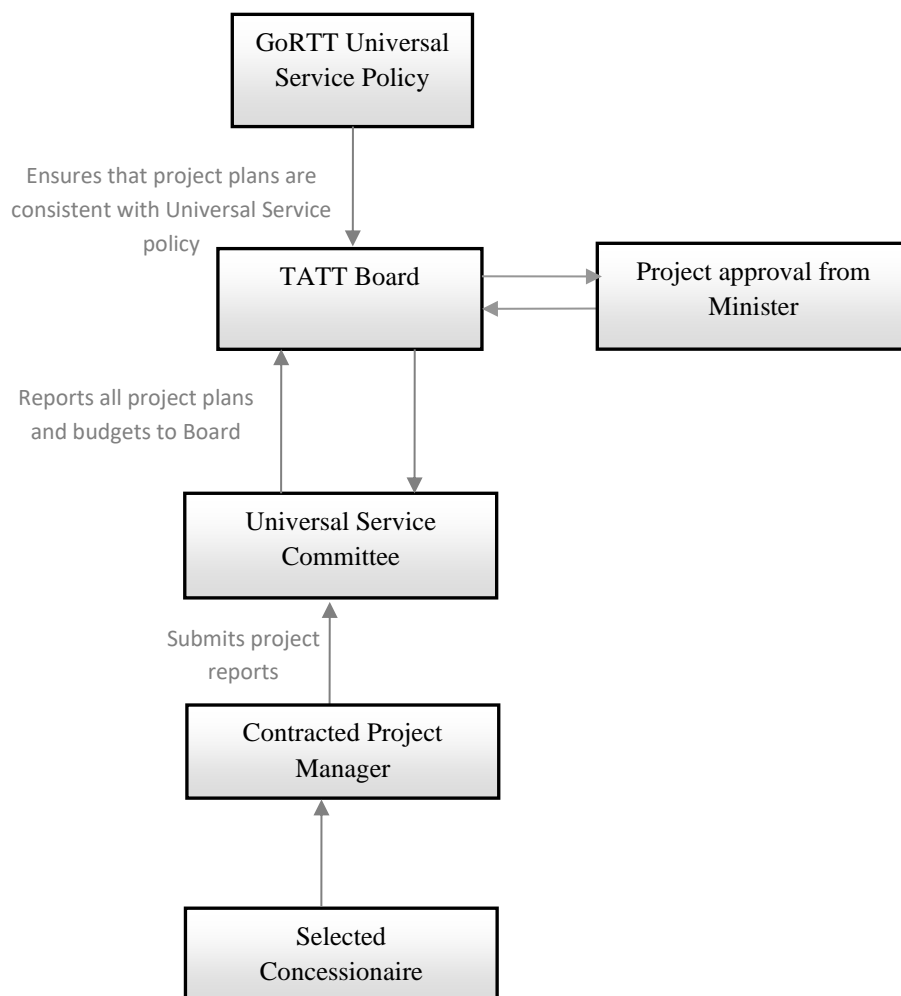
Figure 1: Proposed organisation structure for the project

3.2.2 Eligibility Criteria

This criterion refers to the concessionaries that are eligible to participate in the RFP process and reverse auction, if required, to effectively provide the services intended to bridge the access gaps in broadband Internet service in the relevant communities.

In accordance with section 19 (3) of the Telecommunications (Universal Service) Regulations, 2015, "Only a concessionaire authorized to provide the service or services that comprise a Universal Service initiative may submit a bid under subregulation (1) to be granted funding to implement the Universal Service initiative."

3.2.3 Procurement Process

The procurement process will take the form of an RFP process, followed by a reverse auction, if required. The service provider that meets the requirements for coverage and broadband Internet access speed at the least subsidised cost will be awarded the contract.

The provider must include as part of their proposal the following:

i. Confirmation that the geographical footprint being served by the solution is aligned to the specified area identified by the Authority

ii. A minimum of 5 Mbps download paired with 3 Mbps upload speed being available 100% of the time, with a maximum of 40 Mbps download paired with 5 Mbps upload speeds available to each customer.

iii. Details of the design approach to provide broadband Internet access service to the identified targeted areas. The recommended solution must clearly indicate the technology to be utilised.

iv. Milestones for the project implementation, based on duration of activity and respective achievements

Additional requirements related to quality and customer service standards, in accordance with the *Consumer Rights and Obligations Policy*, (CROP), are as follows:

i. The quality of service experience of these communities, as indicated in this Implementation Plan, should be similar to the experience///that of any other community already provided with such service.

ii. Service outages and other customer issues experienced in these communities are to be handled in the same manner and with the same urgency as with any other area of Trinidad and Tobago provided with such services.

iii. The successful ISP will be expected to treat customers in these USF subsidised infrastructure communities in the same manner as other customers on their network are treated. Customers will be billed as per standard practice.

3.2.4   Project Management Methodology

3.2.4.1   Hiring of the Project Manager

One of the key aspects of managing this project is the selection of a project manager. An external project manager with the requisite skills and experience in handling such network infrastructure projects will be selected.

3.2.4.2   Duties of the Contracted Project Manager

The main duties of the contracted project manager will include:

i.   reporting on the project milestones tied to USF reimbursements.

ii.   status and progress reporting.

iii.   the process for treating with a change of scope.

iv.   liaising with, and reporting to, the Authority's focal point.

3.2.4.3   Monitoring and Evaluation

Once the project is implemented, there will be the need for post-implementation monitoring, a review of lessons learnt, and remedial actions for any mistakes made during implementation or observed as part of monitoring by the Authority.

There will also need to be an acceptance criterion, to be met by the winning bidder, to ensure that installation and service complies with all necessary requirements and are error or issue free.

3.3   Funding

3.3.1   Quantum of Subsidy

This cost will be determined by the winning bidder's quote, i.e., the bidder requiring the least subsidy to meet the stated requirements. This subsidy may be a one-off payment or payments staggered over a specific time period. The RFP will state details of the proposed subsidy options. It should be noted that the Authority does not currently have data on what the likely (USF subsidised) cost of the project will be, so information gathered from the RFP bids can be used in the future to gauge the likely cost implementing other USF contractual initiative projects.

3.3.2   Proposed Disbursement of Funds

In order to properly manage the disbursement from the USF, clear objectives will be defined. The disbursement will be specified based on capital expenditure (CAPEX) and recurrent expenditure. The disbursement for the CAPEX requirement will be based on different outcome-based assessment targets and associated invoices. Reimbursement for recurrent expenditure, if applicable, will be allowed for a maximum of three years.

Table 3: Proposed milestones for the disbursement of the USF for CAPEX

Milestone/Target	Disbursement from USF (% of the total in accordance to the proposed winning bid)	Additional Details of Terms for Disbursement
1. Materials in country and in the concessionaire's possession	25%	The provider will need to provide proof that the bill of materials (BoM) required to undertake this project is all in country and has been cleared from customs. Additionally, in the case of the Tobago deployment, proof will be needed that the necessary provisions have been made to secure a warehousing facility and

Milestone/Target	Disbursement from USF (% of the total in accordance to the proposed winning bid)	Additional Details of Terms for Disbursement
		cargo transport arrangements to Tobago.
2. Network equipment fully deployed	50%	All network infrastructure needed to provide broadband Internet access service has been commissioned.
3. Six months from inception of service to customers' premises	15%	Six months following the date of the first customer installation at each of the locations
4. Commissioned network operating within specification	10%	All issues/deficiencies identified by the Authority are satisfactorily addressed to have a properly functioning system in place for the community.

If a recurrent subsidy is required, the disbursement of such subsidy will commence subsequent to the first subscription and will be allowed for a maximum of three years thereafter based on the invoices submitted.

3.3.3   Procedures for Reimbursement

To access the funds, concessionaires will be required to submit, on a milestone basis and at a minimum, the following documentation:

A completed Universal Service Fund Claim Form[3] and associated attachments including, *inter alia*:
  i.   an original invoice from the concessionaire, referred to in section 3.3.2
  ii.   signed certified copies of invoices
  iii. copies of signed contracts between service providers and recipients of fixed broadband Internet services
  iv.   type of claim (whether recurrent or CAPEX)

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[3] See Appendix V.

The specific payment terms will be in accordance with the signed contract.

4   Targeted Areas in Trinidad and Tobago

The areas targeted for this project are as identified below.

4.1   Brasso Venado and the neighbouring village of Los Atajos, Tabaquite, Trinidad

The Authority conducted a site survey of this area on June 11, 2019. (Appendix II is the report on this visit.) The report concludes that this village (and the neighbouring village of Los Atajos) are appropriate sites for this USF project.

4.2   Villages in St. John's Parish, Tobago

The St. John's parish in Tobago was identified as underserved in the last digital divide survey conducted by the Authority, in 2013. In terms of fixed wireline coverage, the following is to be noted:

i.   One wire-line service provider has approximately 50 corporate wireline customers in Tobago, in the Scarborough area and environs. This service provider has not deployed wire-line services in Tobago for residential customers.

ii.   As shown in Appendix III, a second wire-line service provider does not provide access fibre to the villages of Parlatuvier, L'anse Fourmi and Bloody Bay (red line). This service provider has access fibre in the villages of Hermitage (North East) and Castara (North West). There are several villages in this parish that could be candidates for the USF project.

iii.   A third wire-line service provider has an old first-generation Digital Loop Carrier system serving the village of Parlatuvier. The system is linked by a fibre optic transport system to the rest of the service provider's wire-line network. There are approximately 45 customers served with twisted pair copper wires providing plain old telephone service and 256 Kbps Internet access. This service provider also ran access fibre to the THA facilities in Parlatuvier. As recently announced, a new Huawei wireless system is being utilised to provide fixed POTs and Internet access to residential customers, with the aim of retiring the old twisted pair copper plant.

The villages of Parlatuvier, L'Anse Fourmi, Bloody Bay and Hermitage are underserved areas within the St John's parish. These village(s) will therefore be considered for this project, subject to the approval of the Honourable Chief Secretary, Tobago House of Assembly.

5   Risk Management

Table 4 summarises some risks that may be encountered in the execution of this project and proposed mitigation strategies.

Table 4: Risks and mitigating strategies

Identified Risks	Mitigating Strategies
Resistance from service providers to undertake project	Advertise win-win situation to potential providers, as their CAPEX network rollout is being subsidised in uneconomic to serve areas
Low customer uptake of service	Effective advertising by service providers and the Authority to customers in the area
Delays in material being on island	Assistance from relevant Ministries
Foreign exchange issues	Assistance from relevant Ministries
Failure to have proper material management (secure warehouse storage in Trinidad and Tobago. and oversee that there is no wastage)	Competent contracted project manager to identify any abnormalities or wastage
Subsidy abuse	Explicit, clearly written methodology for disbursement of funds with adequate checks and balances

6   Implementation Schedule

Table 5 details the project implementation schedule.

Table 5: Project implementation schedule

Project Schedule Details				
	Key Milestone	Start Date	End Date	Notes
1	Final selection of Tobago Site	October 2019	December 2019	
2	Approval of the Minister	January 2020	February 2020	
3	RFP Process and Reverse Auction	March 2020	September 2020	
4	Selection of contracted Project Manager	July 2020	September 2020	
5	Full Implementation of Project	October 2020	June 2021	
6	Deployment Post Mortem	July 2021	August 2021	
7	Monitoring of customer uptake and compliance	October 2020	October 2023	
8	Final post mortem	November 2023	December 2023	

7 Appendix I: The Telecommunications (Universal Service) Regulations, 2015 as amended – Part V

8   Appendix II: Brasso Venado (Tabaquite, Trindad) Site Visit Report

Report

Site visit to Brasso Venado, Tabaquite

8.1   Purpose

A site visit to the village of Brasso Venado was conducted by Dexter Boswell-Inniss and Charles Frost on June 11, 2019 to assess the availability of broadband Internet access service in the area. A meeting had been arranged with the residents for 11.00 a.m. that day to discuss their issues and concerns. The information collected from the residents and further data analysis will be used to assess whether this area is suitable for a Universal Service Fund (USF) project, in accordance with the Universal Service Regulations.

8.2   Background

This area had come to the attention of the Authority as two complaints from there were received in mid-2017 about inconsistent mobile phone and Internet services from TSTT. Both customers now have Digicel mobile phones. Brasso Venado is a village in the Central Range at the very end of Telemaque Road. The village was also identified as underserved in the last digital divide survey conducted by the Authority. Ms. Basmatee Ramdial, one of the complainants, spoke to Mr Boswell-Inniss via her Digicel mobile phone and agreed to contact other residents and have a meeting at her home. There is the Brasso Venado Government Primary School close to the end of the roadway. The school had previously been afforded Internet service by the Trinidad and Tobago Amateur Radio League (TTARL), but that service was discontinued sometime in 2017. The TTARL did correspond with the school, indicating that they were working on re-establishing the Internet access link but since then, nothing has been done. The tower that was utilised for the Internet access service was also dismantled, as corrosion and lack of maintenance had weakened the structure, making it dangerous to anyone in the vicinity.

8.3   Methodology

The status of the telecommunications infrastructure en route to the meeting in Brasso Venado was noted. The discussion at the meeting focussed on the status of the broadband Internet service (type and quality of service) currently available within the area. Any other information provided by the residents was also noted. On our arrival, the principal of the primary school also requested a meeting and this request was accommodated.

8.4   Findings

8.4.1   Observations en route to Brasso Venado

On the way to Brasso Venado, it was noted that there are fixed aerial telecommunications cables up to Flanagin Town. There are no cables on Telemaque Road. There is also a larger village called Los Atajos on Telemaque Road, just a few kilometres before Brasso Venado. Many parts of Telemaque Road have collapsed and are somewhat dangerous to drive on, with the real possibility of slipping off the sides of the road down a precipice. An SUV or pick-up truck is a better option for access. There is electricity (the pole route looks satisfactory) and WASA water mains. Evidence of an agricultural economy is seen in the area — cocoa, citrus and short-term crops. The area is also heavily forested, with some logging activity observed.

8.4.2   Internet access service in Brasso Venado

Since 2017, residents and the Brasso Venado Government Primary School have had wireless Internet access via a modem supplied by Bmobile, which receives a wireless data input signal and converts it to a Wi-Fi signal. This WiFi signal is utilised by the residents for internet access. However, depending on the level of the received wireless signal, the box only works in certain locations within and outside the premises and, according to the residents, provides speeds of less than 5 Mbps. Moreover, once there is heavy rainfall, wireless coverage in the area deteriorates or disappears entirely. The Internet package provided is unlimited and costs $225.00 per month.

The primary school has a small staff and currently 46 students are enrolled.

Due to the problematic reception of the wireless signal in Brasso Venado, the modem is placed in an awkward location, on top of a water tank outside the school building. The principal indicated that this area had the best signal level. The modem is under an eave but is somewhat exposed to the elements.

The school also has a rack enclosure which houses servers, switches and miscellaneous equipment for a computer lab and local area network. It is not operational. This equipment was provided by the Ministry of Education. The school principal indicated that a meeting was

recently held with the Tabaquite Regional Corporation to discuss a United Nations-affiliated long distance learning project utilising high speed Internet access.

8.4.3 Cellular coverage

According to the residents, cellular coverage in Brasso Venado is better with Digicel than with Bmobile. TATT employees who are Bmobile customers were able to observe first-hand the fluctuations of the cellular signal as they walked around the area. The closest cell-sites to the village are approximately 5.2 km (Bmobile) and 4.8 km (Digicel) away, as per the Authority's tower database.

8.4.4 Television coverage

The residents stated that they receive a few free-toair (FTA) television channels using standard yagi rooftop antennas. Subscribers to DirecTV reported that the reception is negatively affected during heavy rains.

8.4.5 Number of households

According to the residents, there are approximately 60 houses in Brasso Venado, a primary school and a lunch centre, which is used to prepare lunches for schools. The neighbouring Los Atajos village also does not have proper broadband Internet service. Los Atajos is a larger village with about one hundred houses.

8.5 Conclusion

The villages of Brasso Venado and Los Atajos are suitable locations to implement a USF project. Both villages are underserved in terms of broadband Internet access, with a slow and unreliable service. One of the primary school children stated on our arrival at the school: "*Sir, I need Internet in my home, please!*"

9 Appendix III: One Service Provider's Access Fibre Coverage, North Coast of Tobago
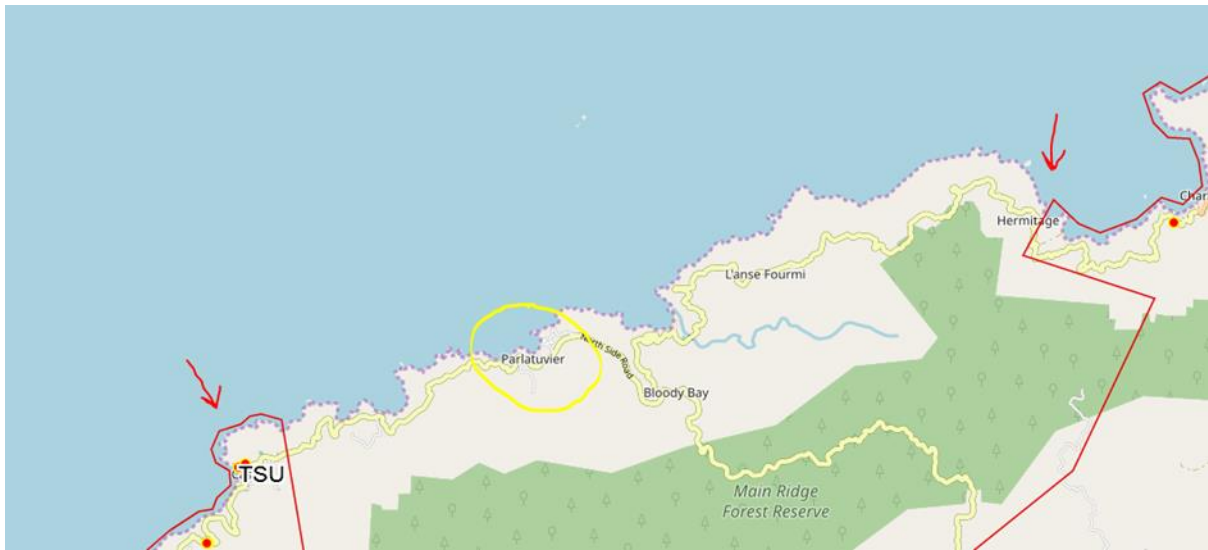
10 Appendix IV: Universal Service Governance Framework (Section 7 – Universal Service Framework)

1 Governance Framework for the Implementation of Universal Service Projects

This section of the document presents the Governance Framework for the decision-making process for the selection and implementation of Universal Service projects, and for the operations of the Universal Service Fund. In particular, this section focuses on the selection process of choosing initiatives as Universal Service projects and the standards and procedures to be implemented for proper management and provision of such.

1.1 Act Requirements for the Implementation of Universal Service Projects

As governed by the Telecommunications Act, the Authority is seeking to implement Universal Service projects which are to be financed through the Universal Service Fund. The following sections highlight the areas of the Act to fulfil such requirements:

Section 28 (1*) "In accordance with the policy established by the Minister, the Authority shall determine the public telecommunications services in respect of which the requirement of Universal Service shall apply."*

Section 28 (5) *"The Authority shall forward its recommendations to the Minister pursuant to this section and the Minister shall indicate his approval, modification or disapproval of the recommendation within sixty days of receipt of the Authority's recommendation."*

Section 28 (8) *"The obligations to provide and contribute to the funding of the services referred to in subsection (1) shall be applied on a non-discriminatory basis as between all similarly situated telecommunications service providers and users."*
Section 53 (3) *"Funds arising in respect of paragraph (1) (d) shall only be applied to facilitate the provision of Universal Service in accordance with the provisions of section 28."*

1.2 Objectives of the Universal Service Projects

As described within this framework, the Universal Service Fund will consist of contributions made by service providers through the 'mandatory Universal Service paying obligations'. In addition to this, a percentage of excess funds collected from the Authority's Operating Budget

may be allocated towards the Universal Service Fund. Monies of the USF will be used for the implementation of the Universal Service projects. These projects will focus on:

a) Ensuring that underserved communities in Trinidad and Tobago, as identified by the conducting of Digital Divide surveys and other research methodologies, are facilitated by having access to the basic telecommunications services listed in section 2 of the Universal Service Framework.

b) Ensuring that underserved population groups are facilitated by having access to affordable basic telecommunications services.

1.3 Universal Service Project Management Structure and Administration

The establishment of a management structure to ensure that there is governance in the decision-making process and the process by which projects implemented is necessary for its successful operations.

The Authority is prescribing to use the organisational structure prescribed in Figure 1 to manage and administer the decision-making process:

Figure 1: Structure for the Administration of the Universal Service Projects
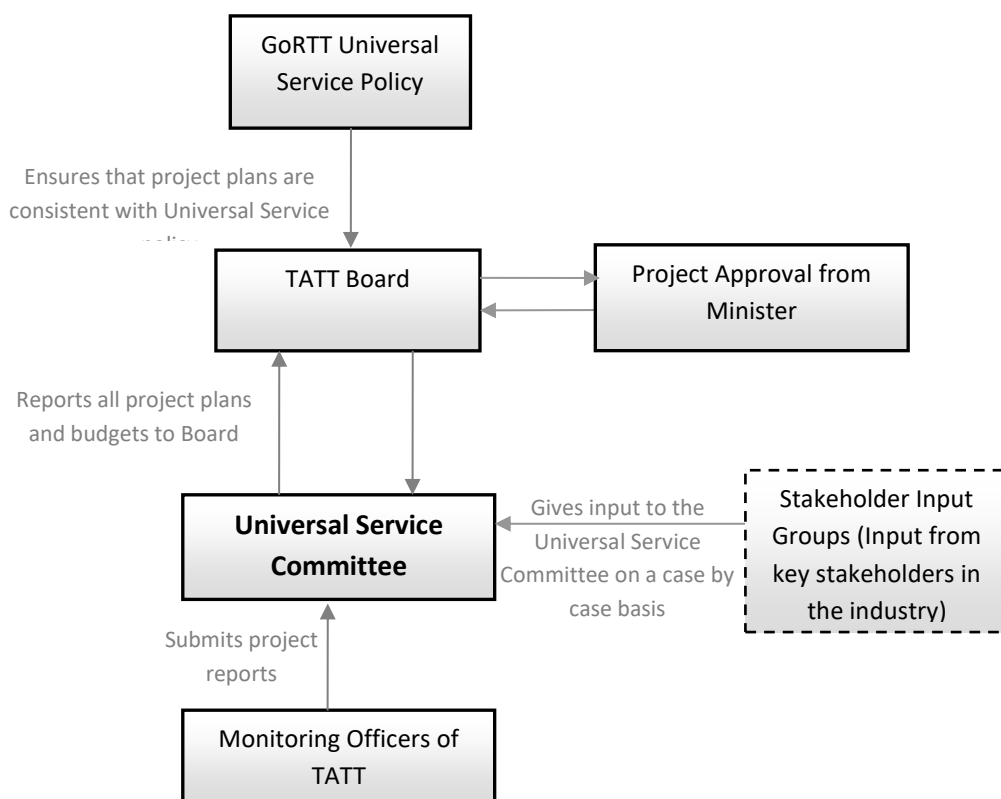
The above diagram depicts the reporting relationships among participants in the selection and implementation process for the Universal Service projects.

At the start of the decision-making process, the Universal Service Committee will receive inputs from the stakeholder input group, in addition to considering the projects devised from research conducted into bridging the digital divide. After evaluation and deliberation of all the proposed Universal Service initiatives received, the Universal Service Committee will submit its recommended Universal Service projects to the Authority's Board for approval.
Upon receipt, the Board will review and submit its recommendations of the Universal Service projects to the Minister for approval in accordance with Section 28 (5) of the Act.
On approval by the Minister, authorisation will then be given by the Board to the Universal Service Committee for the implementation of the selected Universal Service projects. Throughout project implementation, the monitoring officers must provide reporting/feedback on the status of the projects to the Universal Service Committee.

1.4   Operations of Project Administration

1.4.1   Role of the Minister

According to Section 28(5) of the Telecommunications Act:
 "The Authority shall forward its recommendations to the Minister pursuant to this section and the Minister shall indicate his approval, modification or disapproval of the recommendation within sixty days of receipt of the Authority's recommendation."

This section gives the **Minister** responsible for Telecommunications the authority to give final approval to the Universal Service projects recommended by the Board. The Minister is required to ensure that the Universal Service initiatives suggested by the Board are consistent with the Universal Service Policy and the government's overall National Policy for the development of Trinidad and Tobago.

1.4.2   Role of the Board

According to Sections 28 and 53 of the Telecommunications Act, the Authority shall determine the Universal Service initiatives to be implemented. As a result, the **Board** is a significant party in the decision-making process and shall comprise appointed members serving the Authority. They will have oversight over the USF operations and the projects to be implemented.

The Board will be responsible for:
   a) setting the overall policy for the administration of all the Universal Service projects and the Funds collected and distributed from the USF;

b) approving annual plans and budgets for the implementation of Universal Service projects and making any suggestions to the Universal Service Committee regarding projects and USF matters;
c) approving project and Fund annual reports and audits; and
d) seeking authorization from the Minister responsible for Telecommunications and other relevant government bodies to ensure Universal Service projects are in line with national government policies.

1.4.3   Role of the Universal Service Committee

The **Universal Service Committee** shall be responsible for the selection and implementation of the Universal Service projects authorised by the Board as well as responsible for the management and administration of the USF. It should comprise the Chief Executive Officer and divisional members of the departments of the Authority which should include at minimum persons with experience and qualifications in the areas of law, accounting, economics and engineering. The Authority is proposing that the Universal Service Committee have responsibility for:

a) identifying the underserved communities and population groups in Trinidad and Tobago in need of access to affordable basic telecommunications services;
b) organising and coordinating stakeholder input group meetings to provide ideas and feedback when there is deliberation on Universal Service projects to be implemented;
c) providing cost estimates for the proposed Universal Service projects;
d) providing recommendations to the Board with respect to the selection of Universal Service projects and the priority to be given to Universal Service initiatives to be undertaken annually;
e) seeking approval from the Board for the implementation of USF projects;
f) developing objectives, budgets and operational plans for the management of the USF;
g) ensuring the authorisation process for the award of concessions/ and or Universal Service obligation contracts to service providers;
h) ensuring the Fund remains financially sound such that monies are available for the implementation of projects;
i) collecting the contributions from telecommunications providers in accordance with the percentages stated in the Universal Service Regulations;
j) reviewing the adequacy of Fund contributions received every three (3) years and submitting any recommended changes, if any, to the Board for approval;
k) recommending the amounts that should be disbursed from the Fund within a timely manner and to whom the Funds should be disbursed in accordance with the Authority's tendering rules and the Universal Service contracts signed with the service providers;
l) ensuring that financial accounts, reports and records are prepared and published;
m) managing the competitive tendering process for the allocation of projects; and
n) monitoring and overseeing the implementation of all Universal Service projects to ensure that all obligations are fulfilled within the required timeframes.

The Authority shall set up **Stakeholder Input Groups** from time to time to seek advice from stakeholders in the industry when the need arises. The Stakeholder Input groups may comprise stakeholders relevant to the Universal Service projects under consideration by the Universal Service Committee. Such stakeholders may include representatives from various service providers, community and social development, residents of underserved communities, representatives of the relevant Non-governmental agencies, representatives of population groups that fall within the access gap (e.g. differently-abled persons), or any other group determined by the Universal Service Committee to have a key interest.

It must be noted that members of the Stakeholder Input Group will be selected based on the nature of the proposed projects under consideration at that point in time.

The **Monitoring Officers** shall be employees of the Authority identified by the Universal Service Committee. The Monitoring Officers shall have responsibility for:
   a) monitoring Universal Service projects being implemented by the service providers on an on-going basis to ensure compliance with contracts awarded by the Authority; and
   b) preparing reports on the progress and the status of Universal Service projects to the Universal Service Committee; and
   c) advising on any proposed changes to the costs, deliverables or to the output of the Universal Service projects under implementation;
   d) identifying Universal Service projects that have become sustainable and no longer require financing from the USF; and
   e) measuring the uptake of basic telecommunications services in areas when Universal Service projects are rolled out.

> - ***Statement on Universal Service Project Administration:***
> - *The selection and implementation of the Universal Service projects will be administered by the Universal Service Committee. The Minister responsible for Telecommunications will be required to provide approval for projects before implementation.*

1.5   Operating Principles for Determining the Universal Service Projects

A key determinant of the success of any Universal Service project will depend on the creation of sound decision-making principles. All stakeholders involved, inclusive of contributors and beneficiaries of the USF, must perceive the process for the award of projects as being fair and transparent. Therefore the principles that would be upheld by the Authority during the process for choosing and implementing Univerisal Service projects include:

1.5.1 Accountability

Important drivers associated with determining and funding projects are proper financial management and accountability to all stakeholders involved. As a result, provisions must be put in place to uphold the financial integrity of the USF. Such provisions include:

1.5.1.1 Separate Universal Service Account

Section 53 (6) of the Telecommunications Act states:

'The Authority shall keep and maintain a separate account opened with the approval of the Minister of Finance for the purpose of depositing funds collected in respect of the funding of the services referred to in section 28 and such funds shall not be used for any other purpose.'

Consistent with the above, the Authority has established a stand-alone account for the USF where monies are designated for the purpose of promoting Universal Service. The budget for the USF will also be shown separately within the Authority's annual budget[4] in order to ensure transparency and proper recording of the collection and disbursement of Universal Service Funds.

For the operations of the USF, accounting procedures established in accordance with the Authority's Financial Rules and the Telecommunications Act, shall be followed for collecting, tabulating and distributing monies.

1.5.1.2 Establishment of Process for Selection of Projects

There should be guidelines in place to govern the operations of the fund and the decision-making process of the Universal Service Committee who will be responsible for the selection of Universal Service projects and the collection and distribution of monies from the USF to Fund these projects. Such guidelines as listed in Section 7.4, will promote accountability and transparency as stakeholders will be aware of the process followed for the determination of the projects and for the operations of the USF.

1.5.1.3 Public Reports

The Authority considers that in order for there to be confidence by concessionaires and key stakeholders in the determination of Universal Service projects, the process for the periodic review of the projects selected by the Committee and the allocation of Universal Service Funds must be a transparent one. In order to facilitate this, the Authority shall publish a biennial Universal Service Implementation Report and an annual Universal Service Fund Accounting Report.

As referred to in Section 6.1.3, the Universal Service Implementation Report shall be published biennially in June and shall contain information on:

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[4] The Authority's annual budget is published in the GoRTT Draft Estimates of Expenditure

- ➢ the description and details of a two (2) year implementation plan of Universal Service projects to be undertaken and the proposed budget for these initiatives;
- ➢ A report on the progress of Universal Service projects currently being funded by the USF; and
- ➢ Any revisions of the USF objectives that may be necessary for the period following the current financial year.

Also previously mentioned, a Fund Accounting report should be published annually three (3) months after the end of the Authority's financial year and shall contain information on the collection and disbursement of Funds from the USF.

1.5.1.4 Independent Auditing

The accounts published in the Fund Accounting Report are public accounts and will be audited by the Auditor General of Trinidad and Tobago pursuant to section 57 (2) of the Act, which states:

"On completion of an audit of the Authority, the Auditor General or an auditor authorised by him to undertake the audit, as the case may be, shall immediately draw to the attention of the Minister and the Board any irregularity disclosed by the audit which in the opinion of the Auditor General or the auditor is of sufficient importance to justify so doing."

1.5.2 Impartiality and Transparency

Another significant characteristic of the selection and implementation of projects is that of transparency and impartiality among service providers and other stakeholders in the industry. In particular, the integrity of the project decision-making process should not be compromised by the impression of favouritism or bias being displayed towards any one service provider or stakeholder in the industry. Impartiality and transparency however can be supported through the establishment of proper operating processes and procedures. Therefore, in accordance with Section 28 of the Telecommunications Act, the Board will forward recommendations on the Universal Service projects to be undertaken to the Minister responsible for Telecommunications for approval.

While the Universal Service Committee will be responsible for the management and project implementation of the Universal Service initiatives, the Board will provide oversight and generally an advisory and monitoring role.

1.5.3 Efficiency

Another key operating principle in the selection and implementation of Universal Service projects is that of efficiency. The Universal Service Committee must ensure that monies in the USF are efficiently used for the implementation of Universal Service initiatives to reduce the digital divide. Efficiency may be promoted through:

- ➢ The establishment and monitoring of targets for the implementation of the Universal Service projects; and
- ➢ Allocation of the required human resources to carry out the tasks required by the Universal Service Committee and other members of the decision-making and implementation process is important so as to not cause any unjust delays in the carrying out of projects.

1.6 Selection of Universal Service Projects

1.6.1 Submission of Universal Service Projects

At the beginning of each operating period the Universal Service Committee shall initiate the process of identifying projects to be considered for funding. This process will include:

- ➢ Consideration of GoRTT's national and medium term development policy and plans;
- ➢ solicitation of proposals from telecommunications service providers;
- ➢ solicitation of proposals from relevant Ministries and other stakeholder groups;
- ➢ identification of projects through conducting digital divide surveys and other data gathering exercises.

This process does not preclude the Universal Service Committee from identifying and soliciting projects at any other time during the operating period. However any implementation of identified projects must be approved by the Board and ultimately the Minister responsible for Telecommunications.

The process of soliciting project proposals from telecommunications service providers and other interested parties may include the following:

- a) public meetings and consultations;
- b) face to face meetings with specific stakeholder groups;
- c) online advertisement/solicitation through the Authority's website;
- d) public announcements/advertisements on the newspapers or the broadcasting media for the invitation of proposed projects; or
- e) any other information-gathering exercises to inform the identification of projects.

1.7   Project Appraisal and Selection

The Universal Service Committee shall review the project proposals and shall make recommendations to the Board of the Authority for approval and to be financed by the USF according to the procedures established.

The Universal Service Committee should not comprise any individuals involved in the Universal Service projects who may have foreseeable economic interests in the outcome of a decision to be taken on any fund-related matter.

1.7.1   Complete Assessment of Projects

The Universal Service Committee shall conduct complete assessments for all project proposals submitted for consideration within the given operating period. On completion of the assessments, selected project proposals will be used to determine which projects will be recommended to the Board for funding from the USF.

In conducting these project assessments, the Universal Service Committee may rely upon input and assistance from technical and other staff from the Authority, and any other external sources that can assist in the decision-making process. The Universal Service Committee may also conduct any necessary public inquiries to obtain further information about the scope, nature, benefits and costs of any proposed project, in particular through requests for information or public consultations with relevant stakeholders.

In assessing the proposed projects, the Universal Service Committee should consider the following criteria in its evaluations:

a) Policy Priorities – Determines whether the objectives of the project are in keeping with the objectives and priorities of national policy.

b) Technical Feasibility and Requirements - Evaluate and identify the technical and all other essential components of the project to define the potential scope of work that would be required for a telecommunications service provider to implement the project as defined. While various technologies may be proposed by different providers, a baseline set of assumptions as to the basic approaches likely to be used should be determined, to serve as a basis for assessing the economic and financial structure of the project.

c) Financial Analysis - Estimate the initial capital investment and other, start-up expenditures necessary to launch the project. Provide a breakdown of these costs in as much detail as possible. Estimate annual recurring expenses for operations, maintenance, and support needed to maintain the ongoing delivery of the services over a 5 year period. Prepare estimated forecasts of the annual service revenues that will be

generated by the project, and will offset some of its costs. Forecasts should attempt to take into account expected revenue growth for a period of at least 5 years.

d) Economic and Social Cost-Benefit Analysis - Prepare an assessment of the economic and social benefits to the communities or population group, and to the country as a whole, that would be likely to result from implementing the proposed project.

e) Risk Analysis - Identify the most likely threats to the project and analyze the impact of such scenarios on the project.

1.7.2 Final Project Selection

Based on the results of the above project assessment, the Universal Service Committee shall prepare recommendations to the Board as to the priority projects to be financed during the operating period. The recommendations shall be subject to the constraint that the total cost of the combined recommended projects shall not exceed the available USF Project Budget amount for the relevant time period.

The final set of project proposals and recommendations will be presented to the Board for review and consideration in the selection of projects to be financed under the current Operating Plan.

The projects approved by the Board shall then be submitted to the Minister responsible for Telecommunications for approval. The Universal Service Committee shall publicly announce the projects approved.

11 Appendix V: Universal Service Claim Form

Telecommunications Authority of Trinidad and Tobago

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TELECOMMUNICATIONS AUTHORITY OF TRINIDAD AND TOBAGO (TATT)

UNIVERSAL SERVICE FUND (USF) CLAIM FORM

Project Information

1) Name of Concessionaire ....

2) Project Name ....

3) Project Number ....

4) Start Date of Project ....

5) Estimated Completion Date of Project ....

6) Project Phase (if applicable) ....

7) Project Location ....

8) Total Approved Funding $...

9) Total Claim Amount $...

10) Details of Claim:

_____

_____

_____

_____

_____

_____

Name: _____   **Signature:** _____

Designation: _____   **Date:** _____

For official use only			
	Name in Block Letters	**Signature**	**Date**
Claim certified by			
Claim checked by			
Payment approved by			
Please attach claim form to your original invoice for the amount claimed together with all relevant documentation to support the claim			

12 Appendix VI: Service Provider Packages and Rates

Table 6: Service provider packages and rates

Service Provider	Package Speed	Cost (TTD)	Type of Solution
FLOW	5 Mbps Dl/3 Mbps Ul	$142.00	Wired
FLOW	40 Mbps Dl/5 Mbps Ul	$234.00	Wired
FLOW	60 Mbps Dl/15 Mbps Ul	$320.00	Wired
FLOW	100 Mbps Dl/20 Mbps Ul	$410.00	Wired
FLOW	300 Mbps Dl/30 Mbps Ul	$600.00	Wired
FLOW	600 Mbps Dl/50 Mbps Ul	$999.00	Wired
Digicel	50 Mbps Dl/50 Mbps Ul	$299.00	Wired
Digicel	100 Mbps Dl/100 Mbps Ul	$399.00	Wired
Digicel	240 Mbps Dl/120 Mbps Ul	$545.00	Wired
Digicel	350 Mbps Dl/175 Mbps Ul	$729.00	Wired
Amplia	15 Mbps Dl/7.5 Mbps Ul	$175.00	Wired
Amplia	25 Mbps Dl/15 Mbps Ul	$200.00	Wired
Amplia	50 Mbps Dl/25 Mbps Ul	$390.00	Wired
Amplia	100 Mbps Dl/50 Mbps Ul	$550.00	Wired
Amplia	250 Mbps Dl/125 Mbps Ul	$650.00	Wired
Amplia	350 Mbps Dl/175 Mbps Ul	$700.00	Wired

Lisa Communications	2 Mbps Dl/768 kbps Ul	$336.38	Wireless
Lisa Communications	3 Mbps Dl/1 Mbps Ul	$448.88	Wireless
Lisa Communications	5 Mbps Dl/1.5 Mbps Ul	$561.38	Wireless
Lisa Communications	7 Mbps Dl/2 Mbps Ul	$673.88	Wireless
Green Dot	3 Mbps Dl	$129.00 (Install $1687.50)	Wireless
Green Dot	10 Mbps Dl	$159.00 (Install $1500.00)	Wireless
Green Dot	15 Mbps Dl	$199.00 (Install $1687.50)	Wireless
Green Dot	20 Mbps Dl	$299.00 (Install $1687.50)	Wireless

12.1 Flow Packages and Rates Snapshot

| BASIC | ESSENTIAL | PLUS | MAX | TURBO | LIGHTNING | | $234/mo |

This is what you get

With speeds of up to 40 Mbps (download) and up to 5 Mbps (upload),ESSENTIAL is ideal for Unlimited browsing, emailing, online shopping and occasional streaming.

Max download
40 Mbps

Max upload
5 Mbps

GET IT NOW!

Ideal for
Medium Households

Better
For multiple devices online

Better
To stream online TV

| BASIC | ESSENTIAL | PLUS | MAX | TURBO | LIGHTNING | | $320/mo |

This is what you get

With speeds of up to 60 Mbps (download) and up to 15 Mbps (upload), PLUS is ideal for video streaming, gaming, and heavy uploading or downloading.

Max download
60 Mbps

Max upload
15 Mbps

GET IT NOW!

Ideal for
Medium Households

Better
For multiple devices online

Better
To stream online TV

| BASIC | ESSENTIAL | PLUS | MAX | TURBO | LIGHTNING | | $410/mo |

This is what you get

With speeds of up to 100 Mbps (download) and up to 20 Mbps (upload), MAX delivers the speed you need for video streaming, gaming, heavy uploading or downloading and security surveillance systems.

Max download
100 Mbps

Max upload
20 Mbps

GET IT NOW!

Ideal for
Large Households

Best
For multiple devices online

Better
To stream online TV

| BASIC | ESSENTIAL | PLUS | MAX | TURBO | LIGHTNING | | $600/mo |

This is what you get

With speeds of up to 300 Mbps (download) and up to 30 Mbps (upload), TURBO gives you the lightning-fast speeds you need for heavy surfing, video-conferencing applications, downloading/uploading large files, bandwidth-intensive gaming and multimedia streaming.

Max download
300 Mbps

Max upload
30 Mbps

GET IT NOW!

Ideal for
Large Households

Best
For multiple devices online

Best
To stream online TV

| BASIC | ESSENTIAL | PLUS | MAX | TURBO | **LIGHTNING** | **$999/mo** |

This is what you get

With speeds of up to 600 Mbps (download) and up to 50 Mbps (upload), LIGHTNING is perfect for heavy surfing on multiple devices, transfer of large files, video-conferencing & VoIP applications, extreme bandwidth-intensive gaming and HD multimedia streaming.

Max download
600 Mbps

Max upload
50 Mbps

GET IT NOW!

Ideal for
Large Households

Best
For multiple devices online

Best
To stream online TV

12.2 Digicel Packages and Rates Snapshot

Modern Fibre 50

For the browser & social user

Download	Upload
50 Mbps	50 Mbps

Includes:
▸ 1 Free TV Box
▸ With 26 FREE local & international channels

Price (VAT inc.): $299.00

Modern Fibre 100

For the streamer or tech home with multiple users

Download	Upload
100 Mbps	100 Mbps

Includes:
▸ 1 Free TV box
▸ With 26 FREE local & international channels

Price (VAT inc.): $399.00

Modern Fibre 240

For the gamer & heavy internet user

Download	Upload
240 Mbps	120 Mbps

Includes:
▸ 1 Free TV box
▸ With 26 FREE local & international channels

Price (VAT inc.): $545.00

Modern Fibre 350

For the ultimate techy, gamer & apps guru

Download	Upload
350 Mbps	175 Mbps

Includes:
▸ 1 Free TV box
▸ With 26 FREE local & international channels

Price (VAT inc.): $729.00

12.3 Amplia Packages and Rates Snapshot

$175.⁰⁰

Vat Inc

ⓑ mobile

INTERNET

Surf A Little

Features:

(Download / Upload)

(Up to)

15Mbps / 7.5Mbps

b mobile

INTERNET

Surf Some More

$200.00

Vat Inc

Features:

(Download / Upload)

(Up to)

25Mbps / 15Mbps

b mobile

INTERNET

Surf A lot

$390.00

Vat Inc

Features:

(Download / Upload)

(Up to)

50Mbps / 25Mbps

bmobile

INTERNET

Surf A lot More

$550.00 Vat Inc

Features:

(Download / Upload)

(Up to)

100Mbps / 50Mbps

bmobile

INTERNET

Surf It All

$650.00 Vat Inc

Features:

(Download / Upload)

(Up to)

250Mbps / 125Mbps

12.4 Lisa Communications Packages and Rates Snapshot

Service	Rate	VAT 12.5%	Total
2Mb Residential Circuit (2Mbps/768kbps)	$299.00	$37.38	$336.38
3Mb Residential Circuit (3Mbps/1Mbps)	$399.00	$49.88	$448.88
5Mb Residential Circuit (5Mbps/1.5Mbps)	$499.00	$62.38	$561.38
7Mb Residential Circuit (7Mbps/2Mbps)	$599.00	$74.88	$673.88

12.5 Green Dot Packages and Rates Snapshot

Up to 3 Mbps	Up to 3 Mbps	Up to 3 Mbps	Up to 3 Mbps
Month to Month	One (1) Year Contract	Three (3) Year Contract	Year in Advance
Install: $1,687.50	Install: $843.75	Install: $421.88	Install: $843.75 · Three Months Free
TT $129.00 per month (Vat Excl.)	TT $129.00 per month (Vat Excl.)	TT $129.00 per month (Vat Excl.)	TT $129.00 per month (Vat Excl.)

Up to 10 Mbps
Month to Month
Install: $1,500.00

TT $159.00 per month (Vat Excl.)

Up to 10 Mbps
One (1) Year Contract
Install: $750.00

TT $159.00 per month (Vat Excl.)

Up to 10 Mbps
Three (3) Year Contract
Install: $375.00

TT $159.00 per month (Vat Excl.)

Up to 10 Mbps
Year in Advance
Install: $843.75 · Three Months Free

TT $159.00 per month (Vat Excl.)

Up to 15 Mbps
Month to Month
Install: $1,687.50

TT $199.00 per month (Vat Excl.)

Up to 15 Mbps
One (1) Year Contract
Install: $843.75

TT $199.00 per month (Vat Excl.)

Up to 15 Mbps
Three (3) Year Contract
Install: $421.88

TT $199.00 per month (Vat Excl.)

Up to 15 Mbps
Year in Advance
Install: $843.75 · Three Months Free

TT $199.00 per month (Vat Excl.)

Up to 20 Mbps
Month to Month
Install: $1,687.50

TT $299.00 per month (Vat Excl.)

Up to 20 Mbps
One (1) Year Contract
Install: $843.75

TT $299.00 per month (Vat Excl.)

Up to 20 Mbps
Three (3) Year Contract
Install: $421.88

TT $299.00 per month (Vat Excl.)

Up to 20 Mbps
Year in Advance
Install: $843.75 · Three Months Free

TT $299.00 per month (Vat Excl.)