



Business Plan

FY 2021 – 2025

Table of Contents

Executive Summary	3
BSCC Structure.....	3
Business Objectives	3
Strategic Framework.....	4
Marketing.....	5
Capacity	5
Pricing.....	5
Market and Regulatory	6
BSCC Positioning.....	6
BSCC Products	7
Network.....	8
Technology	11
Operations	12
Organisation.....	12
Finance.....	13
Key Parameters	13
Capital Expenses (Capex).....	13
Tax	14
Equity.....	14
Debt.....	14
Dividends	14
Outcomes	14
Base Model	15
Risk Analysis	15
Technological Risk	16
Operational & Environmental Risk	16
Financial Risk	17
Sovereign Risk.....	17
Regulatory Risk	17
Currency Risk (including Transferability and Convertibility Risk).....	17
Resourcing Risk.....	17
Project Management Risk.....	17
Timing Risk	17

Executive Summary

This 2021 – 2025 Belau Submarine Cable Corporation (BSCC) Business Plan focuses on completing the network extension to Airai (CAP-A) in 2021, the elimination of further potential single points of failure in BSCCnet through development of a second submarine cable connection to Republic of Palau, and the further refinement of operational processes.

Forecast Revenue for 2021- net of an expected 25% reduction caused by the impact of COVID-19, is \$2,262k. Forecast total expenditure is \$1,579k, representing general expenses of \$635K, specialist operational services of \$368K and interest expense of \$576K. Capex of \$10.1M is funded by borrowings/grant funding of \$10.1M.

BSCC is contributing \$900k towards the PC2 project, which is comfortably funded from cash reserves of \$4.3M, including \$1.0M in reserve account funding.

BSCC Structure

BSCC was established in 2015 by RPPL9-47 (the BSCC Act), to progress a project initiated by the World Bank and Asian Development Bank (ADB) to provide international submarine fibre optic connectivity for the Republic of Palau (RoP). ADB remains the sole financier.

BSCC has provisionally applied for a licence to operate a wholesale network in RoP in January 2018 in accordance with RPPL 10-17 of 2017 (the Telecoms Act).

The sole shareholder in BSCC is the Minister of Finance, on behalf of the Republic of Palau. A Board of Directors is appointed by the ROP government.

Business Objectives

The primary business objective of BSCC is to

Provide licensed Retail Service Providers in Palau with equal access to high quality wholesale capacity at the lowest pricing commensurate with full cost recovery.

The focus of this Business Plan is to build on the gains flowing from the submarine link constructed in 2017, ensuring robust international connectivity and cost-effective core Palau infrastructure for RoP Retail Service Providers (RSPs) on a fair and equal basis.

The business issues addressed by this Plan are:

- (a) Complete CAP-A Eastside Extension.
- (b) Complete CAP-A building.
- (c) Develop a second international fibre optic link for RoP

- (d) Work with other parties in the RoP telecommunications market to ensure effective market performance.
- (e) Work with relevant authorities to ensure effective disaster planning for international connectivity.
- (f) Develop BSCC capability, including staff recruitment and network resilience.
- (g) Define key operational arrangements including ongoing management, marine maintenance, landing party agreements and Network Operations Center (NOC).
- (h) Establish the expenditures and revenues associated with the development and operations of BSCCnet.
- (i) Set out the financing arrangements to underpin BSCC and its projects.
- (j) Analyse risks associated with the company's activities.

Strategic Framework

BSCC's price positioning is defined by the BSCC Act. Accordingly, BSCC will operate pricing regimes that support servicing and repayment of debt and business costs, rather than maximising profits.

BSCC is a wholesale supplier in the RoP telecommunication market. This enables the lowest possible cost structure, as BSCC supplies raw capacity to Retail Service Providers (RSPs), rather than telecommunications services to end-user customers, avoiding the need to invest in complex product support and billing systems, sales and marketing capability and customer support systems. By positioning as a wholesaler, BSCC also avoids the difficult position of having to compete with its own customers, who are much better resourced to develop, supply and support telecommunications services in the retail market.

BSCC offers the same capacity products, pricing, payment options and terms and conditions to all eligible customers (ie licensed RSPs).

Because BSCCnet is relatively small in terms of capacity in service, compared to other intercontinental submarine networks, and is likely to have relatively few customers (perhaps no more than four in the medium term), its operational needs will not justify extensive full-time roles. Accordingly, BSCC outsources most business functions in network operations and management, finance, IT and legal.

BSCC is pursuing a four-part strategy to achieve its business goals:

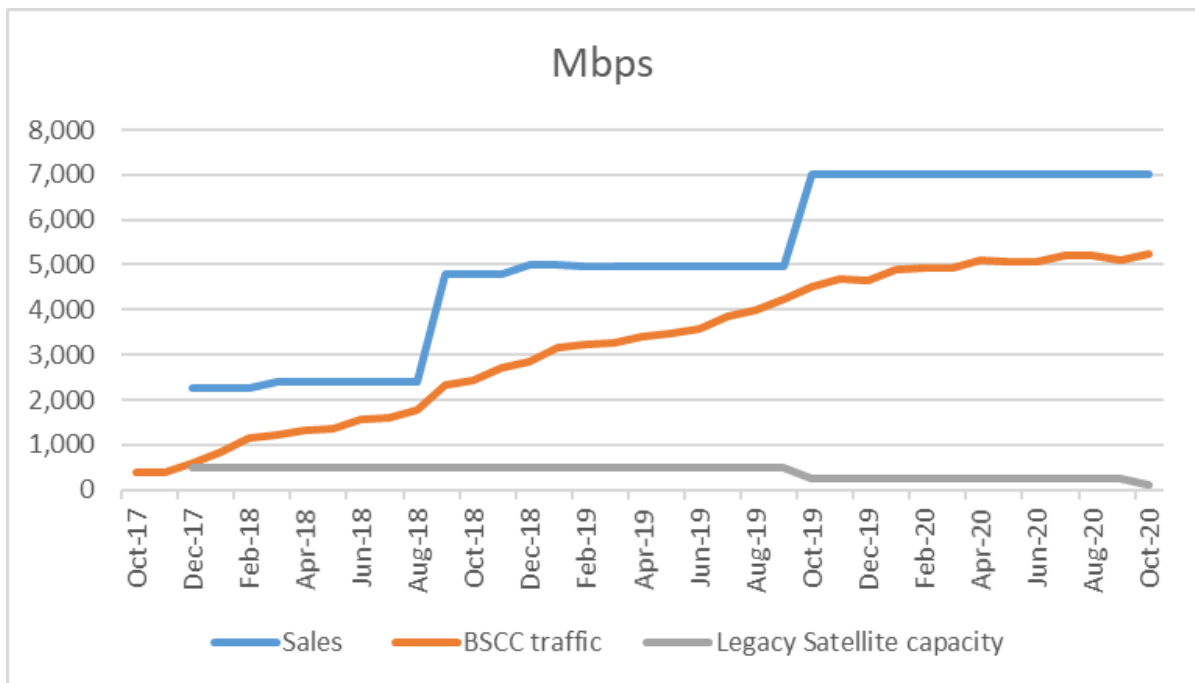
1. Ensure flawless operation of the current international submarine cable network connection for Palau
2. Complete the new Capacity Access Point at the airport site in Airai (CAP-A), to support equitable access for all RSPs

3. Improve resilience of CAP-A by completing the network extension loop clockwise around the east side from Ngeremlengui to Airai
4. Improve resilience and capabilities with a second international submarine cable network connection for Palau

Marketing

Capacity

Pre-BSCCnet, total satellite capacity use for RoP was estimated at 400 Mbits / sec. There was an immediate increase to 1,000 Mbits / sec by March 2018. In the six months after Ready for Service, BSCCnet traffic doubled again to 2,000 Mbits / sec and in the twelve months since, nearly doubled again. Since February 2020, while overall capacity use has held fairly constant, the COVID-19 shutdown has seen growth stall, with tourist numbers down to effectively zero.



BSCC is assuming a 25% revenue decline for FY 2021 due to COVID impacts, with no new sales.

This Plan assumes no revenue growth in 2022 on the assumption that it takes a full year for Palau to recover from the impact of COVID-19 on the economy. Growth then resumes at the rate of 40% in 2023 (adjusted), 20% in 2024 and 22% in 2025. Capacity growth is forecast as flat during 2021/22, with a normalised growth forecast thereafter. It is possible that a capacity spike could occur as the economy returns to normal, but this hasn't been factored in.

Pricing

All pricing is in USD, which is industry standard.

BSCC reduced prices by 30% from September 2018. The current price list is:

Mbit /sec		3 Year Lease
From	To	
50	199	190
200	399	140
400	999	105
1000	1999	79
2000	4999	60
5000	9999	45
10000	19999	34

BSCC pricing is intended to support a virtuous cycle, where higher volume purchases attract lower unit prices, which in turn allow retail price reductions by customers, which in turn generate higher volumes.

Market and Regulatory

The Palau telecommunications market is competitive, regulated by the Bureau of Communications established under RPPL 10-17 of 2017 (the Telecoms Act).

Regulation remains in its infancy, with significant uncertainty. A Regulator was appointed in late 2019.

The RoP telecommunications market is still largely dominated by the incumbent provider, Palau National Communications Corporation (PNCC). The main competitor is Palau Telecom, which has operated a Wi-Fi network and is expanding into mobile and possibly fixed line customer access. Palau Mobile (previously Palau Wi-Fi) continues its smaller operation focused on tourist hotels and a limited set of customers. All have been impacted by the pandemic.

RoP is the world's first all-IP network. RSPs agreed to establish an open interconnection regime in August 2018 and PNCC and PT have already implemented a voice interconnection regime. BSCC supports minimum regulatory complexity consistent with orderly allocation of public resources such as spectrum and numbering.

BSCC Positioning

BSCC positions as a carriers' carrier, providing wholesale capacity on its network to licensed RSPs. Irrespective of scale, BSCC will not sell capacity directly to retail customers. This "wholesale only" positioning has three features:

- BSCC focuses on capacity products, avoiding the need to maintain costly billing, customer management and sales infrastructure
- BSCC avoids competing with its own customers, who are better resourced to service retail markets

- BSCC supports ROP government's objective of fostering the development of healthy competition in the retail service provision market

BSCC offers CAP-N (capacity access point at Ngeremlengui Cable Landing Station) to CAP-G (Tata at Piti, Guam) connectivity, and also temporary access to BSCC's Westside Fiber at CAP-KBS (KB Shell corner in Airai). CAP-A (the long-term access point in Airai, at the airport site) will be completed in 2021.

BSCC can offer minimum space for customer equipment at the Ngeremlengui cable station, but more extensive co-location space will be available on reasonable terms at CAP-A for all BSCC customers.

In order to meet the different cash flow goals of the different players in a developing capacity market, BSCC currently offers Lease products, although Indefeasible Rights of Use (IRU) is available, if customers express interest. To date customers have indicated interest only in leases. BSCC customises its solutions to customer requirements beyond those supported by standard access approach on a cost-plus basis.

BSCC Products

The core product offered by BSCC on the cable is leased capacity between the BSCC Capacity Access Point at the Cable Landing Station (CLS) at Ngeremlengui, Palau (CAP-N), and CAP-G at Tata Piti in Guam.

The minimum capacity offered is 50 Mbit / sec.

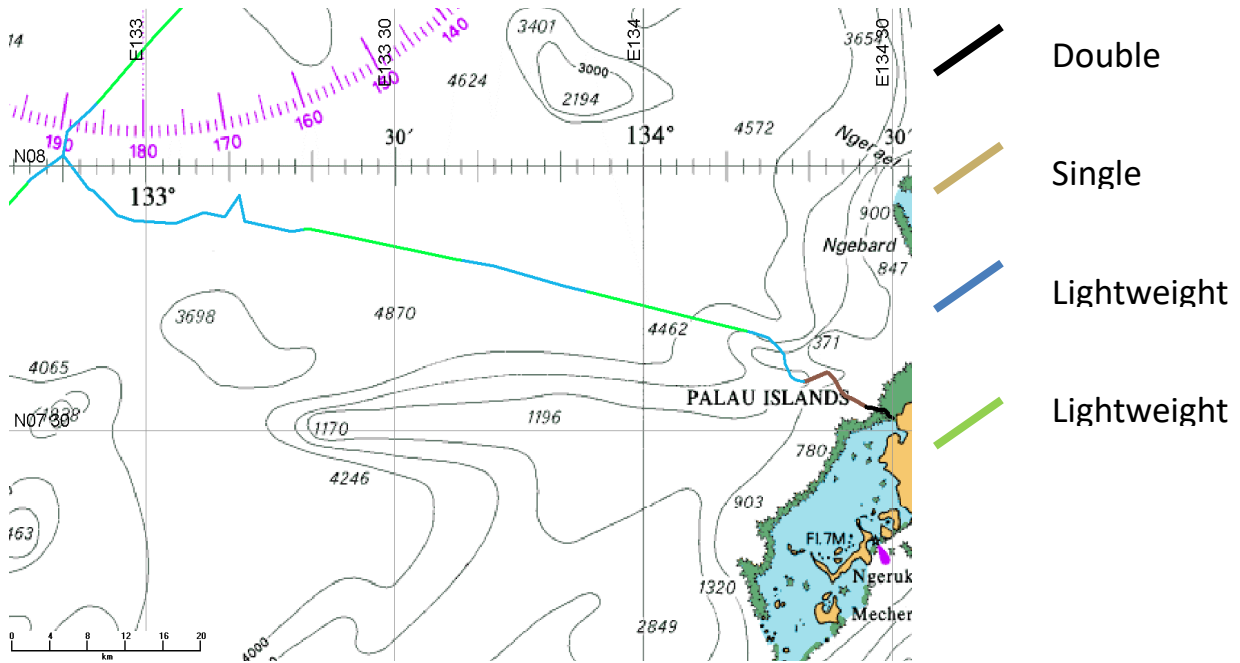
Leases are available on one or three-year terms.

BSCC is service provider neutral. Key elements of the product offering support this stance:

- BSCC will offer the same product set and pricing to all customers.
- BSCC will ensure that CAP-A space is available on fair terms to all BSCC customers.
- BSCC will ensure that low volume products remain available to encourage new market entrants.
- BSCC will ensure that distribution of customer information is limited to necessary operational purposes.
- BSCC will ensure that a process is defined to enable customers to raise and resolve concerns related to equal access and confidentiality.

Network

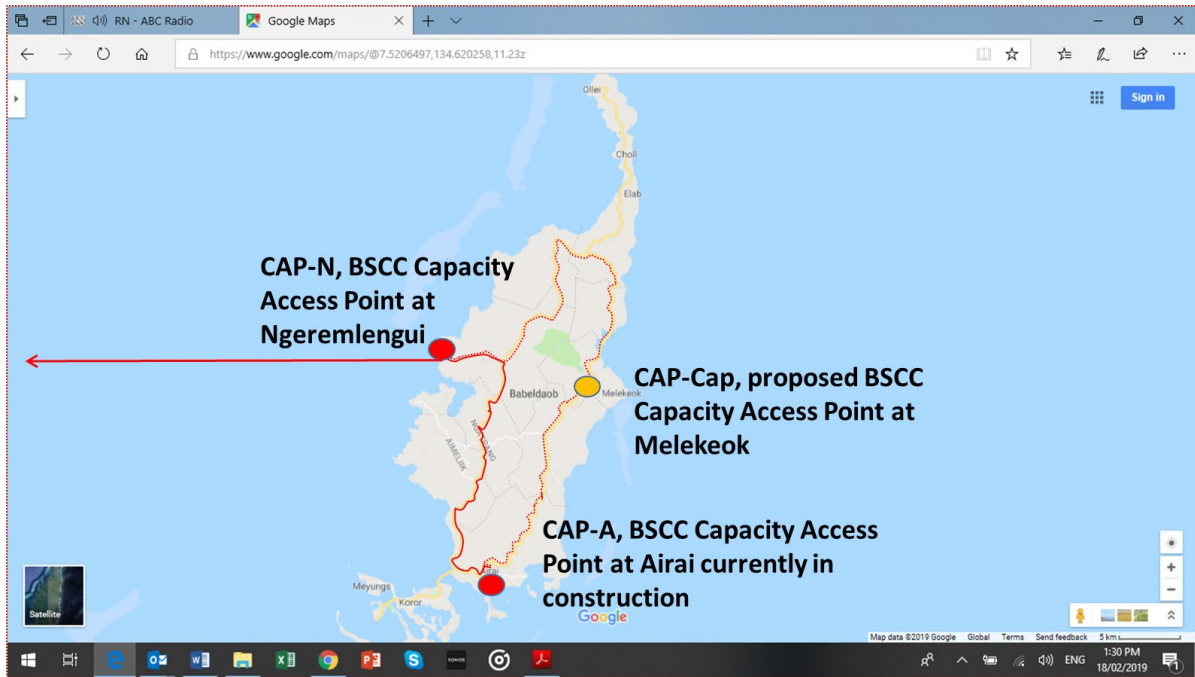
The international route is a repeatered branch connection from Ngeremlengui Cable Landing Station (CLS) to a Branching Unit on the SEA-US main trunk cable, with onward transport on SEA-US to the GTA CLS in Guam.



BSCC is currently constructing a network extension to the Airai airport site to establish a new Capacity Access Point, CAP-A. Costs of current BSCC network development projects can be completed within the original \$25M loan to RoP from ADB:

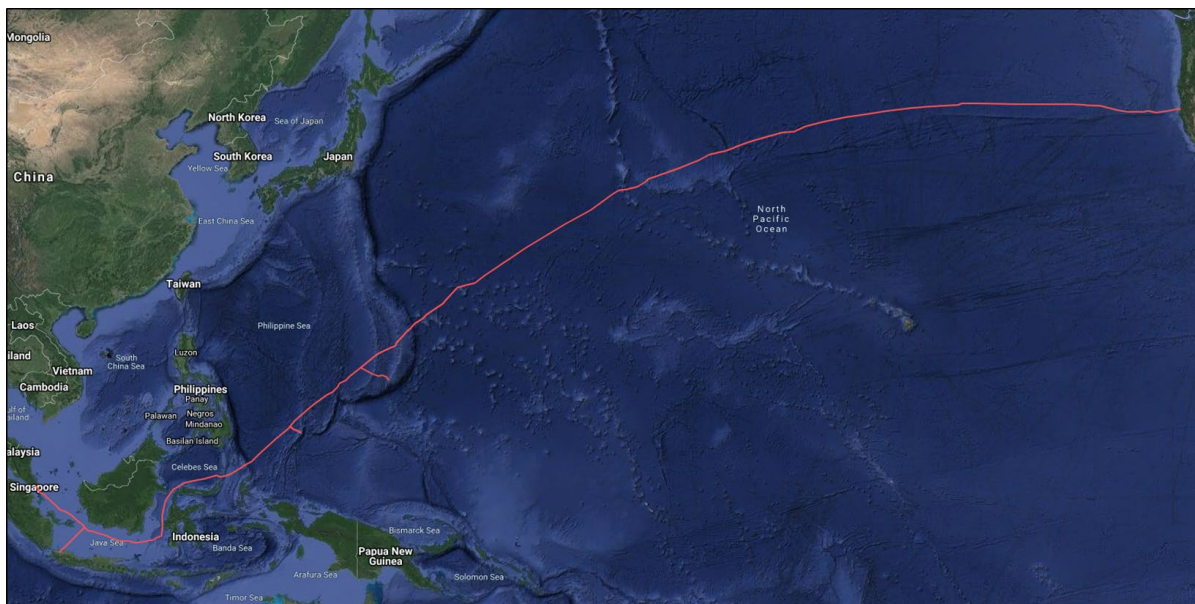
Project	Completion Date	Cost (US\$M)
International connection to CAP-N	Completed December 2017	20.0
Network extension CAP-N to CAP-A westside	June 2020	1.5
CAP-A Building incl fit-out	December 2021	0.5
Network Extension CAP-N to CAP-A eastside	November 2021	3.0
TOTAL		25.0

The completed network will provide a robust shared infrastructure that will enable all RSPs equal and cost-effective access to international connectivity:



However, while the targeted network topography provides a very robust access architecture, the entire BSCC link from CAP-N to CAP-G represents a single point of failure. Further, the ever-widening gap between capacity in use (the orange line on the graph in the marketing section above) and satellite capacity available in the event of an outage (the grey line) indicates the growing vulnerability of economic and social activity in Palau to a service interruption on BSCC.

Accordingly, BSCC is pursuing construction of a second cable link for Palau (PC2), with the support of government and the RSPs. BSCC has identified a new cable proposed for Singapore to USA, passing within 200 km of RoP, which has incorporated a Palau Branching Unit (BU) into their design.



BSCC has arranged loans from Japan Bank for International Cooperation (JBIC). Sumitomo Mitsui Banking Corporation (SMBC) and the Export Finance Australia (EFA). Together with grant funding from AUSAID, Australian Infrastructure Financing Facility for the Pacific (AIFFP) and USAID, a robust and favourable financing structure is proposed.

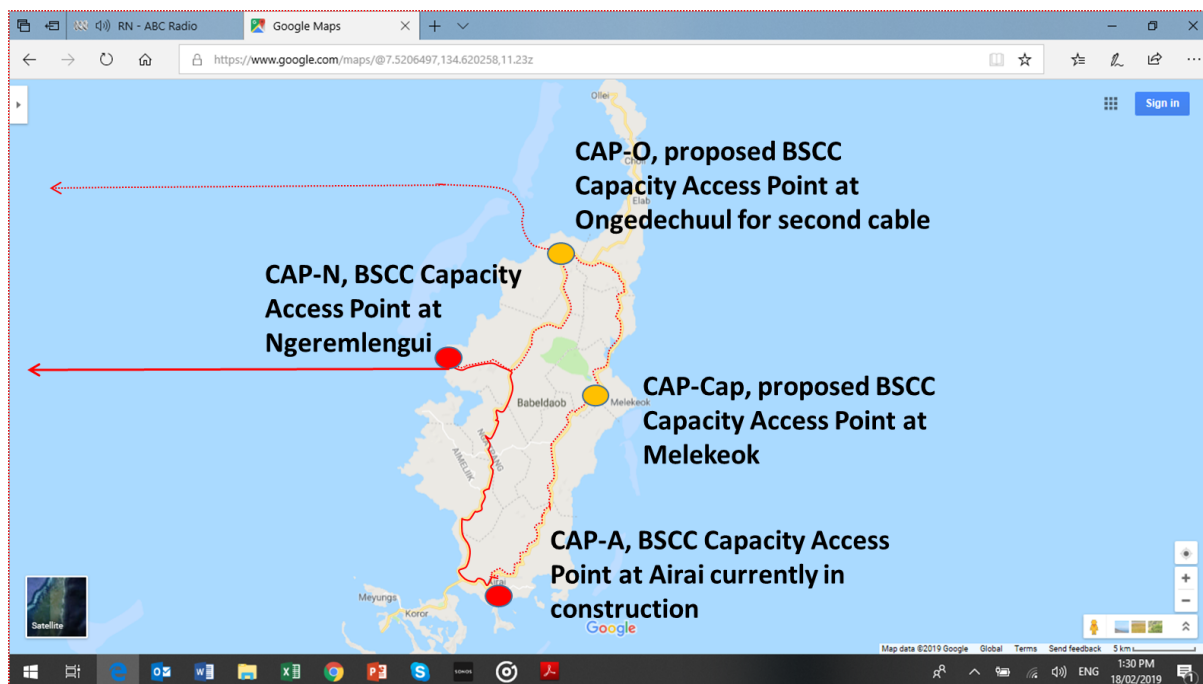
Source	Type	Amount	Total
<u>BU Funding</u>			
Australia Infrastructure Financing Fund for the Pacific (AIFFP)	Loan	\$1,750,000	
	Grant	\$850,000	
BSCC	Equity	\$900,000	\$3,500,000
<u>Marine Survey Funding</u>			
Ausaid	Grant	\$561,000	\$561,000
<u>Full System Funding</u>			
AIFFP	Loan	\$6,672,226	
Japan Bank for International Cooperation (JBIC)	Loan	\$4,000,000	
Sumitomo Mitsui Banking Corporation (SMBC)	Loan	\$4,000,000	
US Compact Agreement	Grant	\$7,000,000	
US AID	Grant	\$3,800,000	\$25,472,226

TOTAL		\$29,533,226
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BSCC has identified Ngardmau as a suitable landing point for PC2. Work has commenced on an Initial Environmental Evaluation (IEE) for the project.

Sensitivity analysis indicates the proposal is robust financially, and independent economic analysis indicates it offers significant economic benefit to Palau.

The target network topology is:



Technology

The network technology deployed for BSCCnet is identical to that used for the main SEA-US cable, based on the latest available commercial technology, utilising 100 Gbit / sec wavelengths, supplied by NEC.

BSCC has currently lit one of five 100 Gbit/sec wavelengths over which it holds an IRU with Globe Telecom of Philippines. The link between the GTA CLS and CAP-G, provided by GTA of Guam, is currently configured at 10 Gbit/sec. This potential bottleneck and single point of failure will be addressed by provision of a diverse link in 2021.

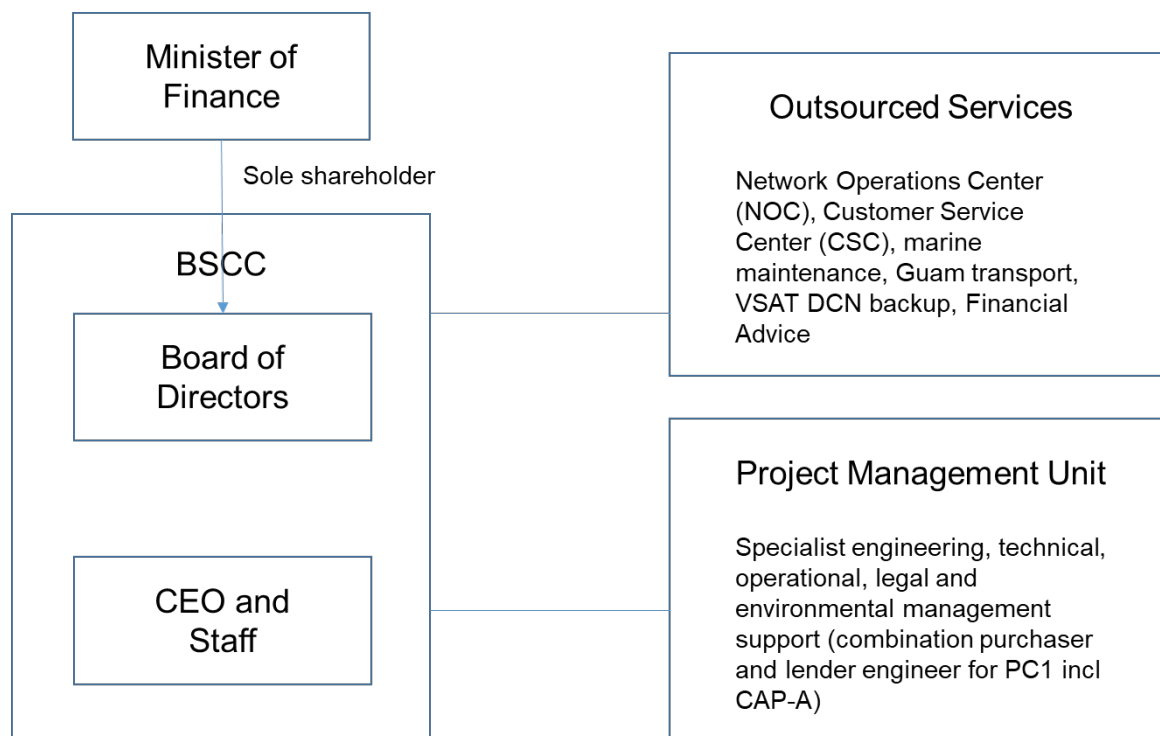
The core submarine network is augmented by twin Ciena network routers in both CAP-N and CAP-G, to facilitate resilient and flexible management of customer access. The same standard interface will be available to BSCC’s RSP customers at CAP-A.

BSCC can support up to 10 Gbit/sec on current network configuration.

Operations

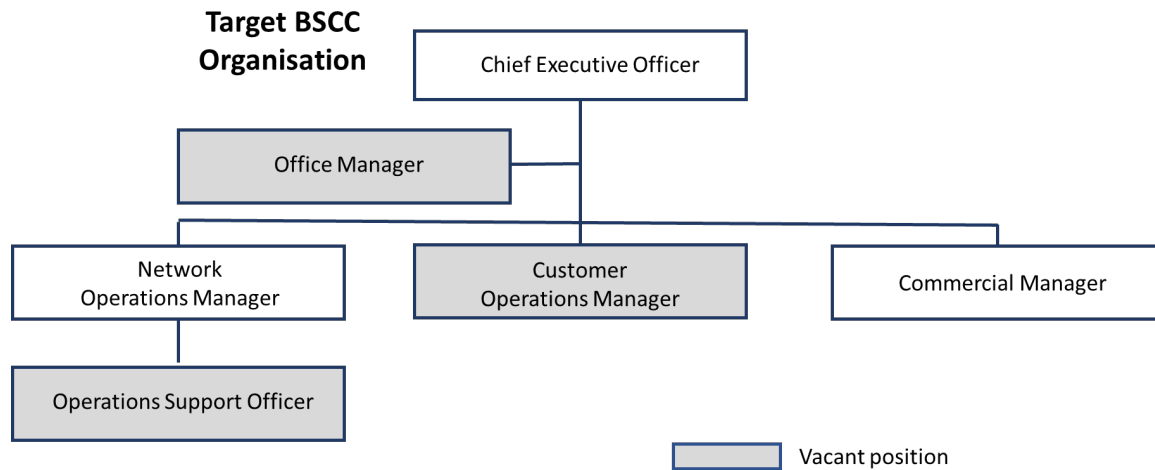
BSCC outsources the following business functions:

- Marine maintenance and Guam spares storage (TE Subcom)
- Network Operations Center (NOC) management (Globe Telecom)
- Customer Service Center (CSC) management (Docomo Pacific)
- Engineering and Commercial Support (McCann Consulting International)
- Guam interconnection (GTA)
- Diesel generator and air-conditioning maintenance (Surangel)
- Financial accounting (nem and Deloittes)
- Legal (Office of the President)



Organisation

The target organisation structure is:



Currently, three positions are unfilled (shaded above).

During 2021 BSCC will recruit a Customer Operations Manager to support the increased network infrastructure that will be delivered through the CAP-A project, expected to be completed in Q4 2021.

Finance

Key Parameters

Key assumptions underpinning the financial analysis are:

- No capacity growth in 2021/22 as the economy struggles through COVID-19, with normalised growth thereafter:
- Revenue is discounted by 25% for 2021/22 as customers struggle under the impact of COVID.
- Nominal forecast growth in other customers post 2023 only
- Year on year expense growth – 3%
- Cap A project to be completed in Feb 2021.
- PC2 Project to be ongoing throughout 2021, with RFS currently scheduled for Dec 2022.
- Existing RoP financing to continue (ADB back-to-back)
- LIBOR for ordinary loan 1.5% ie LIBOR + 1% = 2.5%, Special Loan 2% fixed
- Cable design life 25 year

Capital Expenses (Capex)

Key remaining project expenses:

BSCC Business Plan

Cap A Project – Westside Plant	\$ 305,582
Cap A Project – Eastside Plant	\$ 2,314,000
Cap A Project - Building	\$ 450,000
PC2 Project	\$29,533,226
(PC2 50% 2021 & 50% in 2022 completed 2022 [Dec])	

Cap A capex is funded by remaining ADB/RoP Funding

PC2 Project to be funded by a debt consortium including JBIC and the Australian Infrastructure Financing Facility for the Pacific (AIFFP) – refer above.

Tax

BSCC remains exempt from all taxes except those related to payroll – WHT, SSA and Health.

Equity

The Minister of Finance holds the only share, in accordance with the BSCC Act.

Debt

This plan assumes BSCC draws down the full \$25M of available funding for Cap A (East & West loop)

The PC2 project will be consortium funded. The debt terms are attractive (excludes grant funding):

Debt Terms - PC2									
Lender	Total Amount	Term	Grace Period	Interest rate	Assume	Margin	All up	Commitment	Approval Fee
AIFFP - BU Debt (Tranche 1)	\$ 1,750,000	10 years	15 years	US SWAP	1.75%	0.50%	2.25%	0%	\$100,000
AIFFP Full System debt (Tranche 2)	\$ 6,010,063	20 years	10 years	US SWAP	1.34%	0.80%	2.14%	0%	\$100,000
JBIC	\$ 4,000,000	10 Year	Nil	CIRR	1.63%	1.30%	2.93%	0.25%	0%
SMBC	\$ 4,000,000	10 Year	Nil	LIBOR	0.32%	1.30%	1.62%	0.25%	\$ 100,000
Total Debt	\$ 15,760,063								

Dividends

In accordance with the BSCC Act, no dividends are expected to be paid. Operating surpluses, after full debt service provisioning in the Debt Service Reserve Account (DSRA) and funding of the Marine Maintenance Reserve Account (MMRA), are reflected in price reductions, effectively a general dividend.

Outcomes

Detailed financial data are provided in an associated spreadsheet.

In summary, the FY 2021 forecast is:

	USD M
Revenue	2.263

General Expenses	0.635
Network Operating	0.368
Interest	0.576
Net Operating Cashflow	0.684
Debt received	10.153
Cap A Capex	2.784
PC2 Capex	7.369
Total Capex	10.153
Reserve Accounts	0.500
NET CASHFLOW*	0.184

*Cash balance at commencement of year \$4.363m. Under financing arrangements BSCC is required to provide circa \$0.9M towards the PC2 project.

Base Model

Despite the adverse economic conditions, the outlook for 2021 features:

- Operationally cash positive
- DSRA and MMRA will continue to be accumulated.
- Completion of the Cap A project
- Commencement of the PC2 project

Risk Analysis

Refer to Risk Matrix following for a risk assessment and mitigation strategy.

The main categories of risk faced by BSCC are:

- Technological Risk
- Operational & Environmental Risk
- Financial Risk
- Sovereign Risk
- Regulatory Risk
- Resourcing Risk

- Project Management Risk

Technological Risk

As BSCC is now fully operational, technology risk is now restricted to the operational support arrangement in place and the yet to be completed Cap A and PC2 projects.

Technological risks always exist and they are offset by factors including:

- ✓ Reliance on proven industry specialists for all outsourced arrangements (e.g. NOC)
- ✓ Use of appropriate and proven technologies.
- ✓ Selection of an optimal cable route on the sea bed using proven marine survey technologies.
- ✓ Turn-key supplier NEC for PC2, a long-time industry heavyweight with a well-established track record.
- ✓ Professionally managed procurement and acceptance testing to ensure compliance with specifications.
- ✓ Availability of spares for the lifetime of the system.
- ✓ Supplier guarantees.

Operational & Environmental Risk

COVID-19 Plans have been enacted and are being adhered to.

Environmental Management Plans have been established and are adhered to.

Further environmental plans will be established for PC2.

BSCC has entered into the South Pacific Marine Maintenance Agreement which provides marine maintenance services of an available cable ship (Reliance) and spares storage, which provides proper insurance in the event of a cable break.

BSCC has established a Maintenance Reserve Account with a progressively increasing balance to peak at \$2M.

BSCC also mitigates operating risk by contracting the experienced carriers, Globe Telecom and Docomo Pacific, to provide Network Operating Center and Customer Service Center services which including network administration and customer service and assurance management.

Financial Risk

BSCC is cashflow positive from an operational perspective, despite the economic impact of COVID-19

While project finance risk will feature in the upcoming PC2 project, BSCC has already proven its ability to properly manage the finances of large projects with the initial project being completed on-budget and the Cap A project also running on budget.

External finance support is relied upon from nem Australasia Pty Ltd (operational and project finance support), Deloitte (Accounting) and Burger, Comer, Magliari (audit).

Sovereign Risk

Sovereign Risk exposure is considered low.

Regulatory Risk

A regulatory framework exists for RoP but no activity yet detected.

BSCC continues to work cooperatively with the industry and government to encourage development along the lines envisaged in the TAP papers.

Currency Risk (including Transferability and Convertibility Risk)

Currently all outgoings and earnings are USD.

Resourcing Risk

As a small company with only three core staff, BSCC is unable to replace personnel from within its own resources. The CEO, local Project Management Unit (PMU) presence and the Operations Manager and Commercial Manager can provide backup for each other for short term absences and temporary support can be engaged e.g. while recruitment is undertaken for permanent replacements or BSCC staff are unavailable.

Project Management Risk

Project management continuity will be ensured by contracting McCann Consulting International as PMU. MCI has been instrumental in driving all projects to completion. This arrangement will continue with the PC2 project.

Timing Risk

BSCC has advanced all financing, technical and commercial discussions to the point where it should meet any timetable imposed by its prospective partner.

Risk	Impact	Probability	Mitigation Strategy
COVID-19 Risk	high	very high	COVID-19 Plan enacted. Close contact maintained with all customers and flexibility provided regarding payment terms as a means of ensuring their survival. Close liaison with Government departments to manage project implications, with back-up plans established and enacted as necessary.
Construction delays	medium	low	PC2 contracts will place construction risk with suppliers. Ensure adequate liquidated damages provisions are in place. Tech Center and Eastside Fiber contracts are in force.
Construction delays (force majeure)	medium	low	Self-insure, with adequate contingencies.
Environmental damage	low	low	IEE completed. IEE for CAP-A completed. Eastside Fiber and PC2 pending
Sovereign risk	medium	low	No action.
Regulation	high	high	Active participation in market change to promote demand growth through TAP.
Technology	high	low	BSCC uses established, well understood technologies. Suppliers with well-established track records are used, offering industry standard warranty periods. Comprehensive acceptance regime applied before acceptance.
Financing	high	medium	PC2 project funding well advanced.
Project Management	high	low	BSCC has contracted capable, experienced consultants to support financing, technical and legal functions.
Timing	low	low	BSCC has advanced all financing, technical and commercial discussions to the point where it should meet any timetable imposed by its prospective partner.