



# PUBLIC-PRIVATE PARTNERSHIPS IN SÃO TOMÉ & PRINCIPE: IMPROVING CONNECTIVITY, FOSTERING COMPETITION & REDUCING PRICES



Photo: Angolares Market, São Tome (Credit: David Stanley, Flickr, CC BY 2.0)

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## Public-Private Partnerships in São Tomé & Príncipe: Improving Connectivity, Fostering Competition, Reducing Prices

Public-Private Partnership (PPP) investments that combine public and private funding have been used extensively over the past decade to finance the construction of telecommunications infrastructure needed to extend Internet access across emerging markets. The record of these PPPs has been mixed over this time. In recent years, however, more PPP success stories have begun to emerge, as a result of increased private sector appetite to finance telecommunications infrastructure, which has created new opportunities to expand Internet access in emerging markets on a profitable commercial basis.

In transitional economies, successful PPPs depend on the willingness of private investors (in the past, usually local telecom operators) to share early – and often difficult-to-quantify – investment risk with governments. These investments are used to build out infrastructure (e.g., submarine cables, terrestrial fibre networks, and data centres), which is then made available on an open access basis to all licensed service providers or shareholders.

### Developing a Public-Private Partnership to Obtain International Fiber Optic Connectivity

São Tomé & Príncipe (STP) provides one example of such a successful partnership. In 2011 and 2012, the Government of STP and the incumbent local fixed and mobile telecommunications service provider, Companhia Santomense de Telecomunicações (CST – a subsidiary of Portugal Telecom), partnered to invest in access to the Africa Coast to Europe (ACE) submarine fibre optic cable, as well as a submarine cable landing station. This shared investment resulted in a substantial expansion of telecommunications infrastructure to and within STP, and in sharp price declines for most telecommunications services in the country. This in turn helped to achieve the Government's related objective of attracting a second mobile telephony and Internet service provider to STP in 2014.

A beautiful archipelago extending over 1,000 square kilometers in the Gulf of Guinea off the west coast of Africa, São Tomé & Príncipe has a population of only 200,000 and income per capita of about US\$1,670.<sup>1</sup> STP has achieved rapid though uneven economic growth over the past decade, fuelled by increasing international prices and demand for cocoa, revenues from petroleum exploration, and foreign investments in tourism. Despite this economic growth, and substantial improvements in health and education, São Tomé's national poverty rate has declined only marginally, and unemployment has remained high, particularly among young people. As with other small island developing states, STP faces challenges related to its geographical isolation, environmental degradation and climate change, and the limited diversity of its economy.

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<sup>1</sup> Current population estimate : [http://countrysmeters.info/en/Sao\\_Tome\\_and\\_Principe](http://countrysmeters.info/en/Sao_Tome_and_Principe). Income per capita: GNI, Atlas method, current US\$.



Until early 2013, São Tomé & Príncipe relied on satellite communications for international connectivity, resulting in very expensive and low quality communications outside the country. This poor connectivity limited the country's opportunities for improved business development, employment, trade, and tourism, and hindered competitiveness on the global market, particularly compared to countries connected to fibre optic submarine cables that provided high quality international connectivity at far lower costs.<sup>2</sup>

Recognizing the potential of low-cost connectivity to support economic growth and the development of a diversified economy, the Government of São Tomé & Príncipe requested World Bank financial assistance to improve its Internet connectivity and infrastructure. Specifically, the government requested funds to expand the country's telecoms infrastructure, improve its regulatory framework, and connect to the ACE fibre optic submarine cable.<sup>3</sup> The ACE cable is developed and managed by a consortium of companies (the ACE Cable Consortium) led by Orange (formerly France Telecom). It aims to provide high-speed broadband connectivity to Orange subsidiaries and other network operators along the west coast of Africa.

To secure the requested World Bank grant, the government and incumbent telecommunications operator CST came together to form a new company called STP-Cabo.<sup>4</sup> This public-private entity would construct and own São Tomé & Príncipe's ACE cable landing station, and would negotiate a shareholders' agreement to ensure open access to the ACE cable by new market entrants.

Negotiation of the STP-Cabo shareholders' agreement was complicated by CST's role as the only choice by most STP residents and businesses for telephone and Internet services, and the only entity at the time in a position to sign the ACE Consortium Agreement and oversee construction, management and maintenance of the landing station. Recognizing this effective monopoly, the Government, CST, and the telecommunications regulator, Autoridade Geral De Regulação (AGER), agreed to a set of clear commitments to open access and non-discrimination in the lease of cable capacity; they also agreed to multi-year declining caps on prices for wholesale and retail international bandwidth, and a formula for prices at which the Government (or CST under certain conditions<sup>5</sup>) could sell its shares of the new company (STP-Cabo) to any new entrants. AGER also developed a model to determine more accurately costs for national and international bandwidth access, and the sharing of infrastructure. It then imposed obligations on CST, with the goal of ensuring that Internet services were offered at cost-based prices. One such obligation was to provide other operators access to ACE capacity owned by STP-Cabo, making the market more attractive to new entrants.

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<sup>2</sup> Implementation Completion And Results Report (Ida-H6420). Grant In The Amount Of Sdr 9.8 Million (US\$ 14.9 million equivalent) to Democratic Republic Of Sao Tome And Principe for Central African Backbone Program (Apl2), June 17, 2015. Transport And ICT Global Practice Africa Regional Integration Africa Region. (STP World Bank Implementation Report June 2015).

<sup>3</sup> [https://www.ace-submarinecable.com/ace/default/EN/all/ace\\_en/](https://www.ace-submarinecable.com/ace/default/EN/all/ace_en/)

<sup>4</sup> This is owned 75.5% by CST and Portugal Telecom affiliates and 24.5% by the Government of STP. Note the new entity is a Special Purpose Vehicle.

<sup>5</sup> For example, CST could be required to sell some of its shares if CST is not using ACE capacity that is required by others.

From the start, a key objective of the government and the World Bank was to attract and license a second operator, recognizing the need for competition to reduce prices and expand access to more marginal users. In 2014, after the successful launch of ACE cable service to São Tomé & Príncipe, the government, with support from the World Bank, introduced competition through the award of a telecommunications license for US\$1.62 million to Angolan mobile phone company Unitel.<sup>6</sup> Simultaneously, the government sold its 24.5% interest in STP-Cabo to Unitel for US\$6.38 million, enabling Unitel to become the second major telecoms operator in São Tomé & Príncipe. Unitel subsequently invested in network infrastructure rollout and, in mid-2014, began offering mobile voice and Internet services in São Tomé & Príncipe. The entry of a new provider in the telecoms market resulted in substantial price reductions across a range of services, and led UNITEL and CST to increase investments to expand infrastructure. This move also left the government with substantial proceeds, which could be reinvested in the ICT sector to expand access further, and to improve investment in and economic outcomes within the country.

Usage of ACE capacity within São Tomé & Príncipe, though low, is increasing rapidly. As a result of the ACE cable and infrastructure investment project, the cost of international connectivity has fallen substantially – the average monthly price of wholesale international E1 capacity link (2Mbps) from São Tomé & Príncipe to Europe declined from US\$9,000 in January 2010 to US\$2,500 in December 2014. Use of international Internet bandwidth in São Tomé & Príncipe also experienced a substantial increase, growing from 50 Mb/s before the cable, to over 4,500 Mb/s after. The following table summarizes the success of this PPP in increasing access to low cost telecommunications services across São Tomé & Príncipe:

Indicator	January 1, 2010	December 31, 2014
Access to Internet services (number of subscribers per 100 people) <sup>7</sup>	0.7%	17.9%
Access to telephone services (fixed mainlines plus cellular phones per 100 people).	67%	87%
Retail price of Internet services.	US\$852/ month (640 euros / month)	US\$52/ month (40 euros / month)
Localities with broadband Internet access (minimum 256Kbps).	56%	100% (achieved by December 2013)

Source: World Bank<sup>8</sup>

Subsequent to launch of service by Unitel, the ACE Consortium decided to deploy ACE Segment 4 to connect São Tomé to Cape Town, South Africa – a deployment that had previously been

<sup>6</sup> The Government retained a “Golden Share” entitling it to guarantee open access and defend the country’s interests.

<sup>7</sup> Based on fixed Internet subscribers (DSL) only. Mobile broadband (3G and 4G) subscribers are not included. Therefore, penetration rate is underestimated.

<sup>8</sup> STP World Bank Implementation Report, June 2015.





postponed due to initial lack of investment interest in South Africa and Namibia. This segment is now expected to proceed with new investment in the ACE Consortium from South Africa-based mobile operator MTN; deployment is expected to begin in mid-2016, with the commercial launch of service expected by the end of 2016. This deployment will also provide São Tomé & Príncipe with redundancy in international connectivity by providing an additional route to the global backbones.

## Conclusions

The experience in São Tomé & Príncipe highlights the potential of PPPs to absorb early stage project risk and provide a bridge to substantial private investment, both initially through the PPP, and subsequently, by facilitating the construction of key infrastructure needed by new entrants. The availability of low-cost international connectivity and access to the incumbent's infrastructure at cost-based prices were important considerations in attracting Unitel as a competitive new entrant into the country's telecoms market — a move which led to substantial decreases in prices for most telecommunications services.

The environment for investment in telecommunications infrastructure in emerging markets has evolved substantially over the past ten years, with important implications for the development of PPPs and other vehicles to fund fiber optic infrastructure in emerging markets. What factors have helped to drive this telecommunications infrastructure market evolution?

- Private operators have experienced massive increases in mobile broadband usage in their emerging market networks, and most now expect that this rapid growth will continue.
- Active acquisition, construction, Well-funded private infrastructure investors (both service providers already active in-country and international wholesale infrastructure access providers) are actively acquiring, constructing, and investing in telecommunications infrastructure, including fiber optic networks, towers (through focused tower owner-operators) and data centers.
- Greater interest in sharing the ownership of telecommunications infrastructure and capacity by operators, dedicated infrastructure providers, banks and other high capacity users — both through the purchase of shares and indefeasible right of use (IRUs) by, helping to create a market and set tangible commercial values for such infrastructure assets.
- Lower cost and more proven infrastructure technologies that provide high-speed broadband connectivity, including less expensive fiber optic cable installations, more efficient software overlays that make fiber optic terrestrial and submarine cables more productive, and wireless technologies that provide broadband solutions for low density areas and irregular terrain.
- Increasing awareness by government of the importance of infrastructure sharing in reducing the cost of telecommunication deployment — either by requiring operators to share infrastructure (e.g., towers), or by providing access to roads, rail lines or power grids through a PPP.



These developments have reduced the risks to private operators in financing and constructing telecommunications infrastructure, and have underpinned a surge in telecommunications investment across emerging markets. While the role of governments will remain important in structuring future PPPs, the increase in available private funding would free up government funding to achieve other pressing policy objectives, while encouraging further use of PPP structures that acknowledge the reduced risk and evolving interests of private investors.