



EQUITABLE GROWTH, FINANCE & INSTITUTIONS NOTES

GovTech Case Studies: Solutions that Work

Brazil: The SOL-ution for Smart Community Procurement

Simple, Efficient, and Transparent Government Systems

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Introduction

SOL is the Portuguese acronym for Online Bidding Solution (“Solução Online de Licitação”). SOL is a GovTech solution for community-level procurements carried out under community-driven development (CDD) projects, and it addresses the procurement challenges that the communities usually face.

Piloting SOL in selected projects in Brazil showed the app’s potential to increase the efficiency, transparency, and governance of the procurement process. The app facilitates the connection between community associations and their suppliers and automates the full procurement process. In addition, as all procurement data is generated and safely stored in the app, the app enhances the audit capacity of governments and the World Bank.

Given the many positive results, SOL is to be upgraded with new features and translated into other languages to facilitate scale-up and use by other countries, including in Latin America and the Caribbean.



Problems and Objectives

Community-driven development is an approach to development that emphasizes community control over initiatives to promote local development by participating in decisions regarding planning and investment resources. As operations based on a CDD approach can be more responsive to community needs, CDD has been a key strategy for local development in Bank programs. It is also widely recognized that one of the major challenges for the successful implementation of CDD projects is the capacity of communities to carry out procurement processes and manage risks. The most common procurement risks include the failure to identify enough suppliers for a competitive procurement and to follow the recognized procurement standards and rules. Therefore, ensuring that a community's capacity is sufficient for sound procurement is recognized one of the key factors that needs to be addressed in order to implement a CDD project effectively and successfully.

Communities of CDD projects in Brazil have experienced similar difficulties in carrying out their procurement processes. They had to work on paper and usually travel long distances to find suppliers when there were not enough suppliers in their region, so competition was always limited to very few bidders. Communities also had difficulties in preparing procurement documents correctly, and serious mistakes were a common issue. In turn, given the highly decentralized and scattered location of communities, government audits could only cover a very small sample of procurements and contracts done at the community level, limiting their capacity for effective monitoring and control of those processes.

The idea of developing SOL emanated from how to ensure communities conducted procurement processes faster, more easily and efficiently for better results on the ground. As such, the project development objective is to scale up the adoption of open-source electronic procurement software by governments for CDD projects in Brazil and other countries of the Latin America and the Caribbean region and to foster a collaborative community to maintain the software. The adoption of a GovTech solution will provide communities with easier creation and launching of tenders, quicker access to contractors, suppliers, and providers and will enhance the ability of governments and the World Bank to have real-time information on all community-level procurement for their support, monitoring, and auditing functions.



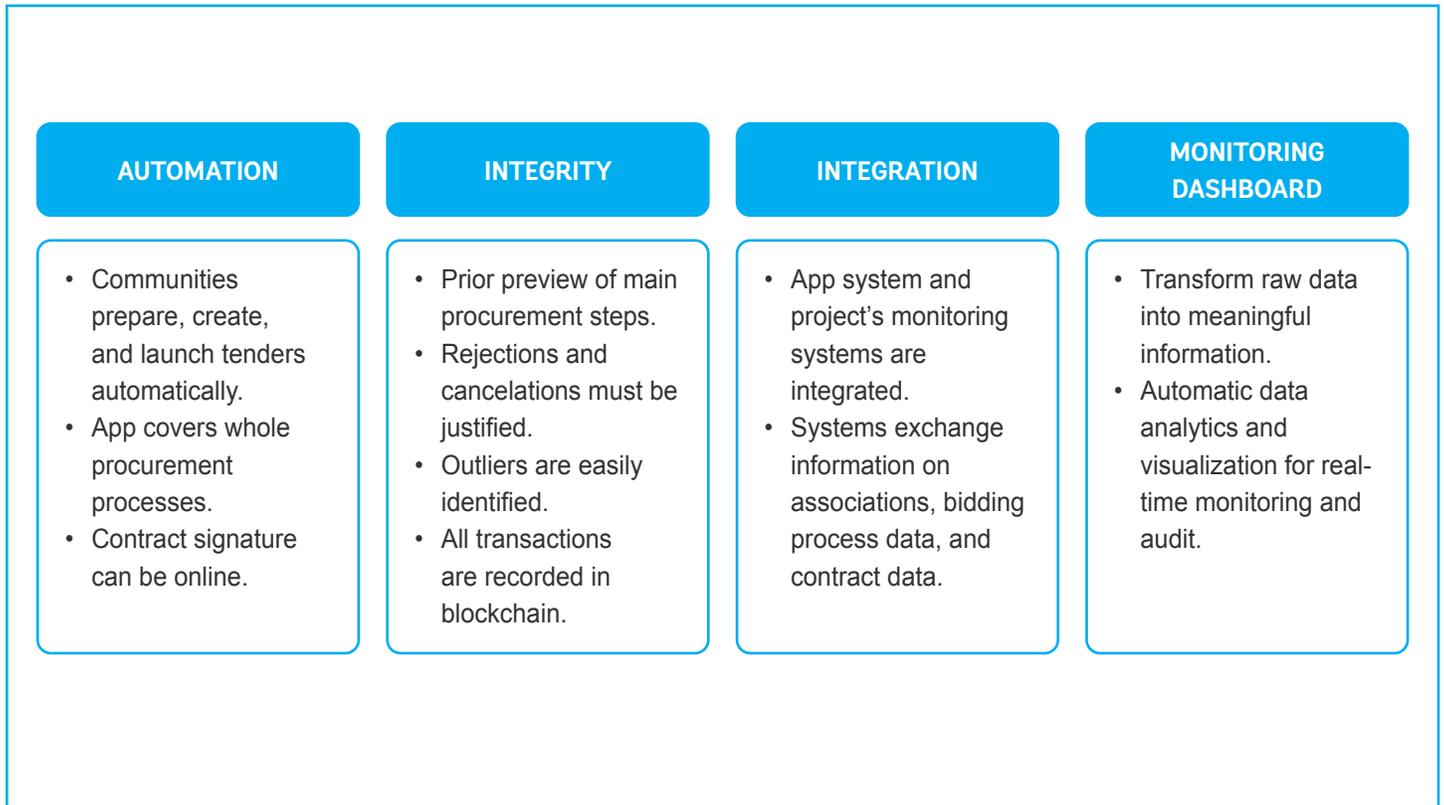
Solutions and Approaches

To address procurement challenges in CDD projects, the SOL app was developed by the Brazilian states of [Bahia and of Rio Grande do Norte under the Bahia Sustainable Rural Development Project \(P147157\)](#) and the [Rio Grande do Norte Regional Development and Governance Project \(P126452\)](#) for the beneficiary community associations to manage their buying processes electronically in a secure and easy way.

The SOL app covers all CDD procurement steps, from advertising to signing contracts, replacing paper-based processes. Communities can create bidding notices and requests for quotation through SOL, which will notify registered suppliers automatically. All procurement documents are prepared in the app and filled out automatically as tenders are created, quotations are received, and contracts are awarded and digitally signed, reducing errors. In turn, suppliers can self-register in the app, access bid opportunities, submit their proposals and follow up the procurement process result. SOL also offers monitoring reports, dashboards, and a complete set of CDD-level procurement data for analytics.

The SOL app has four main features: Automation, Integrity, Integration, and a Monitoring dashboard; Figure 1 presents them in detail.

FIGURE 1 - Main Features of the SOL App



Source: Revised from World Bank project report 2021.

DIGITAL SOLUTIONS

The SOL was developed as a custom software (CSW) with a centralized web-based application and mobile app by a private solution provider. It launched in July 2019 after 15 months of development, with the cost of \$150,000 sourced from the World Bank funding (Investment Project Financing project).

One notable detail is that the SOL app was developed as an open-source software, and its code is available for download from GitHub. This app development model enables governments to keep maintaining and enhancing the app through collaborating with developers in the community, thus, ensuring the sustainability of the app.

Moreover, blockchain technology based on a private network and Hyperledger was adopted into the SOL app to secure data. All transactions in the app are stored digitally in the blockchain, so the information can be protected against any attempt to corrupt the data. The blockchain makes the more transparent and secure environment for the procurement management.

Results

Since the launch in July 2019, the figures show its successful implementation and impact on the community. As of November 2021, 1,391 associations and over 2,600 suppliers had registered, and 3,293 contracts concluded, with an estimated value of R\$ 76 million (US\$ 15 million) in awarded contracts.

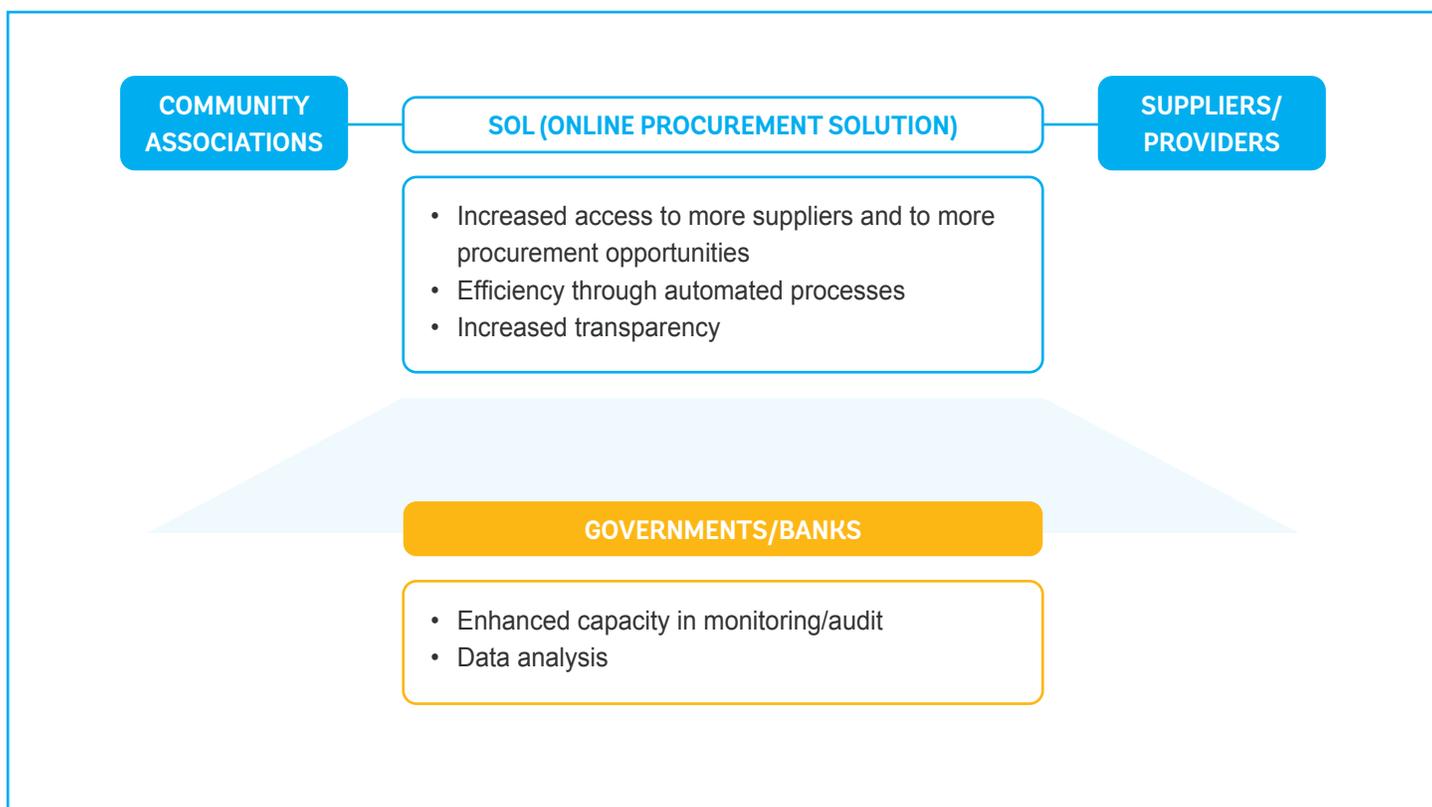
With SOL, the community associations procured products and services faster, safer, and more efficiently through the automated creation of advertising of tenders, receipt and evaluation of bids, and contract awards. Suppliers also benefitted by having access to a formerly restricted multimillion-dollar market of thousands of procurement opportunities simply by registering themselves in the app.

A key benefit for governments and the Bank is that this tool enhances their capacity to support, monitor, and audit CDD projects by collecting and analyzing procurement data. This is possible because all transactions in the app are recorded and stored digitally. The app also provides for enhanced transparency and integrity because its blockchain prevents data and transactions from being tampered with.

During the COVID-19 pandemic, the usefulness of the SOL app has become greater since the app eliminated the need for face-to-face meetings. In contrast to other states that stalled or delayed their procurement processes during the lockdowns, community associations in Bahia and in Rio Grande do Norte could continue their project implementation activities by using SOL

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FIGURE 2 - Benefits for Related Parties



Source: Structured based on the contents.

Lessons Learned

The SOL app has highlighted the value of an online procurement app in the normal context as well as during the pandemic. Public services are expected to transform into online service delivery with GovTech approach, and the SOL is a good example of it. The app shows some lessons from its planning and implementation processes.



Capacity building for successful implementation. As the capacity of communities to migrate to the digital way of working is typically weak, carrying out capacity building programs were as essential as developing the app. Therefore, the states and the Bank provided opportunities to learn about how to use the app and the rules of procurement.



Openness for scale-up. Technological features of the SOL are the open-source software and the blockchain which provides reliability and security. Developing the app as open-source contributed to having greater opportunities to expand into other states in Brazil and countries in the Latin America region and beyond.



User-friendly interface. The SOL was developed with user-friendly design, so community associations and suppliers registered in the app could use it more easily and conveniently. Since procurement procedures are usually regarded as difficult and complex, having a simple interface can be considered one of the successful factors.

Next Steps

Some other Bank-financed projects in other states in Brazil as well as in other countries plan to adopt the app. Upgrades and translation into English, Spanish, and French will make SOL a global public good. With a little customization and connection to legacy systems, SOL can easily be adopted by virtually any other CDD project in the world. This scaling up and adoption by other projects will foster the growth of the GitHub's community of SOL users, which is another important measure for ensuring the sustainability of the app by promoting an active development environment.

Contact Information

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Annex: Interface of the SOL

New procurement process

Description (purpose)*

Covenant*

Classification*

Start date*

End date*

Calendar days for tie-break*

Delivery/execution deadline in days*

Delivery location

Procurement process type*

Modality*

Additional site

New procurement process

Lot settings

Lot name

Delivery deadline (days)

Delivery location

Lot items

Lot files

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