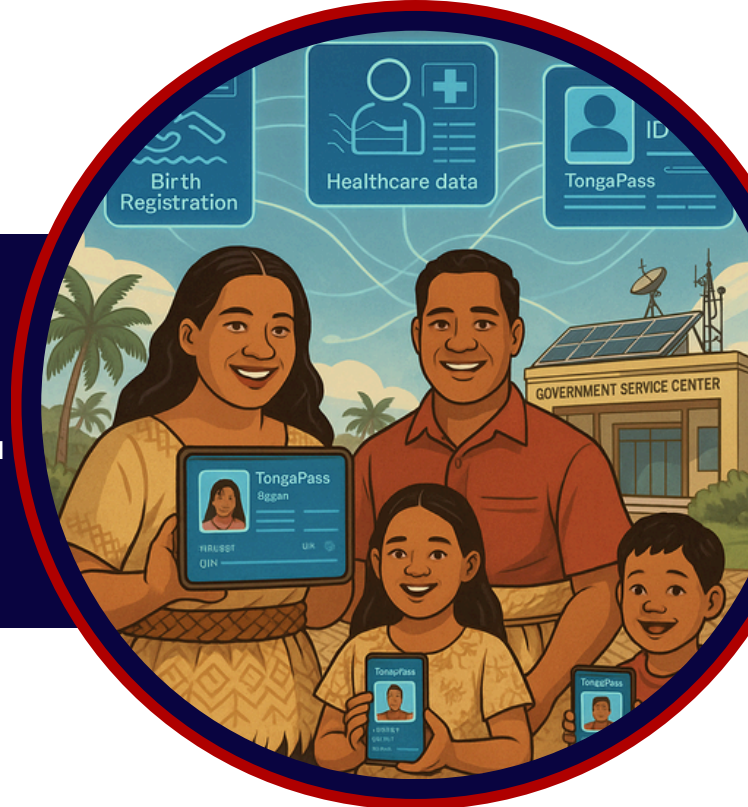# CASE STUDY

Tonga's Digital Transformation - Building a Nation's Digital Public Infrastructure

PROBLEM

The Kingdom of Tonga is undergoing a significant transformation in its civil registration and vital statistics (CRVS) system supported by the Ministry of Justice (MoJ) and assisted by international partners such as the World Bank. This project is a cornerstone in the government's broader initiative to enhance digital governance and streamline public service delivery. The objective is to modernize and optimize the CRVS system to ensure it provides efficient, user-friendly, and secure services to the citizens and residents of Tonga.

The project aims to upgrade the existing CRVS system to handle the registration and management of vital events like births, deaths, and marriages more effectively. It will introduce a centralized digital platform, known as the Orchestrator/ID Hub, designed to facilitate improved data management, enhance security measures, and ensure seamless interaction with other national systems like the National Health Information System (NHIS). A significant component of this upgrade is the integration of a unique identifier number (UIN) system, which will play a pivotal role in unifying personal data across various government platforms, ensuring a seamless, secure, and efficient way to manage citizen and resident data. The upgraded CRVS system will serve as the central repository for all vital events documentation, providing a streamlined process for registering, storing, and managing these events electronically. The system will incorporate advanced technological solutions to automate processes, reduce manual errors, and ensure data accuracy. Key components of the project include:

1. Transforming paper-based registration processes into a digitized, automated workflow that enhances efficiency and reduces turnaround times.
2. Ensuring the CRVS system can communicate effectively with other governmental systems via secure APIs, supporting real-time data exchange and interoperability.
3. Introduce a unique identifier number for each citizen and resident, which will be central to the integration and interoperability of various government databases, enhancing both service delivery and security.
4. Implementing robust security measures compliant with the Tonga National Cybersecurity Framework to protect sensitive personal data against unauthorized access and cyber threats.
5. Developing user-friendly interfaces for various stakeholders, including government officials, healthcare providers, and the general public, to interact with the CRVS system easily.

"The launch of the TongaPass Digital ID alongside the modernisation of the CRVS and the national Data exchange platform marks a transformative step in our digital journey. Tonga now has a secure, interoperable and efficient framework that streamlines identity management, Civil registration and seamless data sharing between institutions.
We appreciate VS ONE WORLD for their innovative technical excellence and commitment to building a system that will serve Tonga for generations "

-Andrew Toimoana -
Director of digital transformation at Prime Minister's Office

SOLUTION

The Government of Tonga, with strategic backing from the World Bank and partnership with VS ONE WORLD launched first Digital Public Infrastructure (DPI) . This foundational ecosystem provides a secure, efficient, and interconnected platform for critical government functions, comprising three core pillars:

1. **MOSIP-based Digital ID Platform (TongaPass):** A secure and foundational digital identification system, purpose-built upon the globally recognized **Modular Open-Source Identity Platform (MOSIP)**. this platform is central in modernizing Tonga's Civil Registration system. TongaPass meticulously assigns a unique digital ID (UIN) to each individual registered in the national registry, establishing an authoritative "single source of truth" for citizen identity. This digital identity is indispensable for secure verification, enabling seamless access to public services and ensuring the integrity of all linked vital records.

2. **OpenCRVS-based Civil Registration and Vital Statistics (CRVS) System:** This state-of-the-art system provides a comprehensive, digital platform explicitly designed for the precise registration and efficient management of all vital events, including births, deaths, marriages, and name changes. Built on OpenCRVS, an open-source solution tailored for civil registration, it ensures unparalleled data accuracy, robust security, and enhanced accessibility for critical demographic and legal record-keeping.

3. **Nationwide API Integration Platform:** This robust Application Programming Interface (API) integration platform, built on WSO2 API Platform, is the critical interoperability layer. It facilitates secure, real-time data exchange between government ministries and agencies. By orchestrating complex, multi-agency service delivery workflows behind a single online interface, simplifying and streamlines comprehensive service access for citizens, reducing the need for manual data transfers and redundant processes.

This pioneering initiative marks a significant achievement as the first of its kind in the Pacific Islands region, firmly establishing Tonga as a leader in digital governanceVS ONE WORLD served as the overarching DPI solutions provider and the crucial systems integrator, ensuring cohesive implementation across all components. Known for its expertise in digital transformation solutions, VS ONE WORLD brought its comprehensive approach to project management and solution delivery to this landmark initiative (www.vsoneworld.com).

"The go-live of OpenCRVS in the Kingdom of Tonga is a proud milestone - not only for the country's digital transformation journey, but also for what it signals across the region and globally about the power of open source and effective collaboration. For the first time, OpenCRVS and MOSIP have been successfully integrated, enabling life events like birth and death to directly inform foundational identity - importantly, in a secure and trusted way.

This achievement reflects the strong leadership of the Government of Tonga and the dedication of the implementation team. The VS One World team demonstrated real tenacity and professionalism in meeting ambitious timelines and delivering high-quality, fully integrated systems that will form the foundation of digital public infrastructure for years to come. Throughout the project, they were consistently responsive, delivery-focused, and an absolute pleasure to work with - a true partner in every sense.

We're honoured to have contributed to this effort and excited to see the benefits unfold for the people of Tonga. It gives us real optimism for what's possible as more countries pursue digital transformation built on high-quality, interoperable digital public goods."

-Ed Duffus -
Co-Founder and CEO, OpenCRVS

"We are pleased to congratulate Vs One World on successfully going live in Tonga. This is one of the first implementations where MOSIP has been integrated with OpenCRVS and rolled out at a national scale; a matter of great pride for all of us involved. We also extend warm wishes to the government of Tonga on this significant milestone. This is truly open-source at work and an illustration that the future of government DPI looks bright. We look forward to witnessing all that this journey will enable for the nation."

- Nagarajan Santhanam -
Chief Dissemination Officer, MOSIP & OpenG2P

Key Features

The Tonga DPI solution integrates several critical features, each designed to enhance the effectiveness, security, and long-term sustainability of the nation's CRVS and broader public service delivery:

- **Integrated Platforms for Seamless Data Flow:** The harmonious operation of TongaPass (digital ID), the OpenCRVS system, and the national health information system (NHIS)creates a unified digital ecosystem. For CRVS stakeholders, this means an end to data silos, enabling consistent data capture and verification across government functions.

- **Unique Digital Identification (UIN) for foundational Identity Assurance:** TongaPass assigns a unique identifier to each citizen, a cornerstone for streamlining authentication and registration across all government platforms. This is paramount for CRVS, preventing duplicate records, ensuring accurate identity linkage to vital events, and establishing a robust framework for tracing an individual's life journey through official records.

Economic and Societal Advantages

The implementation of Tonga's DPI, with its modernized CRVS at its core, is set to deliver profound economic and societal advantages that resonate directly with national development objectives:

- **Improvement in Public Service Efficiency:** Streamlined CRVS administrative processes significantly reduce bureaucratic burdens, translating into substantial time and cost savings for both citizens and government agencies. This efficiency liberates resources that can be reallocated to other critical public services.
- **Enhanced Accessibility to Essential Services for All Citizens:** By enabling citizens to complete a variety of transactions online, the need for physical visits to multiple ministries is drastically reduced. This is particularly transformative for citizens in remote islands and rural areas, ensuring equitable access to vital government services regardless of location. The Tongan government's active promotion of citizen registration to TongaPass through community outreach initiatives (e.g., visiting eastern Tongatapu villages) further underscores their commitment to widespread adoption and inclusivity.
- **Increased Transparency and Accountability:** Digital platforms inherently enhance transparency in government operations and service delivery, fostering greater trust between citizens and the state. This improved visibility is crucial for good governance.

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- **Reliable Data for Precision Policy and Resource Allocation:** The provision of accurate, reliable, and timely vital statistics data forms the bedrock for superior governmental policymaking, strategic planning, and optimal resource allocation. This directly impacts public health outcomes, educational planning, social welfare programs, and economic development strategies by ensuring decisions are informed by current and validated demographic realities.
- **Systematic Protection of Legal Rights and Identity:** Improved digital registration and meticulous management of vital events ensure that all citizens have timely access to essential services and that their legal identities and rights are systematically protected throughout their lives. This foundational legal identity is crucial for civic participation and access to entitlements.
- **Regional Leadership in Digital Transformation:** Tonga's pioneering initiative sets a compelling precedent for other Pacific Island nations. By demonstrating a viable and successful model for digital transformation and establishing itself as a leading digital government and digital ID proponent in Polynesia, Tonga is becoming a regional exemplar.

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