2 DPGs joined forces to tackle COVID-19 in **Sri Lanka**

From resource management to certification, the COVID-19 pandemic underscored the need for digital solutions that could help countries respond quickly to an urgent challenge. Sri Lanka, like most countries, needed digital systems that could adapt to the challenges posed by COVID-19. A specific type of digital solution came to the rescue. Sri Lanka used two Digital Public Goods (DPGs) - Digital Infrastructure for Verifiable Open Credentialing (DIVOC) and District Health Information Software 2 (DHIS2) - as part of its COVID-19 response.
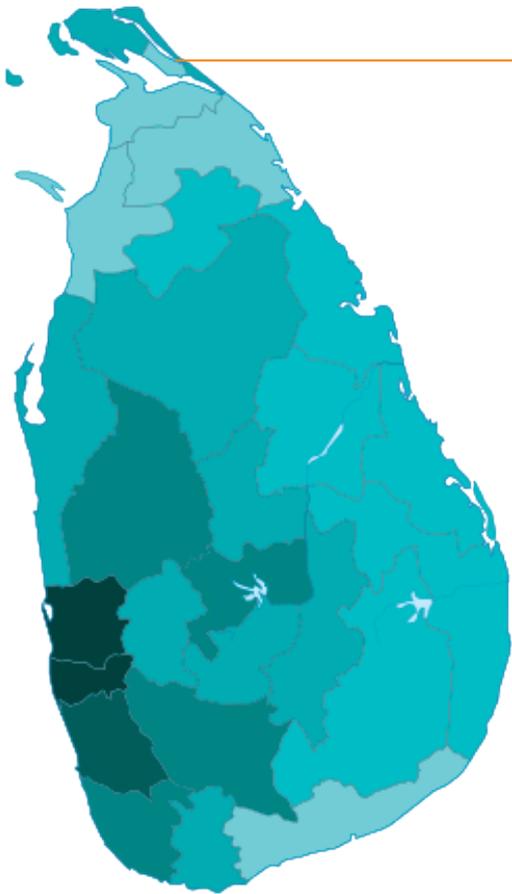
Addressing unforeseen challenges

Before the pandemic, DHIS2 was being used by Sri Lanka's Ministry of Health (MoH) to track and manage the country's health data. DHIS2 is an open-source software developed by the Health Information Systems Programme (HISP) at the University of Oslo. The local DHIS2 partner for Sri Lanka's MoH is HISP, Sri Lanka. In January 2020, soon after the first suspected case of COVID-19 was registered in the country, HISP Sri Lanka deployed a real-time COVID-19 registration, surveillance, and monitoring system - DHIS2 Tracker - on its existing health platform using DHIS2.

A new challenge

With vaccine drives underway in 2021, Sri Lanka turned its attention to another pressing issue: the need for secure and verifiable certificates so that its citizens could prove their vaccination status when they traveled to other countries. This is where DIVOC came into the picture.

Developed by eGovernments Foundation, DIVOC is an open-source platform that enables countries to manage large-scale vaccination certifications and other public health programmes. Built in India for the world as a digital public good, the platform allows countries to use its components together or as an individual solution.

Sri Lanka implemented a core module of DIVOC - its certificate component - which allows implementing partners to issue, verify, update, revoke, and distribute secure and tamper-proof digital certificates.

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Booster Doses

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Verification Portal
https://cert.covid19.gov.lk

egama Wimalawansa Thero Mawatha, Colombo 10, Sri Lanka
: +94 112 692 913| Email:

The integration

The DIVOC team started interacting with MoH and ICTA teams in March 2021. Discussions were also conducted with HISP-Sri Lanka technical teams. After multiple rounds of discussions, ICTA, in collaboration with MoH, implemented DIVOC's certificate service. HISP Sri Lanka in partnership with ICTA integrated DIVOC's certificate module with the DHIS2 tracker to generate digitally signed verifiable COVID-19 vaccination certificates in Sri Lanka.

The service went live in July 2021, making it the first country where DIVOC was deployed after India. COVID-19 vaccination certificates issued in Sri Lanka use the native DIVOC-QR encoding specification and are compliant with the WHO-Digital Documentation of COVID-19 Certificates (DDCC) data specification.

March - 2021

Talks started with Sri Lankan partners

May 19- 2021

First COVID-19 vaccination certificate issued to a government functionary via DIVOC

July 21 - 2021

DIVOC's certificate module went live for all Sri Lankan citizens

July 1 - 2022

Over 5.85 million COVID-19 vaccination certificates issued

DIVOC's certificate component was hosted in the Sri Lankan government's national data center, which is maintained by the ICTA. In this integrated environment, the DHIS2 tracker worked as the centrally-maintained source system for recording/aggregating and tracking all COVID-19 vaccination events, and DIVOC as the certificate component (for both generation and verification purposes).

Where we are today

Sri Lanka extended this service to citizens planning to travel overseas and for government functionaries. Since its deployment, over 585,060 COVID-19 vaccination certificates have been issued (till July 2022) to Sri Lankan citizens on demand to aid in their international travels.

Besides certificate generation, DIVOC's update certificate service is enabling the country to rectify mistakes or make changes to the certificate. DIVOC has also set up a public portal for Sri Lanka to allow verification of the issued certificates by authorised verifiers.

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DIVOC is a digital public good which we use for our smart vaccination certificate programme in Sri Lanka, the proof of vaccination for all Sri Lankans needing to travel overseas during the pandemic. We have integrated DIVOC with our COVID-19 immunisation tracker, which is based on DHIS2.

(The) DIVOC platform helped us to make a transformational impact in our programme by issuing a natively digital certificate. The authenticity of (the) certificate is verifiable by scanning the QR code and we can make the certificate available on any given smart device.

As per our experience, DIVOC is elastic in nature, agile, responsive, modular as well as configurable. As early adopters of DIVOC, Sri Lanka is keen to see the future evolution of DIVOC as a verifiable credential stack, addressing more and more health use cases.

Dasun Hegoda
Director & Software Architect at ICTA

Image courtesy: istock

What's next?

DIVOC's collaboration with Sri Lanka is a great example of digital solutions that can be adapted and deployed quickly to meet unique requirements. Focus on interoperability and creating solutions that could be tailored to both regional demands and global standards were critical. The partnership demonstrates that local innovations can be shared and executed for new use cases on a national scale with the help of partners. It also gave us an integration model with another globally-accepted DPG, which potentially could materialise into a larger global partnership in the future.

Currently, DIVOC is in discussions with DHIS2 for integrations where DIVOC will be available as a service package along with the DHIS2 package in countries where DHIS2 is being used for vaccination support to generate verifiable certificates. The package was successfully tested by DIVOC in collaboration with HISP Sri Lanka.