



Travel Recovery Thought Leadership Series 2021

The Building Blocks of Digital Health Passes Recommendations Paper

Prepared by ATTIA
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Context

Recognizing that for international travel to resume safely and responsibly, countries need assurance that cross-border travel will not result in unmanageable COVID-19 infection spikes.

To provide that assurance, Digital Health Passes (DHP) have been proposed as means to establish trust. Notably, the form factor of the DHP is agnostic in that the source information can be captured manually or digitally before being incorporated into existing digitally-based systems. These systems already operate across international borders and are critical to all existing international travel infrastructure.

To thoughtfully contribute to the dynamic dialogue regarding travel recovery, ATTIA¹ embarked on a series of discussions with organizations involved in different parts of the value chain to better understand the fragmented landscape. Through a closed-door policy eRoundtable and a public ePanel discussion, ATTIA gathered together experts involved in different aspects of this complex value chain to discuss the key challenges and arrive at the set of recommendations captured in this Recommendations Report to inform the development of aligned industry / government priorities and vision for DHPs.

ATTIA recognizes that the pathway to travel recovery is complex, and there is a multitude of approaches so a 'one size fits all' type solution is unlikely to exist. Therefore, ATTIA intends to contribute to the ongoing conversation between all stakeholders as opposed to prescribing a preferred specific solution through this Recommendations Report. ATTIA and its member companies from Asia and beyond thank all participants and contributors who made the compilation of these recommendations possible.

Problem Statement

Travel recovery is both an aspiration and a barometer of a return to 'normalcy'. Developing a solution for travel recovery has been challenging because the participants in the value chain (individuals, businesses, governments, international organisations, technology implementers, etc.) are as diverse as they are unified by a common purpose. Furthermore, the touchpoints along that chain are as geographically dispersed as they are inextricably interconnected.

Whilst DHPs a global vehicle for the secure, convenient and efficient transmission of health data (including vaccination status) across that value chain, it has one weak link - trust. The barrier to universal deployment of a DHP is the issue of trust between participants in the value chain. A DHP brings together two trusted health networks, one of the 'Verifier' seeking to

¹ ATTIA represents companies operating in the travel and tourism sector in Asia, with technology and innovation at their core. Its members include Agoda, Airbnb, Amadeus, Booking.com, Expedia Group and Travelport. ATTIA seeks to promote a deeper understanding of the policy issues that stand at the intersection of travel and technology and serves as a resource and a catalyst for closer collaboration and information-sharing for the development of aligned industry/government priorities and vision for travel and tourism in Asia.

verify the credentials of the traveller and one of the 'Issuer' seeking to affirm the authenticity of the credentials issued, and that it can be trusted and cannot be tampered with.

How to ensure trust in the issuer of a DHP and to verify the authenticity of the DHP issued is key. The solution lies in adherence to standards and creating a framework for interoperability that can be incorporated into existing digitally-based systems that already operate across international borders. If this can be achieved, DHPs could become one of the missing links in the safe and responsible resumption of domestic and international travel.

Key Considerations

Given how vast and diverse the technical, geographic, political, economic developmental, regulatory and cultural considerations are around the design and deployment of DHPs, there needs to be a clear set of key considerations to inform and guide the conversation.

- a. Vaccination might not be an all-encompassing solution for travel recovery. Diagnostics testing will likely remain as a pre-requisite for travel..
- b. Simplicity, accessibility, and user-friendliness are critical to traveller adoption and inclusiveness of DHPs.
- c. Creating a trusted network
 - Data privacy and security are essential to reassure travellers of the safety and use of private health information. Only when travellers are assured that their health data will be secured and used appropriately will they be willing to adopt DHPs.
 - Inclusiveness towards different national approaches and individuals by supporting a wide spectrum of certification of vaccination and diagnostics tests.
 - Scalability of the trust network architecture to support different usage scenarios, use cases and types of certificates will enable DHPs to be adopted and utilized at scale.
- d. Decision-making authority on healthcare decisions relating to the resumption of international travel should reside solely with governments. The rules and rules application framework should be decided by governments.

Key Recommendations

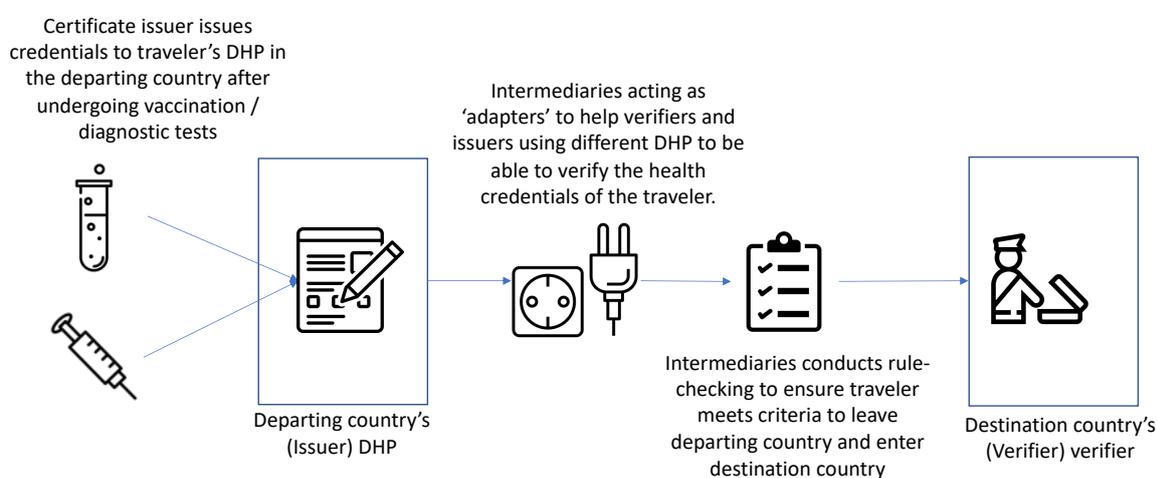
1. Data Privacy and Security

- a. Providing travellers with effective control over their DHP data is essential to increase access and inclusiveness. These measures will increase travellers' willingness to share health data that is normally kept private.
- b. To provide effective control over personal data, the use cases for the DHP data should be easy for travellers to understand e.g. request for permission to access the data should be made in the form of simple 'yes/no' questions that are easy for travellers to comprehend.
- c. Organizations requiring DHP data should endeavor to only request for the minimal datasets based on the level of risk assessment required.
- d. DHP data should be identity binding to securely bind the data to the traveler's identity and ensure that DHP data cannot be falsified.
- e. The usage of the DHP data requested should be limited to the purposes of COVID-19 risk assessment only.
- f. The use of cryptography (e.g. blockchain) to protect personal DHP data and provide limited data on an as-needed basis.
- g. Governments might consider facilitating the sharing of health data by creating a framework that allows for more efficient, privacy-preserving means of achieving verification of health status.
- h. There are two main approaches for the storage and exchange of DHP data requested:
 - i. Allowing the DHP to reside within the travellers' own devices will provide reassurance to travellers that they have control over their personal data. This is in line with the concept of Self-Sovereign Identity (SSI).
 - ii. In instances where DHP data are not stored in travellers' own devices but centrally by governments or by other organizations, providing effective control over the use and access to the data (see above point) is essential to foster trust.

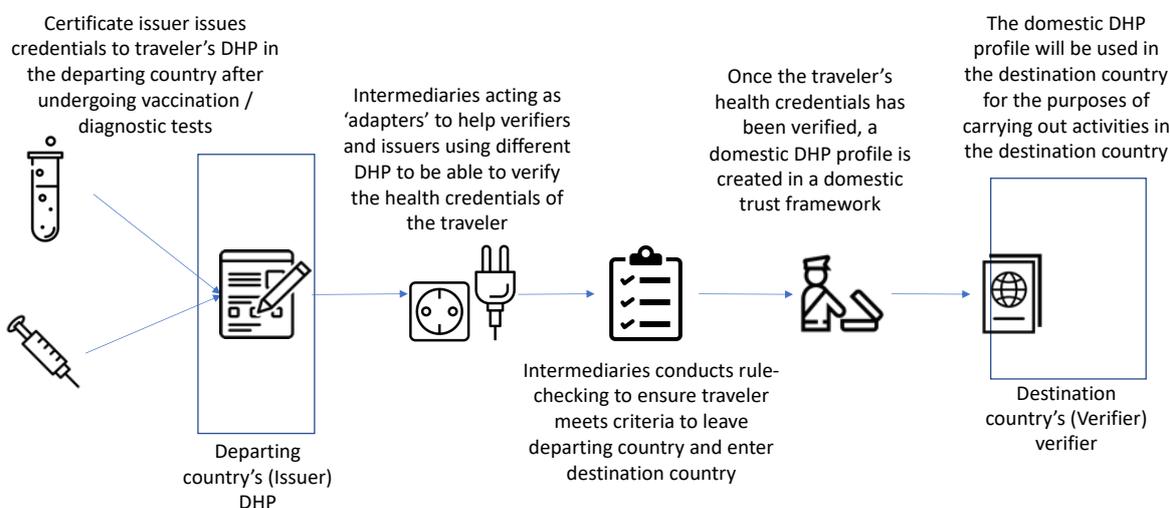
2. Interoperability

- a. Public-private collaboration is needed to reach an interoperable standard for DHP at a national level. Examples of such public-private collaboration include Common Trust Network, Good Health Pass, Open Attestations, Verifiable Credentials, Universal Verifier etc. Whilst vaccinations in Asia are usually coordinated centrally by the national government and so a national vaccine registry usually exists, the diagnostics testing landscape is more fragmented and involves coordination amongst hundreds or thousands of testing sites and laboratories. A national standard is required to bring it all together so that verifiers can verify the DHP issued by issuers with ease and assurance.

- b. Ideally, a framework for interoperability will be created and widely adopted globally (e.g. Good Health Pass), and requires cooperation amongst countries and organizations involved across the DHP value chain. This will allow a verifier in the receiving country to verify the DHP issued in the issuing country with ease.
- c. Recognizing the difficulty of arriving at an interoperability framework at a global scale, the use of Open Standards for DHPs will help intermediaries work towards a sufficient level of interoperability at scale. By relying to the greatest extent possible on open standards, willing organizations will be able to fill the gap of being an intermediary between different DHPs so that the verifier can work through the intermediary to verify the DHP of the traveller from the issuer.

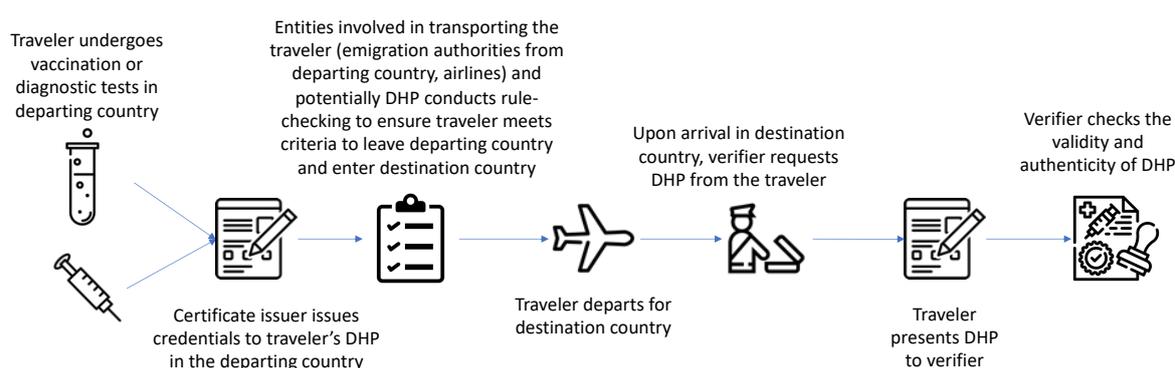


- d. The development of national-level Open Standards for DHP will reduce the diversity of differing DHP standards and hence reduce the adaptations that intermediaries will need to improve interoperability between verifiers and issuers.
 - i. Relying on national-level Open Standards, a possible way to reduce the burden of verifiers and the need for cross-border verification (and reduce the complexities of intermediaries), could be to aim for interoperability at an inter-country level. The profile and DHP of a traveler can be replicated domestically in the domestic trust framework. This is similar to an 'adapter' approach between closed-loop domestic trust frameworks.

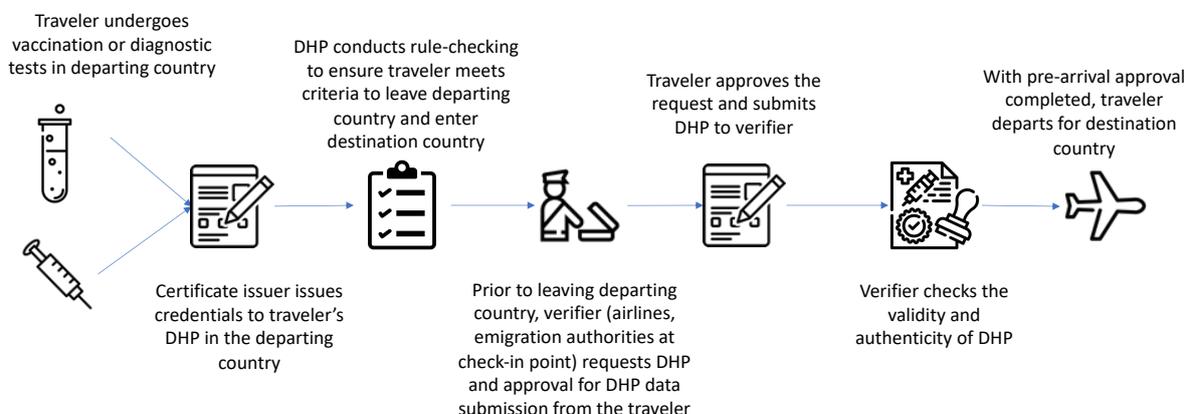


3. Verification

- a. Broadly, there are two main approaches to verification of DHPs:
 - i. Point-of-Arrival verification will involve the traveller showing the verifier (e.g. immigration officer) their DHP for the verifier to verify. This is often done through high-quality QR codes shown by the traveler for the verifier to scan. The verifier will have to use a digital verification system or platform to perform verification checks with the issuer to authenticate the credentials of the traveler on the spot.



- ii. Pre-Arrival / Contactless verification will involve the traveler approving the submission of their DHP to airlines and travel agents. This can be done either by the traveler proactively sending their DHP to the verifier upon request or for the DHP server to automatically send the traveler's DHP status to the verifier from a DHP database upon approval from the traveler.



Contributors

This report has been prepared by ATTIA through consultation with Affinidi, GovTech Singapore, Halza, IBM, Pacific Asia Travel Association, Roche, SAP and The Commons Project Foundation as part of a policy roundtable.



Contact Us

For further information about this Recommendation Paper, this Thought Leadership Series or ATTIA in general, please email secretariat@asiatravelttech.org Thank you for your interest.