Briefing: Interoperability & Health Information

March 2021

BACKGROUND

The digitization of identity, visas, travel authorizations in recent decades is challenged now with the solutions being developed to respond to the COVID-19 pandemic. Although there are some global standards, such as passports and advanced passenger information, health information is largely a paper-based process with limited global standards. Interoperability is a concept that enables different systems to communicate seamlessly together. As in the case of the banking industry with the creation and widespread implementation of the Automated Teller Machine (ATM), where each banking institution's machine operated in isolation, without communication with other players in the field. Interoperability in the banking industry has allowed the universal use of ATMs across different banks and platforms leading to efficiency in operations and ease by users.

The same logic applies in the recovery measures to the COVID-19 pandemic. In the travel industry, we have experienced similar history where travel documents were separate for every mode of transportation. For example, there were different NEXUS documents required for travel by air, rail and highway which were all separate from the passports and the Global Entry program. This changed after the 2011 US-Canada Beyond the Border Action Plan, which accelerated interoperability and saw the emergence of a unified NEXUS document used across the different travel modes.

Health information is not fully defined and changing every month, but can include quarantine plans, COVID-19 test results, history of past COVID-19 infections and/or vaccination status. With the roll out of COVID-19 vaccinations and same being a major factor to the resumption of multimodal travel globally, there is an utmost need for careful streamlining and interoperability of the many health solutions barraging governments and transportation providers and the roll out of vaccine passports or health certificate platforms. We simply cannot go back to an era before 2011 when it was acceptable to have a different mechanism for each mode of transport and each government: the costs of duplication and confusion for travellers is too high.

KEY FINDINGS

1. There are now over 100 different providers of health information smartphone apps for government, travel industry and for general day-to-day use.
2. There is a lack of standards to enable communication among different solutions thereby inhibiting the ability for one system to work with another.
3. A number of government apps are in use for travel. However, the technology roadmap is not clear about current and future requirements (i.e., CBP One or ArriveCAN), and the degree to which coordination between governments, and between industry/governments is fostered.
4. Paper based solutions as proof of testing and vaccination create opportunities for fraudulent documents, reducing fidelity and acceptance.
5. There is no one size fits all mechanism for all modes of transportation: air, maritime and land modes have different demands that need to be tailored to different climates and operating conditions. Early estimates have a 1-minute border transaction growing to 5 minutes: solutions need to be scalable to deal with travel recovery.

Figure 1: A selection of various apps used for health information communication

RISKS ASSOCIATED WITH THE LACK OF INTEROPERABILITY

As shown on Figure 1, there are a variety of different apps that have been deployed in the travel environment. Today, there is no ability for different apps (e.g., Verifly, CommonPass, AOKpass, ArriveCan, etc.) to be interoperable: many of the apps are duplicating the requirements for information submission into Canada and into the United States.

Overall, there are three risks for the lack of interoperability:

❶ **Consistency of information**
Eliminating or reducing the spread of diseases requires a united approach. Data quality, information requirements and methodologies to deal with allowing/disallowing travel need to be organized in a consistent fashion. Far too often, systems are built that are challenged with different methodologies for verifiability of data – if there is no trust in system(s) then the management of status of passengers coming into Canada or the United States will be fraught with confusion and potentially erroneous information being used for admissibility.

❷ **Duplicated efforts**
We have seen many times in the U.S. and Canada border environment the benefits of having a common approach between governments and amongst government/industry processes. Moreover, the trade and travel industry are built on multiple modes of transportation – and each mode cannot have a different approach for verifiable health information. NEXUS and FAST have evolved to be the gold standard – interoperable with a single application form, single fee and mechanism to manage information. Can the same logic be applied to remove duplication for digital health certificate solutions?

❸ **Confusion for the traveling public**
Requirements and platforms that are different by mode, by country or by type of travel are already

confusing. The ability for clear requirements to make it easy for the end-user to use, whether they are connecting, returning home, or leaving a home country is critical to adapt to interoperable health systems.

FBC CRITERIA FOR DIGITAL TRAVEL SOLUTIONS

Based on the interoperability standards being advanced in Europe and the Good Health Pass Collaborative, Future Borders Coalition has developed a set of criteria for digital travel solutions to help with health information requirements:

1. **Meets or Exceeds Privacy and Health Information Protections**
   Solutions have to be aligned with Privacy by Design (PbD) principles in order to deal with the best practices to prevent cyber security hacks, have transparency to the users amongst other features. Solutions must also meet legal and privacy law; for example, the Health Insurance Portability and Accountability Act (HIPAA) surrounding health information transmission and use, as well as future frameworks, such as the Digital Charter Implementation Act (DCIA) and the Consumer Privacy Protection Act (CPPA).

2. **Interoperable and Multi-modal**
   Solutions must integrate well with different modes of transportation but cannot be exclusively one mode of transportation or another. An open standard (i.e., ICAO digital travel credential) approach is encouraged as well as leveraging existing tokens (e-Passports, NEXUS/RFID documents).

3. **Human Centric**
   Solutions should embrace a customer-centric approach that looks at adapting smartphone, identity documents and advance information submission methods with the least hassle, fumble and duplication.

4. **Scalable**
   A preferred solution should be adaptable to ever-changing policy requirements and easily scale for operations to different volumes of passengers with the gradual recovery of travel i.e space, time, staffing.

RECOMMENDATIONS

Figure 2: A Health NEXUS approach could be used to help manage a multi-modal data approach binationally.
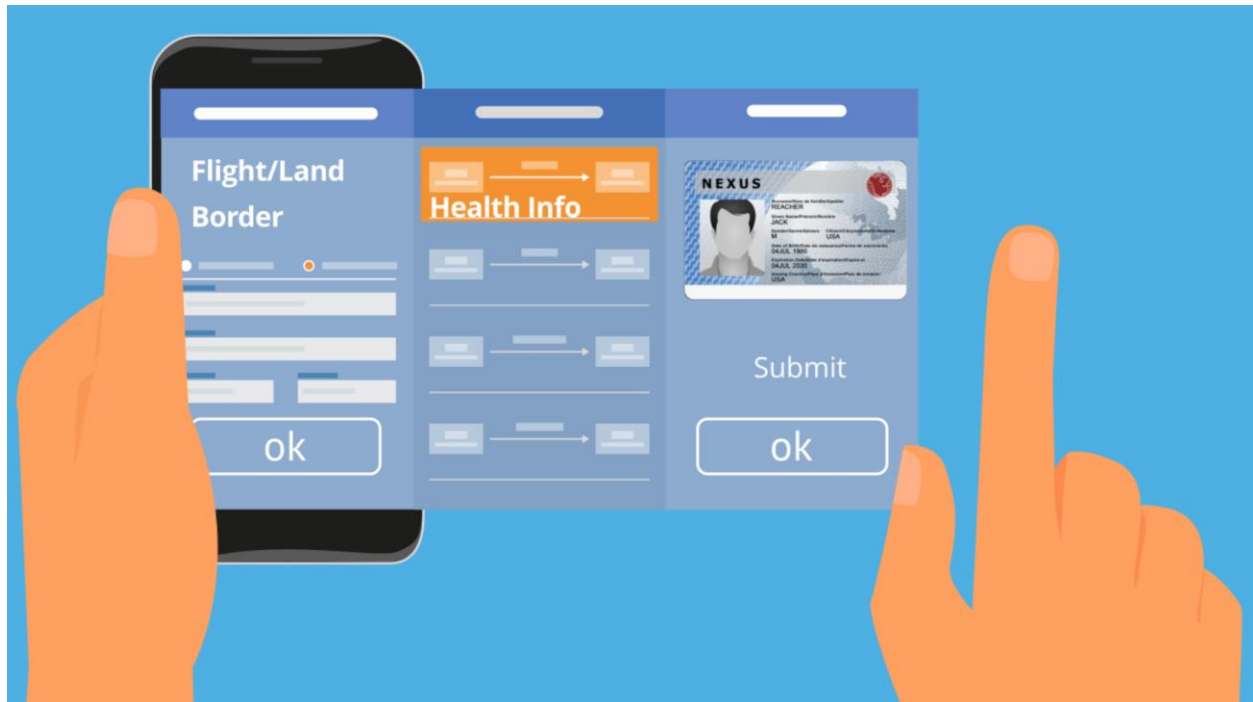
There is an obvious need for interoperability and alignment in systems that share verified and secured health data while maintaining privacy, especially in a land border environment where travellers may cross back and forth on a daily basis.

The roadmap for a renewed U.S.-Canada partnership announced recently by President Biden and Prime Minister Trudeau is a solid foundation for the alignment of Government solutions to address the current play on health information and its role in improving trust and restoring movement across the borders.

In the context of the current environment and ensuring the rapid development of a secure interoperable health certificate solution the Future Borders Coalition recommends the following:

1. The U.S. and Canadian Governments developing travel apps, on an urgent basis, should join the definition of interoperability standards with the Good Health Pass Collaborative Interoperability blueprint draft standards due to be released on April 15, 2021. The Good Health Pass effort and other ideas on interoperability should be monitored for possible inclusion in a cross-border travel environment.

2. The U.S. and Canada should pursue a joint secure digital health certificate platform similar to the NEXUS program, on a priority basis. This could be accomplished by using ArriveCan and CBP One as a combined Border/Health platform to accept secure health information (test results, vaccination information, recovery confirmation from previous COVID infections, etc.) for pre-departure travel screening, health status confirmation on arrival, and determination of quarantine requirements, if any, depending on health authority policies. Individual travellers could either upload their own health

documents directly or through a third-party digital health system like CommonPass, IATA Travel Pass, AOK Pass or other approved platforms. Travellers unable to use a digital app would have to provide physical health certificates prior to departure (air, sea, rail) or at the land border crossing.

3. Leverage existing voluntary trusted traveler programs that can be adapted to include health information and provide a more efficient touchless environment, particularly at the land border. (See Figure 2).

About Future Borders Coalition

The Future Borders Coalition is a group of more than 70 bi-national organizations with a vested interest in advancing the efficiency, security and health safety of the Canada–U.S. border. Task forces are focused on cooperation between industry and governments towards practical and sustainable solutions for pandemic recovery.

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