

ITUWebinars

# ITU/WHO Workshop on Digital Vaccination Certificate

11 August 2021  
13:00 - 18:00 CEST

<https://itu.int/go/DVC-21>

## SESSION 1: Use cases and technical framework

- Daniel Bachenheimer *"Digital passport used by airlines also for vaccination certificate?"*
- Marie Wallace *"Multi-credential Verification: The good, the bad, and the ugly"*
- Kaliya Young *"Information structure and trust for certificate"*



World Health  
Organization



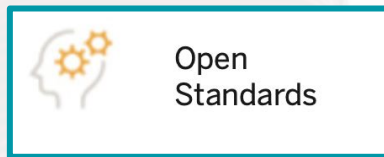
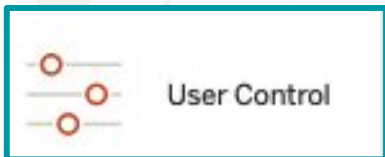


# **GOOD HEALTH PASS**

## **A Blueprint for Reopening International Travel**

Developed at the Trust over IP Foundation in the  
Interoperability Working Group for Good Health Pass

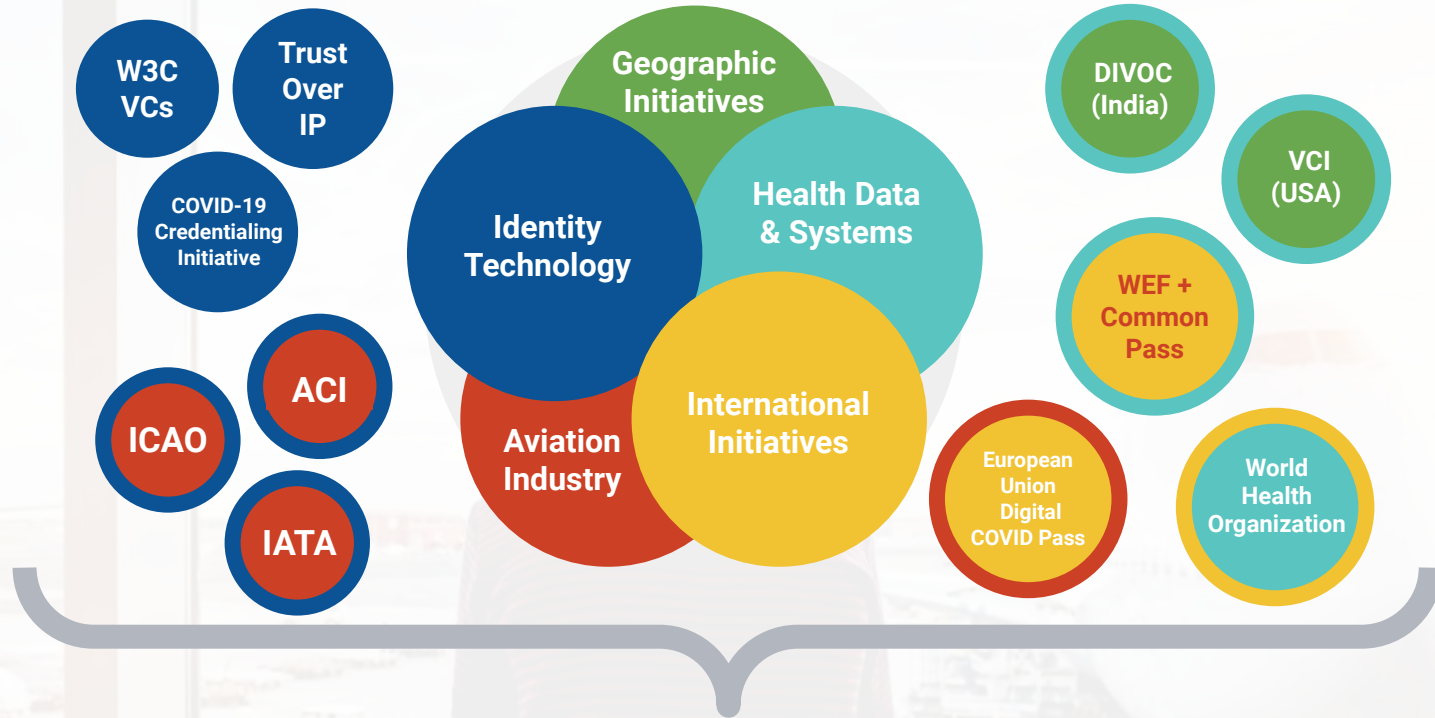
# Commitment to Principles



**Principles:** <https://www.goodhealthpass.org/wp-content/uploads/2021/02/Good-Health-Pass-Collaborative-Principles-Paper.pdf>

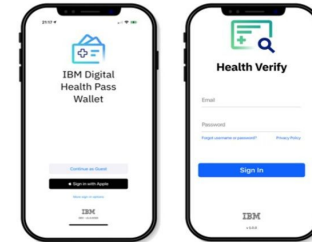
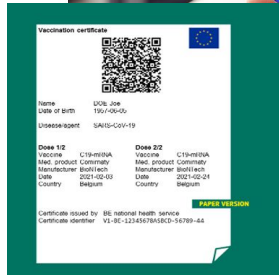
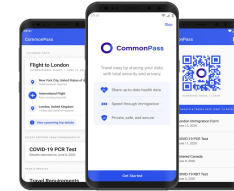
**Blueprint Outline:** <https://www.goodhealthpass.org/wp-content/uploads/2021/03/GHPC-Interoperability-Blueprint-Outline-v2.pdf>

# Overview of Credential & Pass Initiatives



**GOOD HEALTH PASS**

In the absence of standards, dozens of solutions have rushed to market. These vary greatly in terms of **privacy, security, and user control over personal data** — and **none are interoperable.**



How do we ensure these solutions are “**good**”?

How do we create **standards** that promote  
**privacy** and **inclusivity**?

And how do we ensure solutions  
are **interoperable** with one another?

Almost a dozen different terms have been used publicly to describe what a person needs to present to prove their **COVID-19 health status**

We focus on **four primary terms**

# health certificate health credential

- Contain the full set of health data necessary to prove health status to **any** verifier
- Not context-specific
- Does not include other data

Purpose-  
specific  
selective  
disclosure



# health pass travel pass

- Contains only the minimum data necessary to prove health status to **one verifier**
- May contain other context-specific data (e.g., travel)



# health certificate health credential

## Examples

- IATA Travel Pass
- WHO Digital Documentation of COVID-19 Certificates
- EU Digital COVID Certificate
- ICAO CAPSA
- VCI Smart Health Card
- Many others...

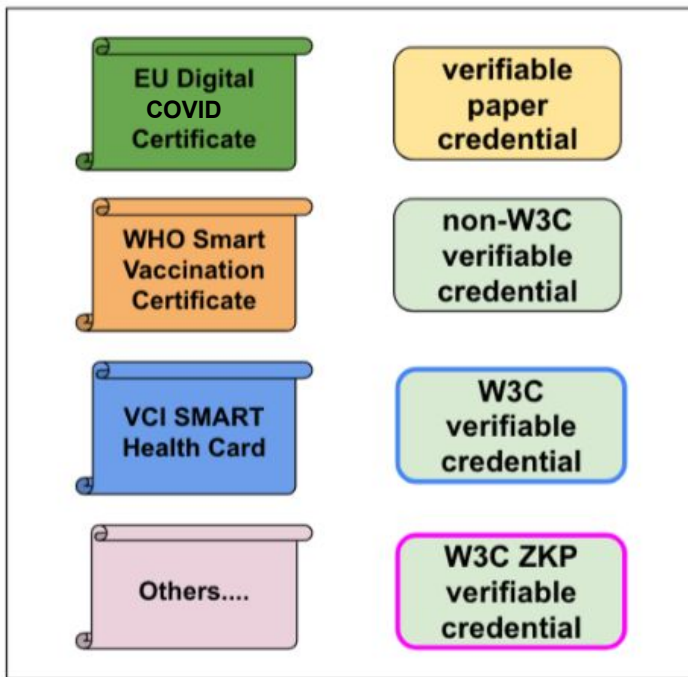
# health pass travel pass

## Examples

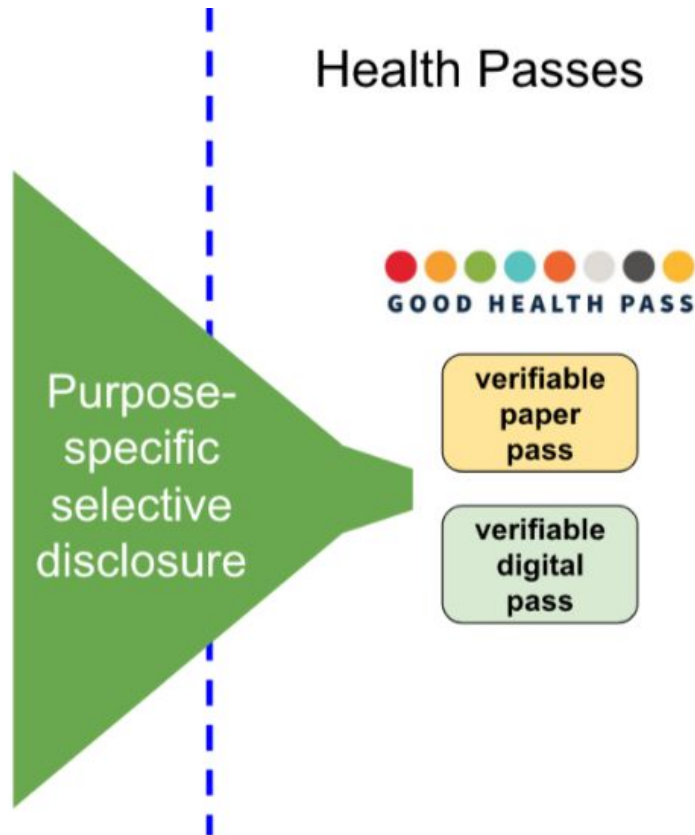
- IATA Travel Pass
- ICC AOKpass
- IBM Digital Health Pass
- CommonPass
- Many others...

# Credential Recommendations

## Health Certificates & Credentials

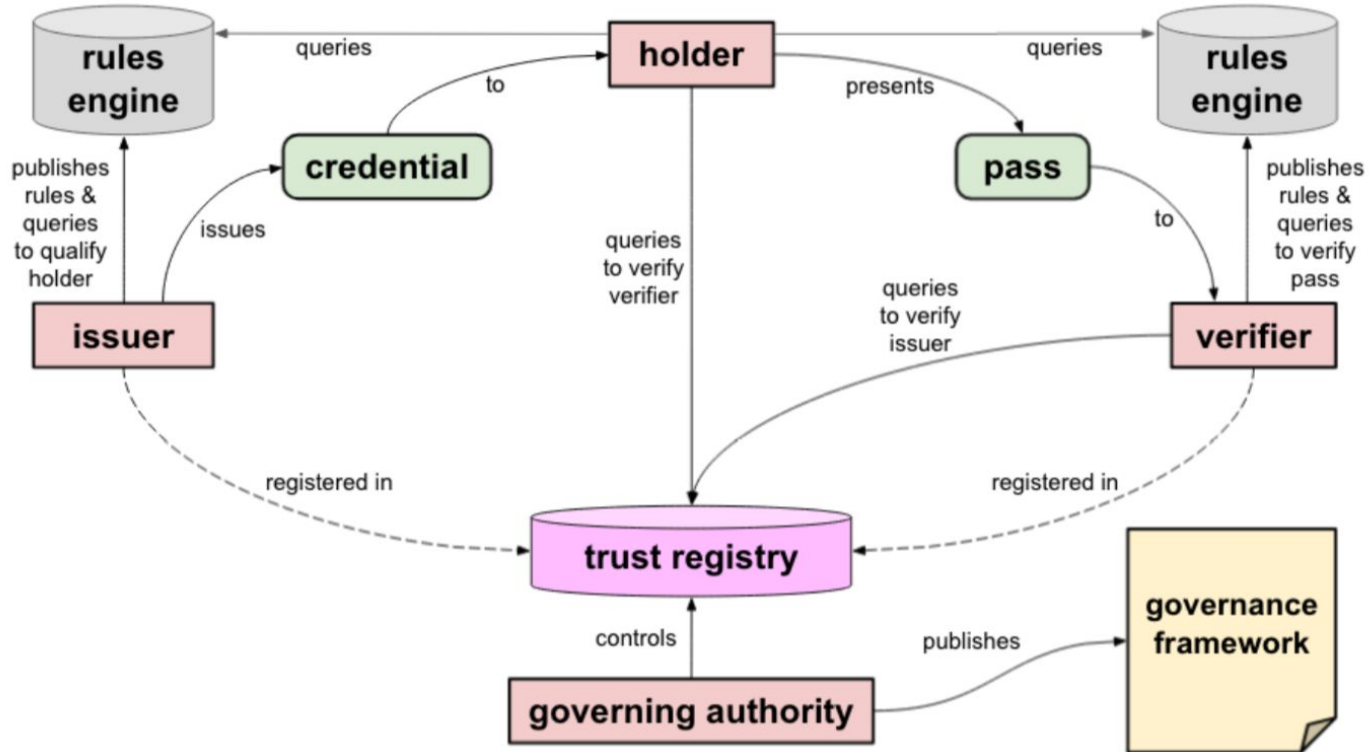


## Health Passes



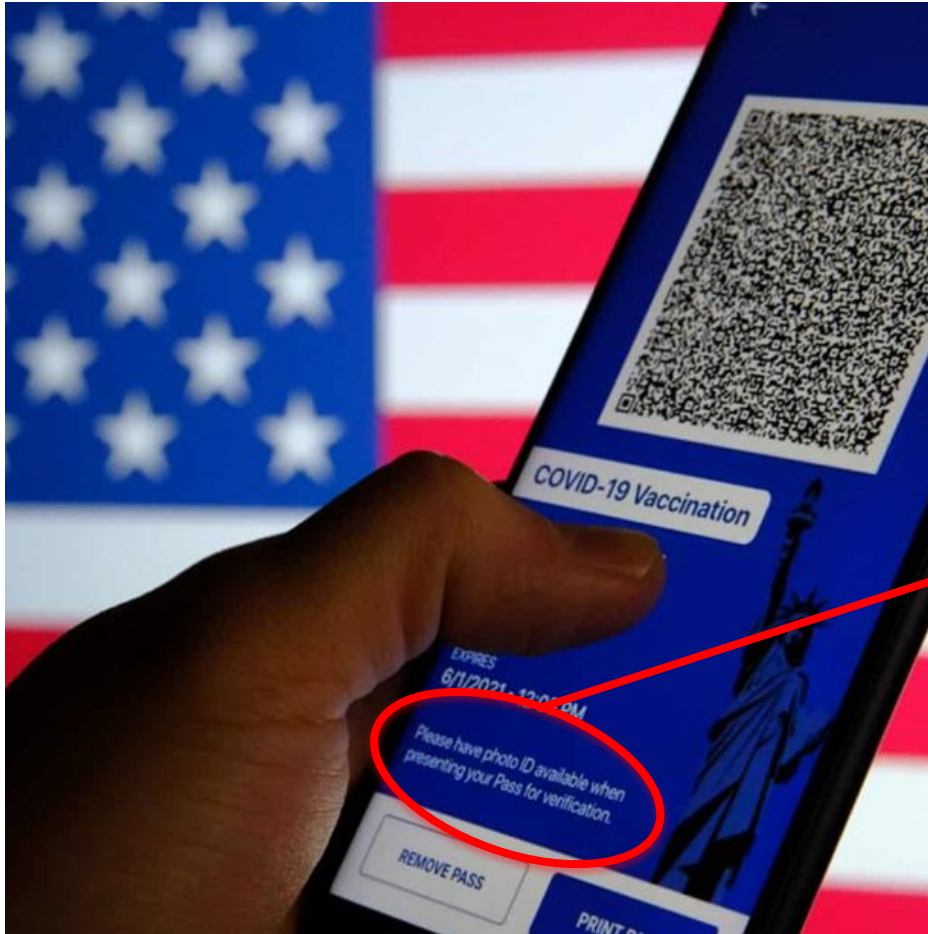
# Operational Infrastructure Recommendations

## Trust Registries



	QR CODE-BASED HEALTH PASSES	VERIFIABLE CREDENTIAL-BASED HEALTH PASSES
<b>PRIVACY (USER CONTROL)</b>	<p><b>Not private</b></p> <ul style="list-style-type: none"> <li>All or nothing</li> <li>PII and PHI are viewable (and easily lost with paper creds)</li> </ul>	<p><b>Privacy Enhanced</b></p> <ul style="list-style-type: none"> <li>Only share what is required for a specific relying party (Selective Disclosure)</li> <li>Zero Knowledge Proofs</li> </ul>
<b>SECURITY</b>	<p><b>Not secure</b></p> <p>PII and PHI is viewable when exchanged and paper creds are not secure and easily lost</p>	<p><b>Secure</b></p> <p>PII and PHI are never stored or exchanged in the clear</p>
<b>INTEROPERABILITY</b>	<p><b>Not Interoperable</b></p> <p>Verifiers must interpret Issuer's</p> <ul style="list-style-type: none"> <li>Formats (e.g. Schemas),</li> <li>Protocols (e.g., Issuance, Presentation),</li> <li>Signatures</li> </ul>	<p><b>Not Interoperable</b></p> <p>Verifiers must interpret Issuer's</p> <ul style="list-style-type: none"> <li>Formats (e.g. Schemas),</li> <li>Protocols (e.g., Issuance, Presentation),</li> <li>Signatures</li> </ul>
<b>IDENTITY BINDING</b>	<p><b>Supports Weak Identity Binding</b></p> <ul style="list-style-type: none"> <li>First Name, Last Name</li> <li>Date of Birth</li> </ul>	<p><b>Supports Strong Identity Binding</b></p> <ul style="list-style-type: none"> <li>Demographics</li> <li>Pseudonyms</li> <li>Biometrics</li> </ul>
<b>TRUST</b>	<p><b>Supports a single signer</b> (which may not be the health provider)</p> <p>Based on traditional, centralized, X.509 public key infrastructure</p>	<p><b>Supports multiple signers</b> - one for each Verifiable Credential (e.g., health, identity)</p> <p>Supports the establishment of a decentralized network of networks trust ecosystem where issuers and verifiers, across networks, have authorizations based on the associated governance framework</p>

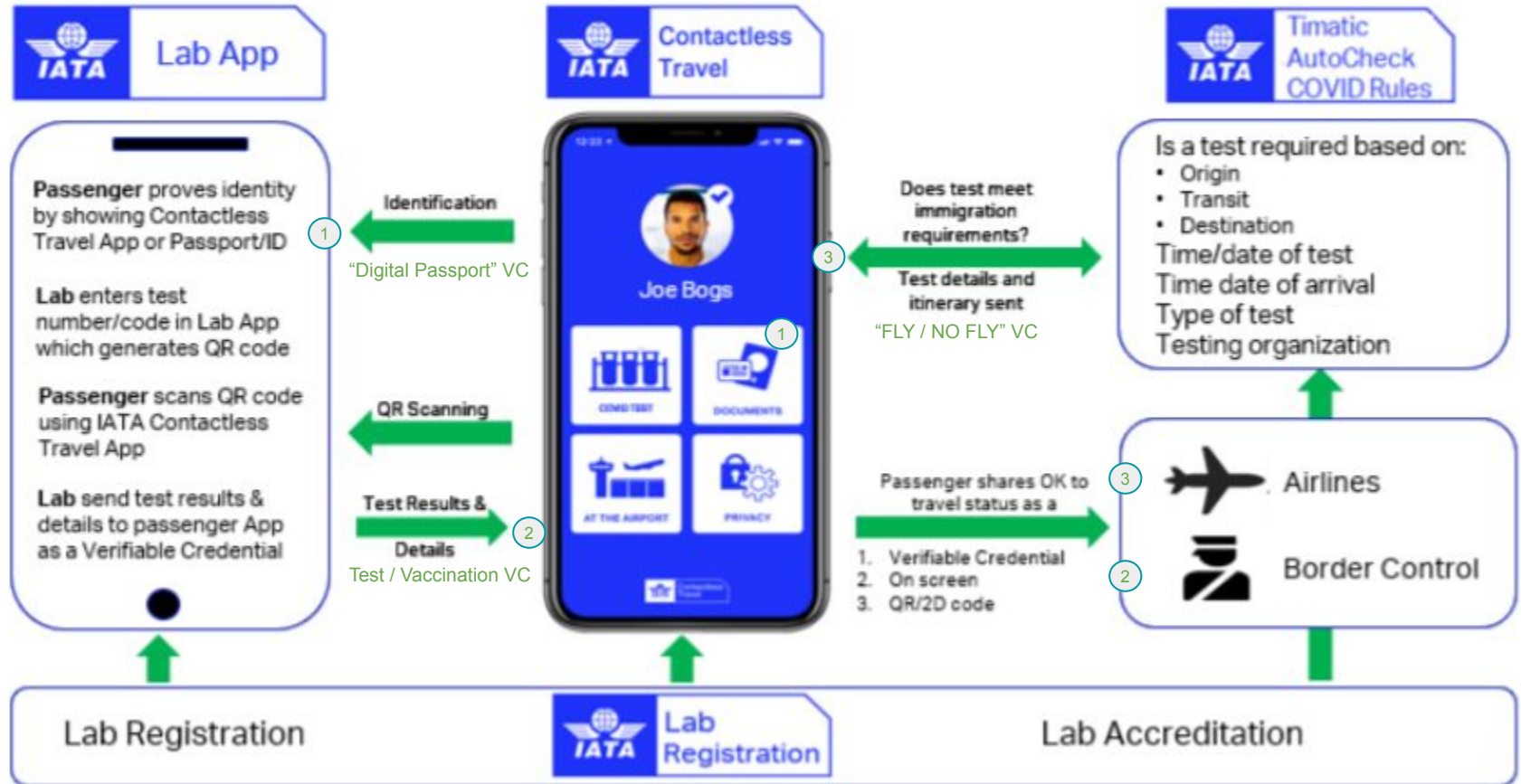
## QR Code Example



QR code contains PHI, typically  
QR code contains Name, DOB  
QR code NOT encrypted  
QR code does NOT contain biometric info

**Please have photo ID available when  
Presenting your Pass for verification**

# Verifiable Credential Example





The GHP Blueprint articulates  
recommendations on how to design a  
**globally interoperable digital pass and  
trust ecosystem**

# Overview of GHP Blueprint

#1	Consistent User Experience
#2	Security, Privacy, and Data Protection
#3	Identity Binding
#4	Standard Data Models and Elements
#5	Credential Formats, Signatures, and Protocols
#6	Paper Credentials
#7	Rules Engines
#8	Trust Registries
#9	Governance and Trust Frameworks



Problem description & context



Good Health Pass design requirements & considerations



Normative & phased recommendations

Once the Blueprint is released you can find it on the front page of ToIP <http://www.trustoverip.org>