



TRUST
Over **IP**
FOUNDATION

Semantic Domain (*ISWG-S*) Weekly Meeting

15 June 2021

 THE **LINUX** FOUNDATION

Antitrust Policy & Member Participation

- › Attendees are reminded to adhere to the meeting agenda and not participate in activities prohibited under antitrust and competition laws.*
- › Only members of Trust over IP who have signed the necessary agreements and charters are permitted to participate in this activity beyond an observer role.

* Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at <http://www.linuxfoundation.org/antitrust-policy>.

Agenda

- › 1. Welcome (Paul—2.5 mins)
- › 2. Newcomer Introductions (Paul—2.5 mins)
- › 3. Good Health Pass: Semantics and Architecture (Paul—30 mins)
- › 4. GHP Recommended Schema Definitions (Paul—10 mins)
- › 5. Logistics and miscellaneous (Paul—5 mins)
 - › a. News from the Operations Team
 - › b. Leadership positions
 - › c. Meeting schedule

Newcomer Introductions

(30 seconds!)

1. Name
2. Location / time zone
3. Affiliation(s)
4. One-sentence summary of your interest in Semantics (or **one particular semantics-related** issue you personally want to see solved)

Task Force/Focus Group Updates

(5 mins)

- Medical Information TF (Scott)
- ✓ FHIR FG (John/Mukund)
- Notice & Consent TF (Mark)
- Privacy & Risk TF (Jan)
- Storage & Portability TF (Christoph)

Standard Data Models and Elements Drafting Group for



GOOD HEALTH PASS

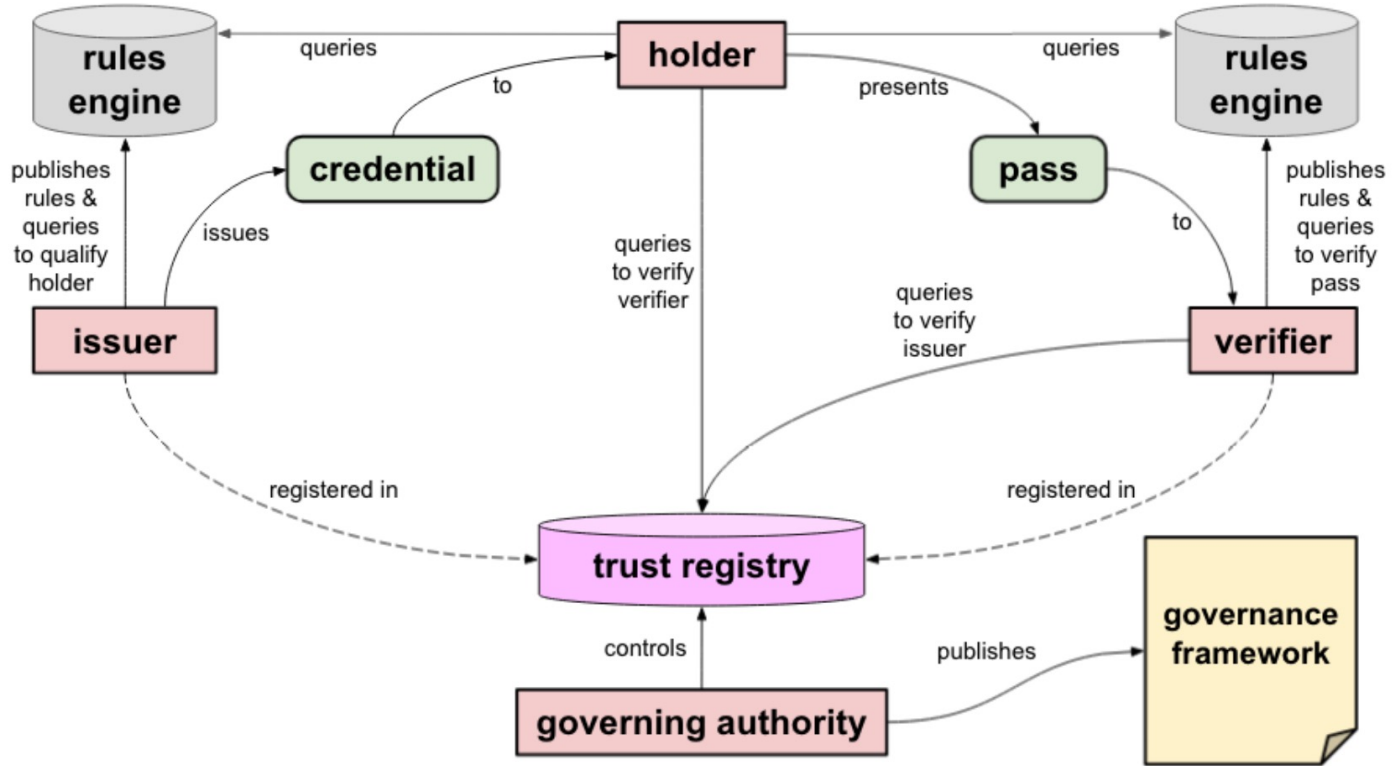
Semantics and Architecture

Curated by Paul Knowles, Drafting Group Co-Chair

The Good Health Pass Collaborative is a
multi-sector global initiative to establish
principles and standards for digital health passes
for international travel

Ecosystem Infrastructure

Good Health Pass: Digital Trust Ecosystem



Good Health Pass: Operational Infrastructure

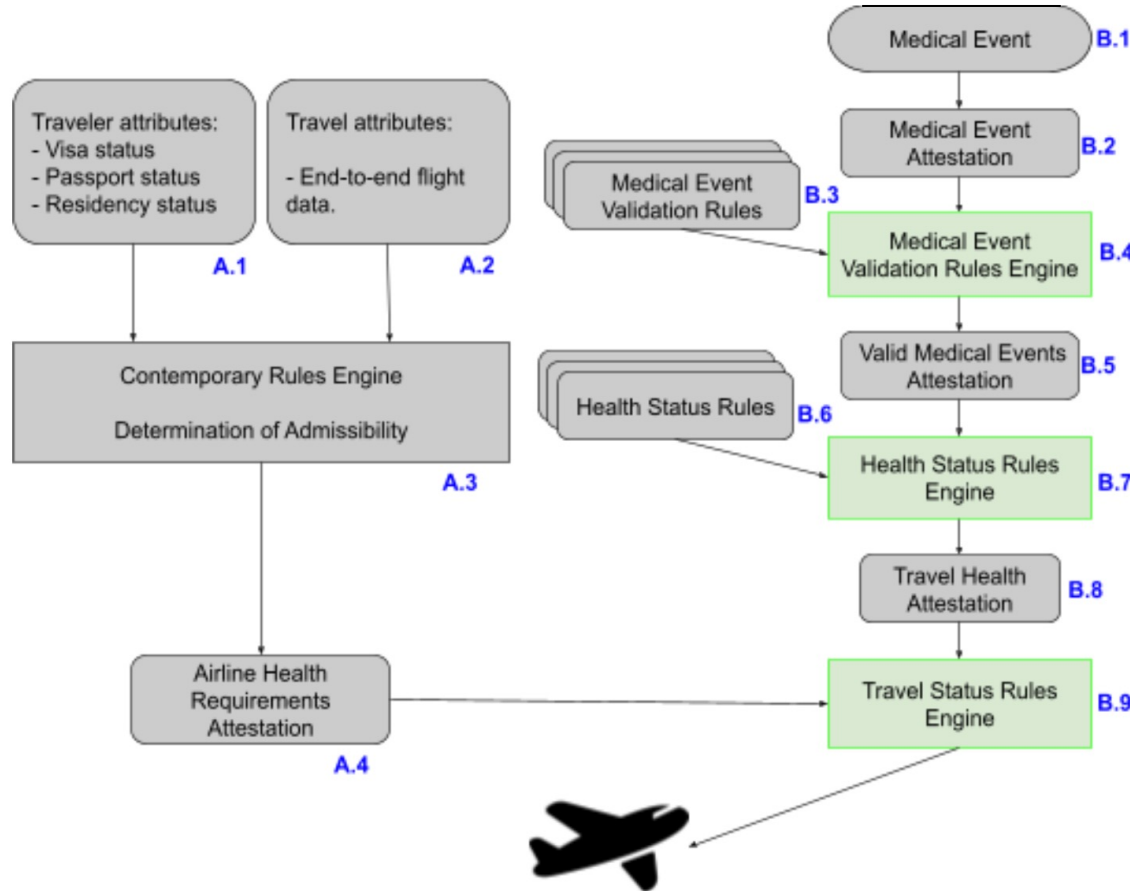
- Trust Registries

A network service available from one or more **service endpoints** specified in a **governance framework** that can be queried to determine if a **party** is authorized to perform a specific **role** or **action**. A common example is a verifier querying a trust registry to determine if the issuer of a verifiable credential is an **authoritative issuer** for a specific **verifiable credential type**. Another example is a **holder** querying a trust registry to determine if a verifier is authorized to make a specific **presentation request**. If a trust registry serves multiple governance frameworks, the trust registry data may also include the governance framework(s) under which issuers and verifiers are authorized. A trust registry can host any data or metadata that assists the querying party in making a **trust decision**. To support **offline credentials**, the records in a trust registry may need to be periodically downloaded by the verifier.

- Rules Engines

A [software system](#) that executes one or more **business rules** in a runtime production environment.

Good Health Pass: Rules Engines

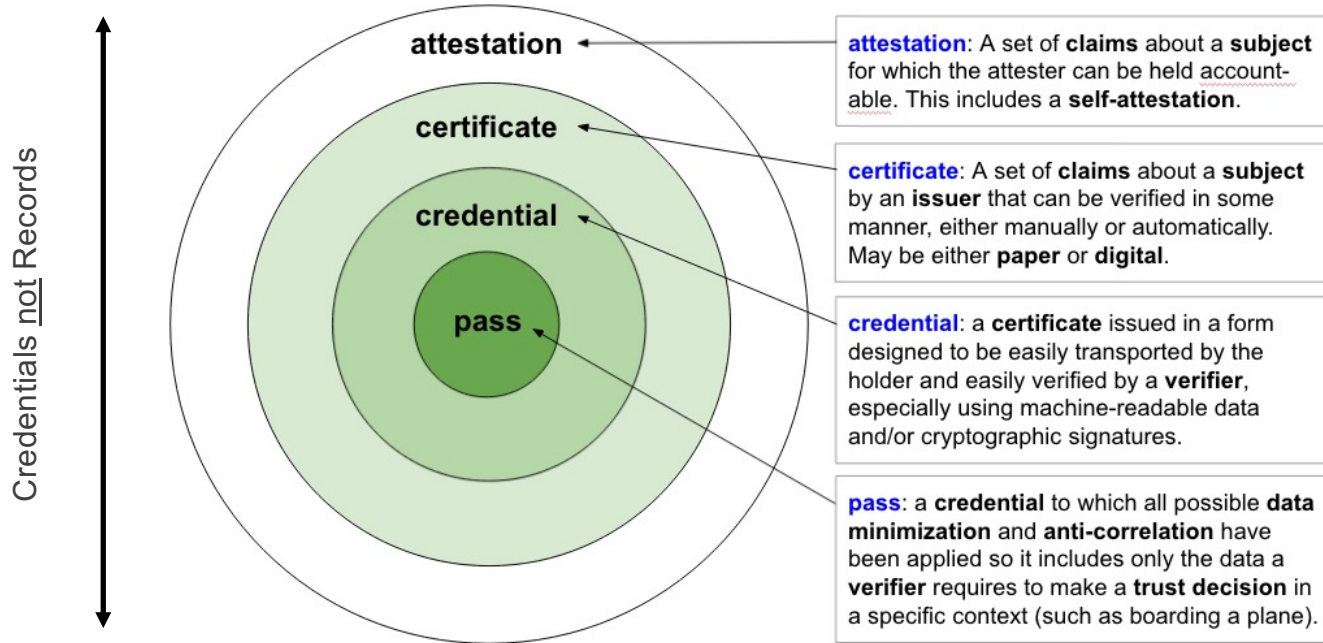


Rules engines can be complex and specific per trust ecosystem

Standard Data Models and Elements

The main objective of the
Standard Data Models and Elements group
was to produce recommendations regarding
data elements, semantic harmonization,
and common models for data exchange
that can help us work toward interoperability
without putting an undue burden on
existing health systems and workflows

Good Health Pass: Data Elements – Certificates, Credentials, and Passes



Good Health Pass: Data Elements – Certificates

- Health Certificates

- Verifiable Vaccination Certificates

https://ec.europa.eu/health/sites/default/files/ehealth/docs/vaccination-proof_interoperability-guidelines_en.pdf

- COVID-19 Antigen Test Certificate

https://ec.europa.eu/health/sites/default/files/preparedness_response/docs/covid-19_rat_common-list_en.pdf

Note that GHPC also recommends that [CVX code](#) and [state/province of vaccination](#) be included as additional data fields for North America only (these two fields are not currently in EU recommendations)



Good Health Pass: Data Elements – Credentials - 1

- Health Credentials

https://ec.europa.eu/health/sites/default/files/ehealth/docs/digital-green-certificates_dt-specifications_en.pdf

- Vaccination Credential

The following data fields SHOULD be included in the [vaccination credential](#):

- (a) name: surname(s) and forename(s), in that order;
- (b) date of birth;
- (c) disease or agent targeted;
- (d) vaccine/prophylaxis;
- (e) vaccine medicinal product;
- (f) CVX code* (*North America only; not currently in EU recommendations*)
- (g) vaccine marketing authorization holder or manufacturer;
- (h) number in a series of vaccinations/doses;
- (i) date of vaccination, indicating the date of the latest dose received;
- (j) state/province of vaccination* (*North America only; not currently in EU recommendations*)
- (k) country of vaccination;
- (l) certificate issuer;
- (m) a unique certificate identifier.



Good Health Pass: Data Elements – Credentials - 2

- Health Credentials

https://ec.europa.eu/health/sites/default/files/ehealth/docs/digital-green-certificates_dt-specifications_en.pdf

- Test Credential

The following data fields SHOULD be included in the [COVID-19 antigen test credential](#):

- (a) name: surname(s) and forename(s), in that order;
- (b) date of birth;
- (c) disease or agent targeted;
- (d) the type of test;
- (e) *test name (optional for NAAT test)*;
- (f) *test manufacturer (optional for NAAT test)*;
- (g) date and time of the test sample collection;
- (h) date and time of the test result production (*optional for rapid antigen test*);
- (i) result of the test;
- (j) testing centre or facility;
- (n) *state/province of test* (North America only; not currently in EU recommendations)*
- (k) country of test;
- (l) certificate issuer;
- (m) a unique certificate identifier.



Good Health Pass: Data Elements – Credentials - 3

- Health Credentials

https://ec.europa.eu/health/sites/default/files/ehealth/docs/digital-green-certificates_dt-specifications_en.pdf

- Recovery Credential

The following data fields SHOULD be included in the [COVID-19 citizen recovery credential](#):

- (a) name: surname(s) and forename(s), in that order;
- (b) date of birth;
- (c) disease or agent the citizen has recovered from;
- (d) date of first positive test result;
- (e) *state/province of test* (North America only; not currently in EU recommendations)*
- (f) country of test;
- (g) certificate issuer;
- (h) certificate valid from;
- (i) *certificate valid until (not more than 180 days after the date of first positive test result);*
- (j) a unique certificate identifier.



Good Health Pass: Data Elements – Passes

- Good Health Passes

A **Good Health Pass** SHOULD only include the minimal set of information necessary to verify and confirm the holder's vaccination, testing, or recovery status as required for a verifier to make a particular trust decision. For travel, this SHOULD include the following basic elements:

- (a) name: surname(s) and forename(s), in that order;
- (b) date of birth;
- (c) event status



Good Health Pass: Data Exchange – Common Data Model



[Fast Healthcare Interoperability Resources](#) (FHIR) is a standard for health care data exchange that ultimately aims to get legacy EHRs (electronic health records) to a point where they can be interoperable

As Recommended By:

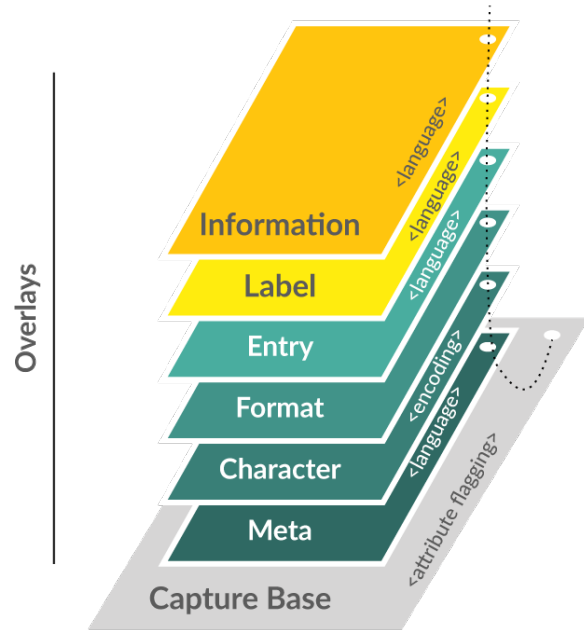


VCI



Good Health Pass: Semantic Harmonization

- Overlays Capture Architecture (OCA)

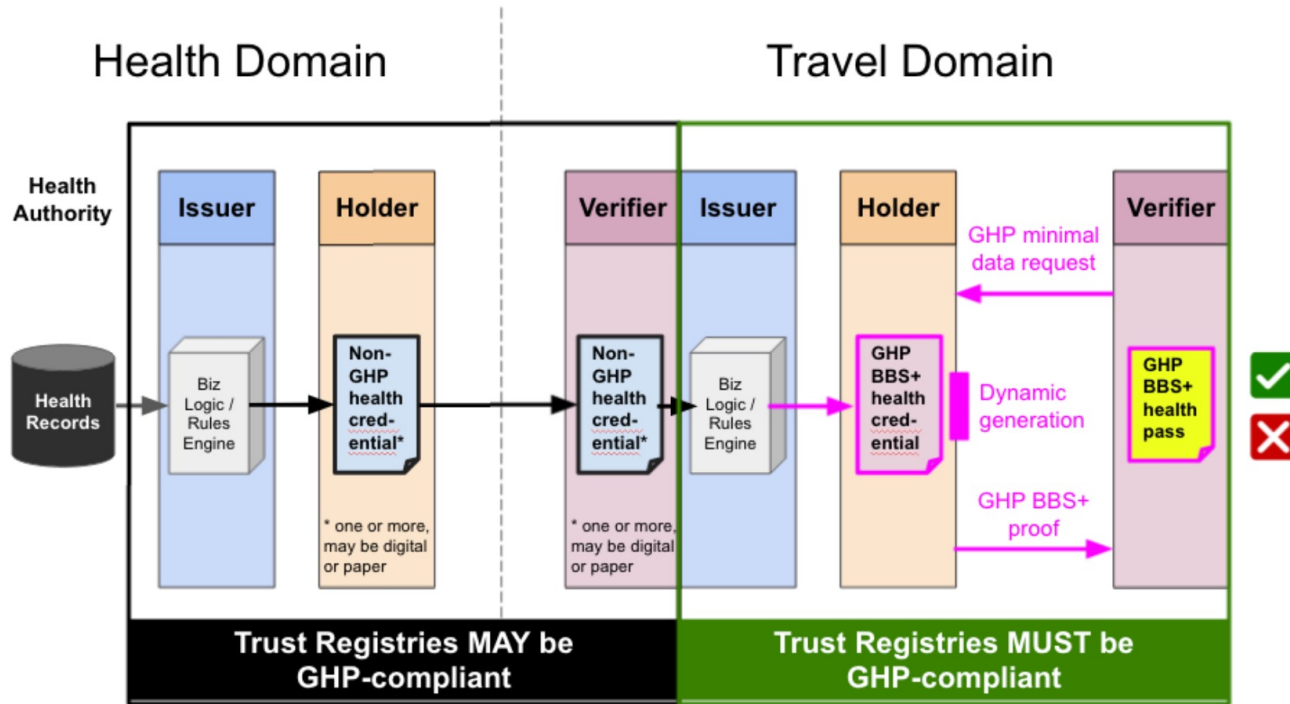


[OCA](#): a solution for semantic harmonization between data models and data representation formats

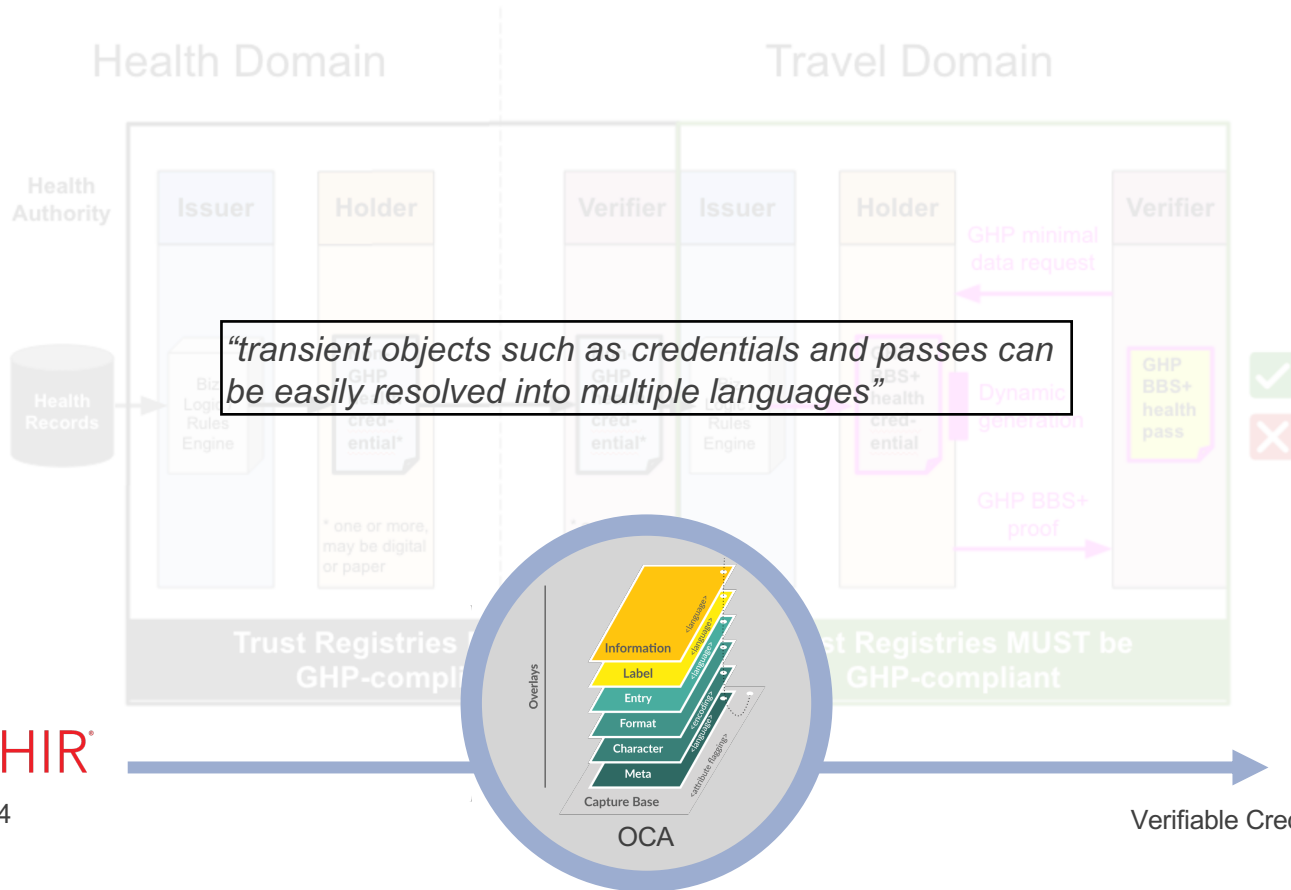
“transient objects such as credentials and passes can be easily resolved into multiple languages”

OCA presents a schema as a multi-dimensional object consisting of a stable *capture base* and interoperable *overlays*. Overlays are task-oriented linked data objects that provide additional coloration to the capture base.

Good Health Pass: Transformation Pipeline



Good Health Pass: Transformation Pipeline



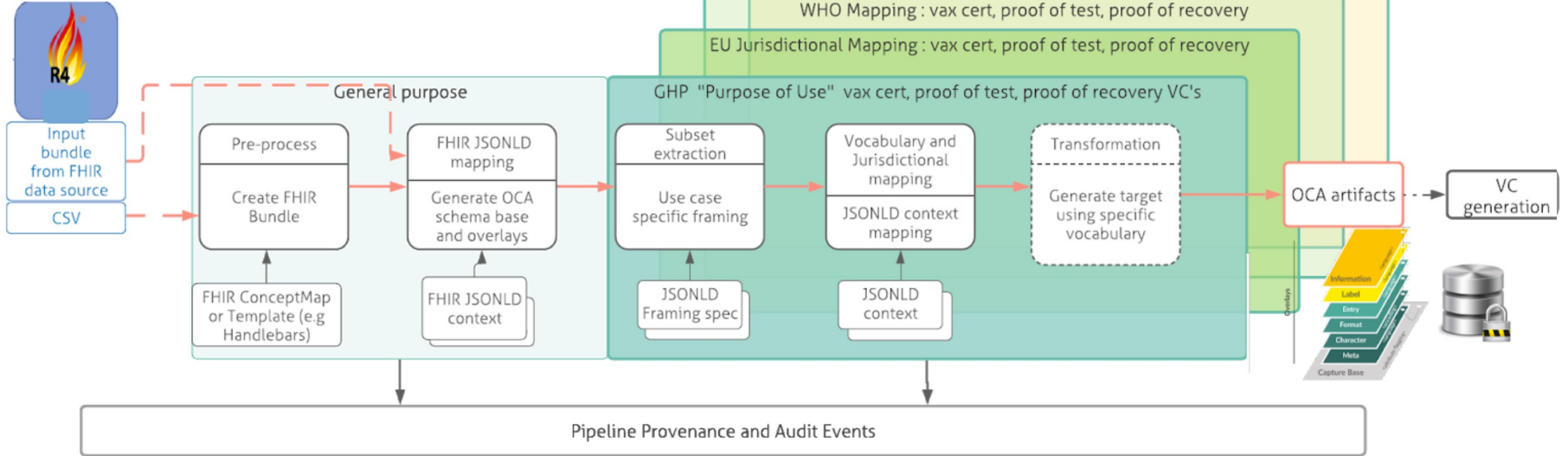
Release 4



Verifiable Credentials Data Model 1.0

Good Health Pass: Semantic Data Pipeline

FHIR Validation,
Security Labels and
Consent obligations
are applied



GHP Recommended Schema Definitions (10 mins)

Presented by: P.Knowles

CCI Schema TF repo at LFPH ...

<https://drive.google.com/drive/u/1/folders/1y-nr-YlacLvv7P54N6EUYVrBNt7YA51T>

Logistics and miscellaneous (5 mins)

<https://wiki.trustoverip.org/display/HOME/2021-06-15+Meeting>

News from the Operations Team

Nick Hayfack

(Inputs and Semantics WG representative on the ToIP Operations Team)

The purpose of the Operations Team is to create a small group of ToIP members who will share information on the workplans of our WGs, help ensure that draft deliverables are advancing as intended through the stages of the ToIP workflow, resolve any bottlenecks that arise around decision-making/approvals and discuss issues such as (for example) introducing firmer parameters for the creation of Taskforces under all WGs.

The Operations Team will not be directing or otherwise interfering with the development of content and deliverables in the WGs themselves.

ISWG Leadership positions

- › Inputs Group Chair
 - › **Robert Mitwicky**
- › Inputs Group Vice-chair
 - › **Sam Smith**
- › Semantics Group Chair
 - › **Paul Knowles** (*ISWG Lead*)
- › Semantics Group Vice-chair
 - › **John Wunderlich**
- › Volunteer via the meeting page at ...
 - › <https://wiki.trustoverip.org/display/HOME/2021-06-15+Meeting>

Meeting schedule

- › **Inputs Group** weekly meeting
 - › Wednesday, **June 16th** @ 09:00 US PT / 18.00 CET
 - › Zoom link: <https://zoom.us/j/93406719136?pwd=SUozZHBQM0N5TUhYMhJqL0ZQM3I3Zz>
- › **FHIR FG** bi-weekly meeting
 - › Thursday, **June 17th** @ 08:00 US PT / 17.00 CET
 - › Zoom link: <https://zoom.us/j/93406719136?pwd=SUozZHBQM0N5TUhYMhJqL0ZQM3I3Zz09>
- › **Storage & Portability TF** bi-weekly meeting
 - › Monday, **June 21st** @ 09:00 US PT / 18.00 CET
 - › Zoom link: <https://zoom.us/j/96177500988?pwd=cDVNS2JzN1YxYXhiUVprWIM0OGQxQT09>
- › **Notice & Consent TF** bi-weekly meeting
 - › Thursday, **June 24th** @ 08:30 US PT / 17.30 CET
 - › Zoom link: <https://zoom.us/j/92346573961?pwd=RmZHNnQxS2lya3NCMHZTVXYra3Rrdz09>



Closing Q & A

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