

VERIFIABLE COVID-19 CREDENTIALS FOR CONTROLLED REOPENING OF SOCIETY AND ECONOMY

› ABOUT

› TNO:

- › The Netherlands Organisation for Applied Scientific Research
- › Independent RTO, 4000 FTE
- › ICT / Transport&Logistics units
- › <https://www.tno.nl/ssi>

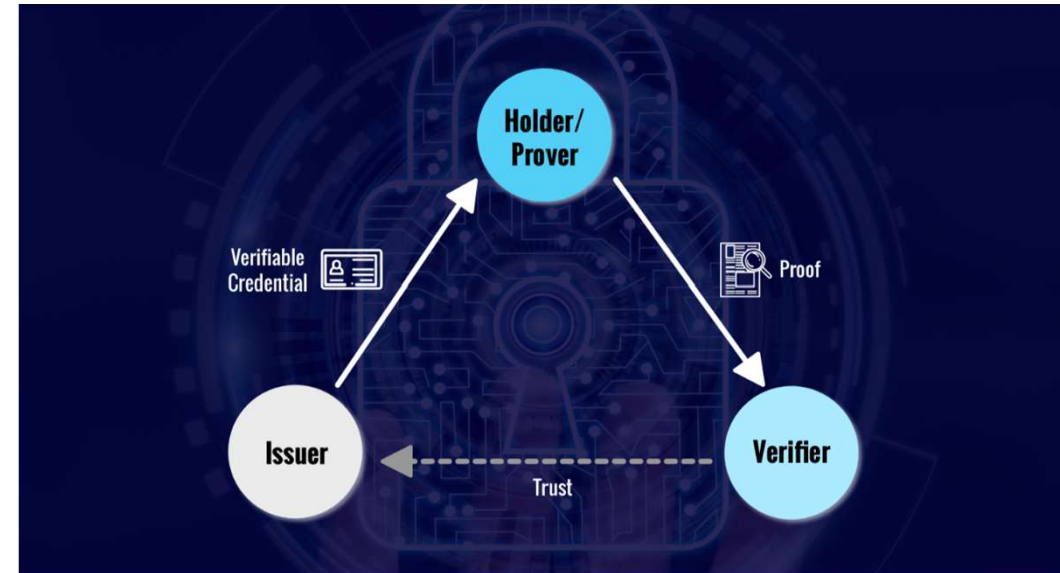
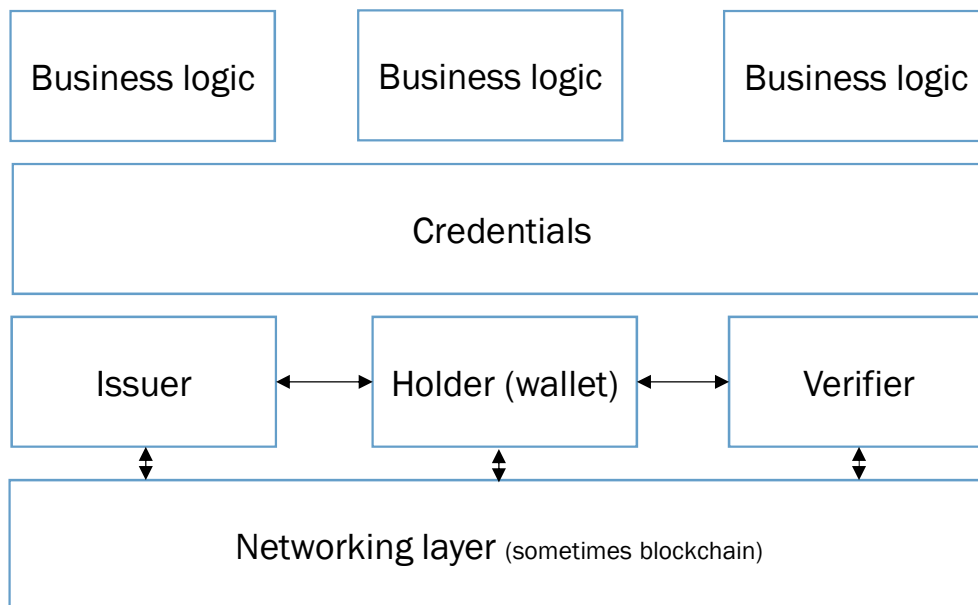
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- › Portfolio lead Self Sovereign Identity
- › Pieter.verhagen@tno.nl




› VERIFYABLE CREDENTIALS

- › Self Sovereign Identity
- › (over)simplified architecture



› INTERNATIONAL COVID-19 CREDENTIALS INITIATIVE CCI

- › <https://www.covidcreds.com/>
- › Since March 2020
- › 300 volunteers from 100 organisations, 10 sister projects
- › Explore and learn together if and how verifiable credentials can help reopen society
 - › ... lowering health risks via digitized COVID-19 proofs
 - proof of health status (test, vaccine, fever (selfdeclared))
 - proof of essential worker status
 - › ... while safeguarding privacy and human rights
- › Demo's of sister project: learning from each other's local implementations






The banner features a woman's face in the background, overlaid with a blue circular logo containing a white 'G'. The text 'COVID-19 CREDENTIALS INITIATIVE' is prominently displayed in white. Below it, a thin blue line separates the title from the mission statement. The mission statement reads: 'Supporting projects that use privacy-preserving Verifiable Credentials (VCs) in order to mitigate the spread of COVID-19 and strengthen our societies and economies.' The word 'mitigate' is highlighted in blue.

COVID-19 CREDENTIALS INITIATIVE

Supporting projects that use privacy-preserving Verifiable Credentials (VCs) in order to mitigate the spread of COVID-19 and strengthen our societies and economies.


Coming together for good

| | | |
|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
|  300+ Contributors |  100+ Global Organizations |  4 Workstreams |
|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|

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› CCI TOPICS

- › Use cases
 - › Application and content of the COVID-19 credentials, including self-declared
 - › Increasing assurance of the digital signature on those credentials “local assurance communities”
 - › Countermeasures against coercion, “verify the verifier”
- › Support local pilots (“sister projects”)
- › Governance: templates for organising a sister project
- › Tools: exchanging technical development experience
- › Communication: newsletter, [blog](#)






The banner features a woman's face in the background, overlaid with a blue circular logo containing a white 'G'. The text 'COVID-19 CREDENTIALS INITIATIVE' is prominently displayed in white. Below it, a thin blue horizontal line is followed by a paragraph of text. At the bottom, the phrase 'Coming together for good' is centered above three white boxes, each containing an icon and statistics.

COVID-19 CREDENTIALS INITIATIVE

Supporting projects that use privacy-preserving Verifiable Credentials (VCs) in order to **mitigate the spread of COVID-19** and strengthen our societies and economies.

Coming together for good

| Contributors | Global Organizations | Workstreams |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
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› COVID-19 CREDENTIALS & TRADE?

TRADE IS BROUGHT BY PEOPLE

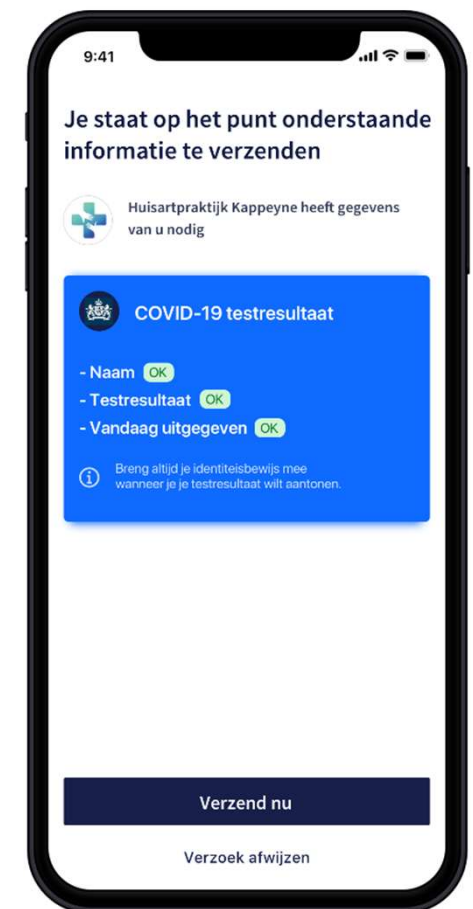
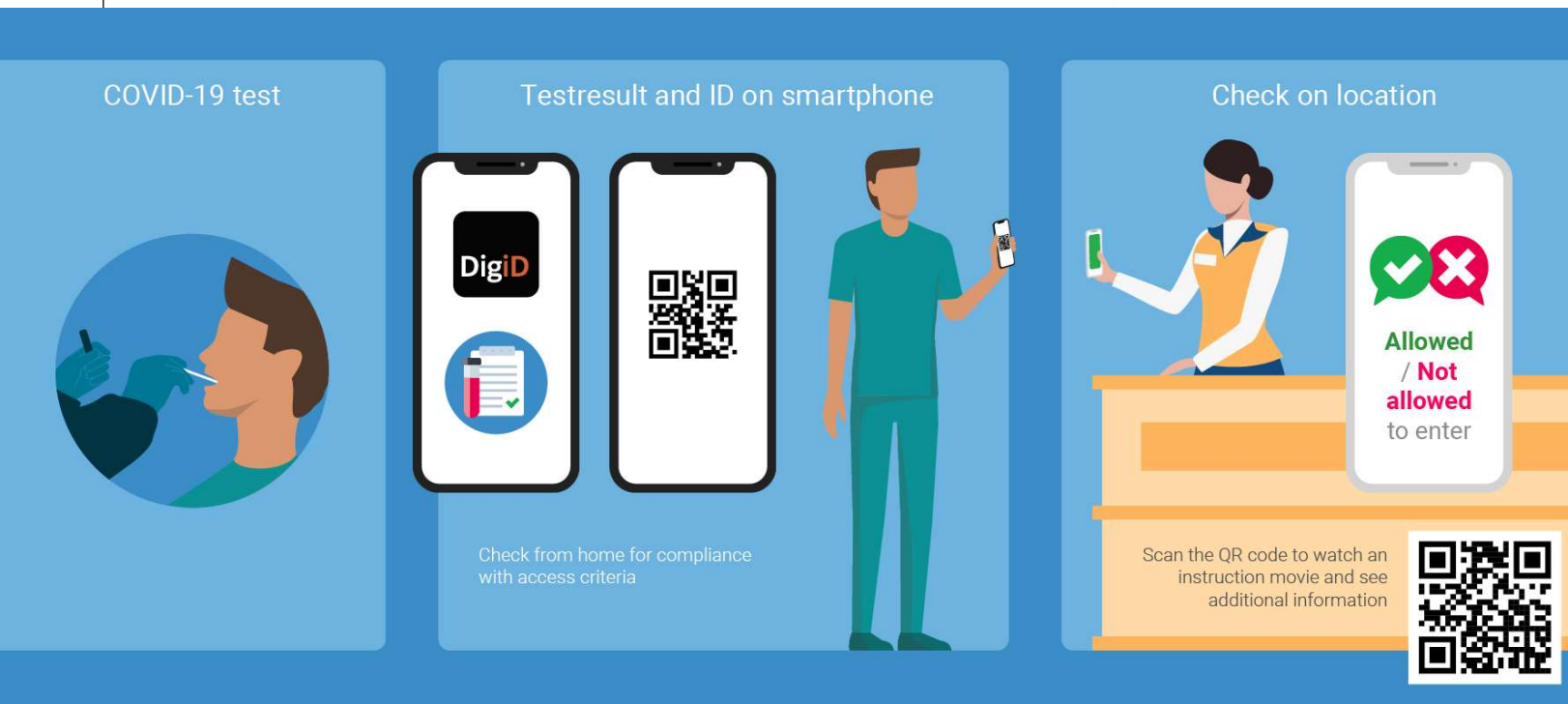
- › Airplane crews, ship crews, bus/truck drivers, ground crews at increased (perceived) risk, limited social distancing possible
- › Fast changing national or local policies



<https://www.nytimes.com/interactive/2020/03/15/business/economy/coronavirus-worker-risk.html>

UNLOCK

CCI SISTER PROJECT, FOCUS ON HEALTHCARE



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C/M'S
Law, Tax



TU Delft

arbo unie



Deloitte.

UNECE AGAT Conference on Advanced Technologies and Supply Chain disruptions caused by COVID19

› CHALLENGES

THERE ARE MANY...

- › Legal
 - › data protection (GDPR: case and country specific)
 - › relation employer/employee (no coercion)
- › Ethics
 - › privacy
 - › exclusion
 - › effect on behavior
 - › risk vs. proof
- › Technology
 - › emerging standards, immature technologies
- › Medical
 - › insufficient medical evidence for immunity / vaccine
- › Standardisation
 - › Lacking global standardisation on digital health certificates
- › Governance



Elizabeth M. Renieris Follow
May 18 · 16 min read ★

Medium    

By Elizabeth M. Renieris, Dr. Sherri Bucher, and Christian Smith

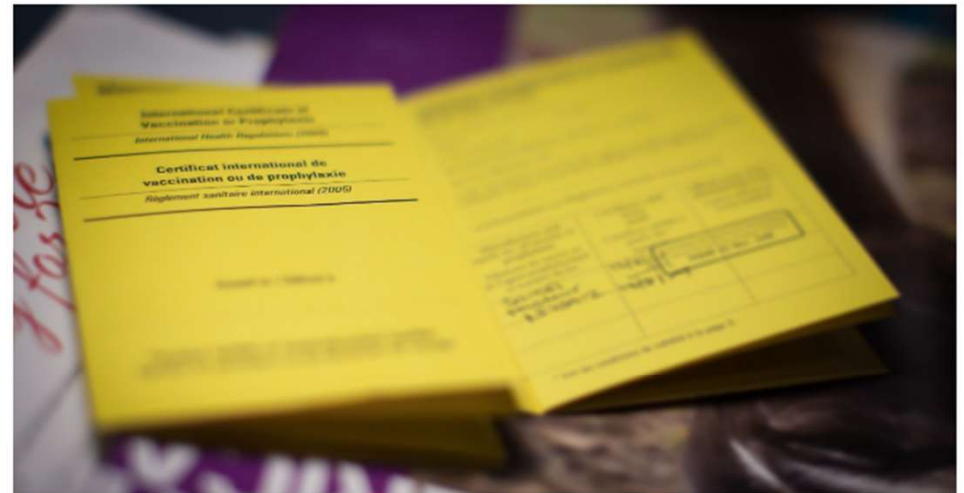


Image via CDC.gov

Despite limited backing from civil society or public health experts, as well as warnings from historians and bioethicists, technologists are racing ahead to build and deploy digital certificates that would allegedly let individuals “prove” whether they have recovered from the novel coronavirus disease (COVID-19), have tested positive for antibodies, or have received a vaccination, should one become available. One such initiative is based on a combination of an emerging W3C standard for Verifiable Credentials (VCs), non-standard decentralized identifiers (DIDs), and distributed ledger technology (DLT) or “blockchain.”¹

› **CALL TO ACTION**

FROM A POLICY PERSPECTIVE

Beyond COVID-19:

- › Global standardisation of verifiable digital health certificates for international travel and trade (beyond COVID-19)
 - local assurance communities

Beyond health:

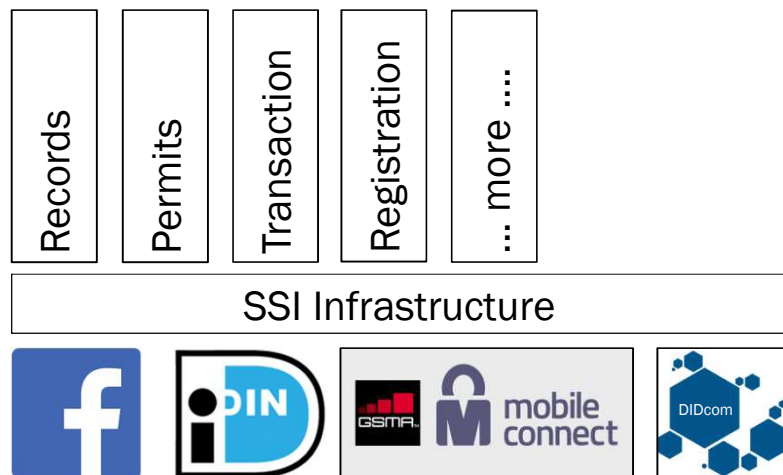
- › Experiment with SSI for trade
 - decentralized verifiable digital signatures on trade documents (DID)
 - what are usefull digital credentials?
 - how to standardise global data models for SSI



› SUPPLEMENT BASED ON Q&A

SSI IRT OTHER IDENTITY SCHEMES

- › SSI can in principle use a variety of technologies to identify the subject of a verifiable credential, each of which may provide a different eIDAS level of assurance (LoA), varying from “bearer” (i.e. no additional assurance) to “in-person biometric check with a state-issued ID”.





› **THANK YOU FOR YOUR TIME**

More info:

- Pieter.verhagen@tno.nl
- www.covidcreds.com
- www.unlockapp.nl
- www.tno.nl/ssi

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