



Covid-status certification review

**Call for Evidence** – 15 March 2021 to 29 March 2021

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### **About BCS, The Chartered Institute for IT**

The purpose of BCS as defined by its Royal Charter is to promote and advance the education and practice of computing for the benefit of the public. We bring together industry, academics, practitioners, and government to share knowledge, promote new thinking, inform the design of new curricula, shape public policy and inform the public.

As the **professional membership and accreditation body for IT**, we serve nearly 60,000 members including practitioners, businesses, academics, and students, the wider UK and internationally. We also accredit the computing degree courses in ninety-eight universities around the UK. As a leading IT qualification body, we offer a range of widely recognised professional and end-user qualifications.

Q1: K) (Other): Professional membership organisation

### **Summary of BCS external commentary**

The material in the response below was covered by the i newspaper as an exclusive story under the headline [Vaccine passports: Everyday rights could be at risk if data is misused, cyber experts warn](#)<sup>1</sup>.

An expanded collection of views on digital vaccine passports, featuring a range of BCS' professional expert members, was published earlier this month under the heading: [Digital vaccine passports must not put everyday rights at risk, warn IT experts](#)'.

Our response focusses on the challenges and opportunities, should a *digital* solution be adopted as some part of the vaccine certification solution - but some findings may be applicable to other formats.

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<sup>1</sup> Published 18 March and written by Rhiannon Williams, Technology Correspondent.

### **Key points:**

- Any digital vaccine proof should not put 'everyday freedoms' - such as entry to cinemas - at risk through inappropriate 'algorithmic decisions'. There are legal risks to making access to venues and travel within the UK conditional on vaccination status. See '**The pub question**' below.
- Any digital vaccine proof, just as with last year's Covid-19 app, must have 'ethical by design, correct by design, and privacy by default' values baked into it; communication and transparency must be strong enough to persuade the public of that.

### **Public Trust**

The National Data Strategy<sup>2</sup> points out that the success of digital and data technologies has to be underpinned by public trust, and conversely public mistrust will overshadow any benefits those technologies will have.

According to a YouGov survey commissioned by BCS last year a majority of people in the UK<sup>3</sup> have no faith in any organisation to use algorithms to make judgements about them, in issues ranging from education to welfare decisions. Vaccine passports and use of data would clearly fit into this consideration.

### **Digital Vaccine Passports and 'the pub question'**

Vaccine certifications exist now, in paper form. They are used for crossing borders from countries where there is an epidemic of a specific disease, e.g. Yellow Fever. They include some identifying detail, such as a passport number, which is manually compared to the passport used to cross the border. Technical means could be implemented that verifies the holder of the certificate.

It is not necessary to create any central digital identifiers for these purposes but there is a temptation to. One reason that healthcare authorities might want to identify people centrally is to manage the vaccination process itself, another might be to exclude vaccinated individuals from particular mass testing activities.

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<sup>2</sup> <https://www.gov.uk/government/publications/uk-national-data-strategy/national-data-strategy>

<sup>3</sup> <https://www.bcs.org/more/about-us/press-office/press-releases/the-public-dont-trust-computer-algorithms-to-make-decisions-about-them-survey-finds/>

It is possible to imagine how data might be joined with other data, such as address, or key worker status. All with sensible intentions, but utmost care need to be taken to ensure this data is not mis-used.

One example of inappropriate use could be calculation of a risk score, and denial of rights or services to someone because of an algorithmic decision.

For example, denying cinema access to someone because an algorithm computes their home location as being a high-risk one, their key worker status as inferring they are an NHS front-line worker, and their vaccination status as un-vaccinated.

Another complexity with risk calculations is the changing nature of the baseline assumptions. What distance in time should be between different doses of the vaccine? What is the drop off in efficacy with a particular distance, or related to age?

The premises in this field are all under constant scientific review and putting them inside an app has the risk of extrapolating the findings in ways that weren't originally intended.

Reference to initiatives in other jurisdictions can never replace analysis against the fundamental legal principles of the three UK legal systems.

It is vital to convince people that certification use cases will be ethical by design for it to be supported by large numbers of the population and the key organisations who will make it work.

There is current speculation<sup>4</sup> that facial recognition technology could be used as part of a certification system. Using FRT to determine whether a particular individual's face matches a centralised database of vaccinated faces is fraught with risk.

One concern is that FRT can be inaccurate in a way that disproportionately affects ethnic minority groups. It can also be subverted.

It is possible to envisage 'non-vac' areas in pubs and restaurants much like the "no-smoking" areas. There should be a role for individual choice, managed ethically.

### **Vaccine passports and international travel**

The WHO has been consulting on its first draft Interim guidance for developing a Smart Vaccination Certificate, including Covid-19 vaccination. At the same time, the WHO does not recommend proof of vaccination as a condition for crossing national borders. Instead, it invites countries to take multiple parameters into account when implementing a risk-based approach to international travel in the context of COVID-19.

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<sup>4</sup> <https://twitter.com/mikarv/status/1375722169100083200?s=20>

The technology may already be there, but the underlying infrastructure of countries' mutual recognition of vaccine passports is not: any kind of passport only works if all countries recognise it. A multi-country effort to coordinate with WHO appears to be a strong solution.

Some of the information standards work needed to share vaccination status has already been done, for example the International Patient Summary project<sup>5</sup>.

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As the professional body for the IT industry, BCS welcomes the government's consultative approach to developing a vaccine certification solution, and stands ready to advise further on the ethical, professional and technical aspects of the scoping and roll-out.

**ENDS**

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<sup>5</sup> <http://hl7.org/fhir/uv/ips/2018May/index.html>