

Briefing

Proof of COVID-19 vaccination in the context of border reopening: scientific and public health considerations

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To:	Hon Chris Hipkins, Minister for COVID-19 Response		
Copy to:	Hon Ayesha Verrall, Associate Minister of Health		

Contact for telephone discussion

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Minister's office to complete:

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| <input type="checkbox"/> Approved | <input type="checkbox"/> Decline | <input type="checkbox"/> Noted |
| <input type="checkbox"/> Needs change | <input type="checkbox"/> Seen | <input type="checkbox"/> Overtaken by events |
| <input type="checkbox"/> See Minister's Notes | <input type="checkbox"/> Withdrawn | |

Comment:

Proof of COVID-19 vaccination in the context of border reopening: scientific and public health considerations

Security level: IN CONFIDENCE **Date:** 30 July 2021

To: Hon Chris Hipkins, Minister for COVID-19 Response

Purpose of report

1. This report provides you with advice on the scientific and public health considerations for how COVID-19 vaccination status can assist risk stratification of inbound travellers to reduce the risk of COVID-19 from entering New Zealand.
2. This report is an item in the *Reconnecting New Zealanders with the World* work programme that was considered by Cabinet on 5 July 2021 [CAB-21-MIN-0263 refers]. The focus for this briefing is primarily on vaccination status for **inbound** travellers to New Zealand. It does not cover the use of vaccination credentials for domestic use, i.e. to access venues, services or settings within New Zealand.
3. This briefing discloses all relevant information.

Summary

4. Used alongside country and travel route risk assessment ascertaining the vaccination status of inbound travellers can assist with individual risk stratification. It can also support more tailored mitigation measures such as testing and isolation/quarantine based on the risk an individual might present.
5. No vaccine is 100 percent effective against transmission however, and the evidence is still evolving. Uncertainties remain in key areas such as real-world vaccine effectiveness, duration/type of immunity, and the changing nature of these variables as new variants emerge.
6. COVID-19 control measures, including border rules around vaccination status, will need to be flexible and responsive to accommodate this dynamic scientific and epidemiological situation
7. Vaccination certificates are health records that can confirm a person has received a vaccination, however they cannot prove immunity or guarantee the bearer presents low or no risk of importing or transmitting COVID-19.
8. Where there may be significant benefits of having a vaccination certificate (such being granted an entry visa to another country or being exempt from managed isolation and quarantine), the credential itself can become a valuable commodity.
9. Currently, there are numerous vaccination certificate formats being issued internationally. A growing black market in fake COVID-19 vaccination and test certificates is reinforcing the need for global standards for COVID-19 credentials that have security features that provide authenticity and are able to be digitally verified.

10. Until international standards are adopted more widely, the variability in formats will present significant challenges for verifying vaccination status of inbound travellers to New Zealand. Key considerations for easing the border rules for vaccinated travellers should include our degree of confidence:
 - a. in the authenticity of the vaccination certificate
 - b. that the bearer of the certificate was the person who received the vaccination
 - c. that the vaccine the person received meets our standards of efficacy.
11. The rigor around what New Zealand accepts as a valid proof of vaccination needs to reflect the Governments strategy to keep COVID-19 out of the New Zealand community.
12. Systems to transact and verify COVID-19 health credentials for inbound travellers to New Zealand, using a travel health declaration, are in development, led by Customs. The Ministry of Health is providing advice on health conditions and risk mitigation measures as part of the Reconnecting New Zealanders work programme.
13. Part of this work includes establishing New Zealand 'vaccination standards' for inbound travellers, such as:
 - a. which vaccines would be accepted?
 - b. what "fully vaccinated" means (i.e. number doses, dose intervals, and time before travel)?
 - c. what form of proof we might accept?
14. The Ministry of Health is progressing the development of a digital COVID-19 vaccination certificate for people vaccinated in New Zealand, using a format aligned with the European Union standard. This will be widely available towards the end of 2021.
15. The Ministry of Health will continue to engage with other global standards including the International Civil Aviation Organisation Visible Digital Seal and World Health Organization Digital Documentation of COVID-19 Certificates to ensure we are able to create certificates that meet requirements of different jurisdictions. Officials are also working through the process for seeking country-to country or regional mutual recognition of vaccination certificates.

Recommendations

We recommend you:

- a) **Note** that confidence in the vaccination status of people wishing to travel to New Zealand can assist with assessment and mitigation of risk at the border.
- b) **Note** that no vaccine is 100 percent effective against transmission and evidence is still evolving around real world vaccine effectiveness, duration/type of immunity and the impact of variants on these variables.
- c) **Note** that COVID-19 control measures, including border rules around vaccination status will need to be flexible to response to the dynamic scientific and epidemiological situation.

- d) **Note** a growing black market of fake vaccination certificates is emerging internationally.
- e) **Note** that until international standards are adopted more widely, the variability of formats will present significant challenges for verifying vaccination status of inbound travellers to New Zealand.
- f) **Note** that key considerations for assessing traveller risk based on vaccination status include the level of confidence in the authenticity of the certificate; that the bearer of the certificate was the person who received the vaccination; and that the vaccine meets our standards for efficacy.



Dr Ashley Bloomfield
Te Tumu Whakarae mō te Hauora
Director-General of Health

Date: 3/8/2021



Hon Chris Hipkins
Minister for COVID-19 Response

Date: 10/8/2021

This work is critical to the Reconnecting NZ programme.
We need to see a joined-up govt approach to this.
A digital solution linked to passports would be ideal.

Released under the Official Information Act 1982

Proof of COVID-19 vaccination in the context of border reopening: scientific and public health considerations

Proof of vaccination as a tool for managing the pandemic

16. Globally, the rollout of effective COVID-19 vaccines is seen as offering the best pathway to manage the pandemic, enabling the safer reopening of international borders and the resumption of most previously enjoyed freedoms. In New Zealand, vaccines are expected to help shape the phased approach for easing our border restrictions, supported by science, research and evidence.
17. The need for a high level of confidence about a person's vaccination status is driving the push towards trusted credentials that can prove to a third party that a person has been vaccinated against COVID-19. Knowing a person's vaccination status can enable decisions about the level of risk an individual might present and what mitigations might be needed in order to manage the risk. In the context of inbound travellers to New Zealand, the risk an individual traveller presents is also dependent on the numbers of people vaccinated domestically.

Technological solutions can assist with verifying COVID-19 health status

18. On 31 May 2021, the joint statement from Prime Ministers Rt Hon Jacinda Ardern and the Hon Scott Morrison for the annual Australia New Zealand Leaders' Meeting, noted that they had "tasked officials to explore technological solutions to verify vaccination status to enable Australians and New Zealanders to reconnect with the wider world..."
19. Internationally, countries are issuing a wide variety of vaccination certificates using variable formats. A growing black market in fake COVID-19 vaccination and test certificates is reinforcing the need to for countries to adopt global standards for COVID-19 credentials that have security features for authenticity and that are able to be digitally verified.
20. Where there are significant benefits of having a vaccination certificate (such as being granted an entry visa or being exempt from managed isolation and quarantine), the credential itself can become a valuable commodity.
21. As paper documents can be subject to fraud or falsification and can be easily lost or damaged, digital certificates can provide greater confidence that the person presenting the certificate is indeed the person who received the vaccination.
22. Work is progressing to develop a New Zealand issued verifiable digital COVID-19 health certificate for people vaccinated or tested in New Zealand. This is being developed alongside work for an accessible digital mechanism for people to be able to store and view their own COVID-19 vaccination and testing records. The ability for users to be able to request and upload a vaccination certificate as part of this functionality is expected to be widely available by the end of the year.

23. Recognising the importance of international interoperability, the Ministry of Health is designing the New Zealand issued vaccination certificate to be aligned with the emerging international standards. Initially the New Zealand credential will use the European Union Digital COVID-19 Certificate (EUDCC) standard. The Ministry of Health will continue to engage with other global standards including the International Civil Aviation Organisation Visible Digital Seal (ICAO VDS) and World Health Organization Digital Documentation of COVID-19 Certificates (WHO DDCC) to ensure we are able to create certificates that meet requirements of different jurisdictions.
24. This work sits within the Travel Health Pass work programme and is closely aligned with Reconnecting New Zealanders policy decisions. You recently received a briefing from the Ministry of Transport that provided an update on the Travel Health Pass Work Programme (OC210425, 16 June 2021).
25. The Travel Health Pass work programme has two component parts - departures, and arrivals:
 - a. **departures:** to ensure that people vaccinated in New Zealand can access a digital COVID-19 health credential (e.g. vaccination and test certificate) that can be used to facilitate international travel (led by the Ministry of Health)
 - b. **arrivals:** a travel health declaration system that can check and verify a travellers COVID-19 health credentials to ensure travellers are in the correct entry pathway for their risk (led by Customs).
26. This briefing does not repeat the issues covered in that briefing, but rather provides an overview of how assessing the vaccination status of inbound travellers can be as a tool to reduce the risk of COVID-19 from entering the New Zealand community.

Internationally, many countries are introducing proof of vaccination for inbound travellers

27. An increasing number of countries have introduced varying isolation and test exemptions for travellers from low risk countries and who can provide proof of having been vaccinated against COVID-19.
28. At this stage very few countries are requiring vaccination as a *mandatory condition* of entry, with the exceptions to date being Papua New Guinea, Indonesia, Samoa, Grenada, Azerbaijan, Equatorial Guinea and Palau.
29. The scope and extent of exemptions for vaccinated travellers vary based on risk-benefit trade-offs such as geographical proximity, epidemiological factors, response capacities, and socio-economic factors.

WHO position

The World Health Organization advises against proof of vaccination being a mandatory condition of entry

30. The World Health Organisation (WHO) advises against Members States requiring proof of vaccination as a condition of entry or departure across international borders. Their main concern is the limited evidence about the performance of vaccines in reducing transmission and the persistent inequity in the global vaccine distribution.

31. They also cite equity concerns in that preferential vaccination of travellers could result in inadequate supplies of vaccines for priority populations considered at high risk of severe COVID-19 disease.

Instead the WHO recommends a risk-based approach to international travel

32. While recognising the diverse epidemiological situation and that countries have varying response capacities, the WHO recommends Member States adopt a risk-based approach to international travel which considers:
- a. the risk posed by travel for the importation and exportation of cases in the context of the evolving epidemiology, including the emergence and circulation of virus variants of concern
 - b. the expansion of the COVID-19 vaccination roll-out
 - c. lessons learned while responding to the pandemic, including on the early detection and management of cases and the application of public health and social measures.
33. Key among the WHO recommendations are that Member States:
- a. not require proof of COVID-19 vaccination as a *mandatory* condition for entry to or exit from a country.
 - b. consider a risk-based approach to the facilitation of international travel by lifting measures, such as testing and/or quarantine requirements, to individual travellers who:
 - were fully vaccinated, at least two weeks prior to travelling, with COVID-19 vaccines listed by WHO for emergency use or approved by a stringent regulatory authority, or
 - have had previous SARS-CoV-2 infection as confirmed by real time RT-PCR (rRT-PCR) within the six months prior to travelling and are no longer infectious as per WHO's criteria for releasing COVID-19 patients from isolation.
 - c. if testing and/or quarantine requirements are lifted for travellers who meet the above-mentioned criteria, offer alternatives to travel for individuals who are unvaccinated or do not have proof of past infection, such as through the use of negative rRT-PCR tests, or antigen detection rapid diagnostic tests (Ag-RDTs).
 - d. consider recording proof of COVID-19 vaccination in the International Certificate of Vaccination or Prophylaxis (ICVP) ("Yellow booklet") or in digital formats, as recommended by regional or global intergovernmental bodies. Where digital certificates of "COVID-19 status" are used, interoperable solutions should be sought to allow for cross-border verification.

Assumptions

Assumptions behind COVID-19 vaccination certificates

34. The assumption underlying the use of COVID-19 vaccination certificates domestically or for international travel is that vaccination not only protects the vaccinated individual from being infected and becoming severely ill from the disease, but it also reduces their risk of spreading it to others.

35. In the context of international travel, this assumption implies that vaccinated travellers:
 - a. pose *less risk* of importing or exporting the virus
 - b. pose *less risk* of transmitting the virus to others if they are infected
 - c. are *less likely* to get severely unwell (personal protection)
 - d. are *less likely* to place a burden on the health care system.
36. Requiring proof of vaccination allows the stratification of people by the risk they present, and enables a more nuanced approach to testing, and isolation/quarantine requirements based on that risk.
37. It is important, however, to understand just how much risk is mitigated through vaccination, and what risk a vaccination certificate bearer might present to others.

Science

What does the science say?

38. While no COVID-19 vaccine can block transmission of the virus 100 percent, it is clear that vaccines, particularly the Pfizer vaccine, can substantially reduce transmission of the virus. Evidence on the magnitude of the reduction in transmissibility is still emerging.
39. In order for a person to transmit the virus to another person (infectiousness), they must first become infected, which depends on their 'susceptibility' and degree of protection. The Pfizer vaccine has approximately 90% vaccine effectiveness against the first of these steps - viral infection - relative to unvaccinated individuals.
40. As an absolute measure of risk, once vaccinated, approximately <0.5% of Pfizer-vaccinated individuals become infected ('breakthrough' infections). While it is possible for these individuals to infect others, the rate at which a vaccinated infected person can transmit the virus is unknown. However, there is emerging evidence that people vaccinated with Pfizer are less infectious and that vaccinated cases tend to be more asymptomatic, have lower viral loads, and a shorter duration of infection.

Vaccine standards

41. There is variability in the efficacy of different COVID-19 vaccines currently in use internationally. Effectiveness against transmission can vary depending on the type of vaccine and the dominant variant in circulation. While most vaccines offer protection against severe disease, some do not appear to offer the same level of protection against transmission.
42. Prevalent variants and the type of vaccine are important considerations for New Zealand when implementing proof of vaccination for inbound travellers, if the goal is to prevent the importation of the virus.

Not everyone develops the same immune response

43. Vaccination certificates are not immunity certificates. Not everyone will mount the same immune response to the vaccination - the same vaccine may be very effective in protecting one recipient and less so in another. So, while vaccination certificates are a record of a vaccination event they do not prove that a person is immune to the disease.

And some people cannot be vaccinated or may not have had the opportunity to be vaccinated

44. Should requiring proof of vaccination be introduced as a requirement for inbound travellers, consideration needs to be given to people who cannot be vaccinated, such as children or people with particular health conditions. Currently there are a variety of approaches in place for children seeking to travel internationally. Some countries require full testing and managed isolation and quarantine; some require 14 days self-isolation; and others waive all testing and isolation requirements if children are travelling with fully vaccinated family members or caregivers.
45. Whether or not inbound travellers have had the opportunity to be vaccinated may also be a consideration. This may be an issue for maritime crew for example.

Vaccine standards for international travel

The core vaccination standards are relatively consistent

46. Countries that have introduced vaccination status as a consideration at the border tend to have common criteria such as confirmation the required doses have been administered with the correct intervals, and that the last dose was received at least 14 days prior to travel. As the evidence is still emerging on the duration of vaccine induced immunity, some are also specifying that the last vaccination is received within six months prior to entry.

But some vaccines are more widely accepted than others

47. There is more variability in which vaccine a country recognises for cross-border travel. Not all vaccines are accepted consistently across jurisdictions. Some countries refer to the full set of WHO approved vaccines, while others specify a narrower list.
48. The WHO recommends that countries recognise all COVID-19 vaccines validated by the WHO Emergency Use Listing (EUL) or those approved by a Stringent Regulatory Authority (SRA). On 1 July 2021, COVAX issued a statement urging all regional, national and local government authorities to recognise as fully vaccinated all people who have received COVID-19 vaccines that have been deemed safe and effective by the WHO and/or the 11 Stringent Regulatory Authorities approved for COVID-19 vaccines when making decisions as to who is able to travel or attend events.
49. The COVAX statement noted that any measure that allow only people protected by a subset of WHO-approved vaccines to benefit from the re-opening of travel into and with that region would effectively create a two-tier system. It stated this risks further widening the global vaccine divide and exacerbating the inequities we have already seen in the distribution of COVID-19 vaccines. The COVAX statement also noted that moves to prioritise one vaccine over another for international travel were already undermining the confidence in life-saving vaccines already shown to be safe and effective, affecting uptake of vaccines and potentially putting lives at risk.

Unintended risks

Vaccination certificate schemes could have unintended consequences that risk public health

50. In assessing the benefits of ascertaining the vaccination status of inbound travellers, any potential unintended public health consequences also need to be considered.
51. Where vaccination certificates are a condition of certain entitlements, such as being granted an entry visa or being exempt from testing or MIQ requirements, the credential itself can become a valuable commodity. This may increase the risk of falsification or fraud. Depending on what other measures are wrapped around an inbound traveller (such as pre-departure testing or testing on arrival), there is the potential that a non-vaccinated person using a falsified credential could unwittingly import the virus and transmit COVID-19 to unvaccinated or vulnerable people.
52. While on one hand, benefits associated with a vaccination certificate could incentivise more people to receive a vaccine, it could also mean that some individuals may be less willing to disclose their medical history and (potential) contraindications which could increase the risk of adverse events.
53. Further, if the scope and use of vaccination certificates are not clearly defined, there is a risk that they could be used for purposes other than those originally intended, such as by third parties (e.g. commercial entities, insurance companies), which could lead to a distrust in the health system, the government's COVID-19 response or to vaccine hesitancy.

There is a need to be clear about the intended uses for a vaccination certificate

54. The WHO recommends that members states set out clear and specific policies, and laws if needed, on the limits to legitimate uses of a vaccination certificate. It states that use of vaccination certificates to restrict the right to freedom to movement and other human rights is only justified when it supports the pursuit of a legitimate aim during a public health emergency and is provided for by law, is proportionate, of limited duration, based on scientific evidence, and not imposed in an arbitrary, unreasonable or discriminatory manner.
55. Separate to international travel, some jurisdictions have introduced policies to require proof of vaccination to enter specified public venues and settings, such as museums, cinemas, and indoor events. There are significant ethical, legal, equity and public health considerations regarding limiting access to public settings based on vaccination status that are not covered in this briefing.

A disproportionate focus on individual vaccination status could underplay the importance of collective effort

56. A further concern that has been raised is that a focus on individual proof of vaccination may underemphasise the collective nature of the challenge. It risks treating a collective problem as an individual one, and inadvertently suggests a binary certainty whereby holders of trusted certificates are 'safe', and those without are 'risky'. Ultimately it will be national and international vaccination population coverage that will offer greater protection.

Trust in the credential

How can we have confidence in the authenticity of a vaccination certificates

57. At present there are numerous formats being issued internationally, many of which are paper based, have no security features and are not able to be digitally verified. Until international standards are adopted more widely, this variability will present significant challenges for verifying vaccination status of international travellers into New Zealand.
58. The authenticity of a vaccination certificate may be less imperative for countries where the incidence of community transmission is still relatively high. For countries that have a low level of risk tolerance for COVID-19 entering across the border the need for confidence in the vaccination credential is much greater.
59. Key considerations for easing the border rules for vaccinated travellers should include our degree of confidence:
 - a. in the authenticity of the vaccination certificate
 - b. that the bearer of the certificate was the person who received the vaccination
 - c. that the vaccine the person received meets our standards of efficacy.
60. Customs officials are working on a system that will include a pre-travel health declaration to collect information necessary for border agencies to process arriving travellers according to the level of COVID-19 risk.
61. Ideally, COVID-19 health credentials (such as vaccination or test certificates) would be verified digitally prior to travel, as the manual assessment of vaccination credentials is not only resource intensive but slows passenger flow through airports. Manual assessment also relies on subjective verification that is open to variability.
62. Digital verification of a test or vaccination certificate would involve scanning the QR code. This would reveal who the certificate is issued to, details around the test result or vaccine doses administered, along with a cryptographic digital signature confirming that the certificate was issued by a trusted entity. This ensures the information remains secure and provides confidence that the credential is authentic and has not been tampered with.

Setting vaccination standards for inbound travellers

63. In parallel to the policy work on future health settings for Reconnecting New Zealanders, officials are working through a process to determine:
 - a. which vaccines might we recognise for inbound travellers?
 - b. what "fully vaccinated" means (i.e. number doses, dose intervals, and period of time before travel)?
 - c. what form of proof we might accept?
64. The Ministry of Health has commenced work with Medsafe and the COVID-19 Vaccine Science and Technical Advisory Group (CV-TAG) on vaccination standards for inbound travellers. Given the evolving evidence, technology and epidemiological situation, any standards New Zealand adopted would need regular review.

65. Once minimum standards are agreed, a process for agreeing which certificates are recognised need to be progressed. It is likely this will involve country-to-country mutual recognition agreements as well as broader reciprocity agreements through international bodies like ICAO or the EU.
66. New Zealand is in discussions with the EU (along with other 30 non-EU countries) about joining the EUDCC scheme. Being accepted as a 'third country' to the EUDCC scheme would allow us to recognise and have high confidence in the vaccination certificates issued by countries in the EUDCC scheme and, in turn New Zealand-issued certificates would be recognised by those countries who have joined the scheme.
67. We envisage mutual recognition agreements wouldn't require reciprocity of border settings. It is likely that New Zealand will require higher standards of entry from some mutual recognition agreement partner countries than would be required for New Zealanders to travel there.
68. New Zealand officials are in regular discussion with Australian counterparts on COVID-19 vaccination certificates. Australia is also developing a digital vaccination certificate which we understand is expected to be available to people vaccinated in Australia around October this year. We will continue to engage with Australia with the aim of mutual recognition of each other's digital COVID-19 certificates.

Equity

69. Criteria to guide the approach to COVID-19 vaccination certification in New Zealand includes the following equity considerations:
 - a. vaccination certification will not increase health or other inequities, either domestically or globally
 - b. everyone has the right to obtain and hold an authentic credential that documents their vaccination status.
70. While requiring inbound travellers to provide valid proof of their vaccination status may support efforts to reduce the risk of COVID-19 being introduced through the border, this requirement could risk exacerbating health inequities in the following ways:
 - a. some populations may be disproportionately less likely to have an opportunity to be vaccinated and obtain a valid vaccination certificate
 - b. vaccinated individuals with geographical, financial or disability barriers may also be excluded from obtaining and using a digital vaccination certificate depending on the administration process, cost and design
 - c. vaccinated individuals from countries without the infrastructure to issue suitable vaccination certificates may be disproportionately impacted.

Next steps

71. The Reconnecting New Zealanders work programme is considering matters related to proof of vaccination as part of a risk-based approach to reconnection. Further public health advice on settings for entry pathways is being prepared for the Reconnecting New Zealand Ministerial Group for late August 2021.

END

Appendix 1

COVID-19 digital vaccination certificate update and international vaccination requirements

Date:	26 August 2021
To:	COVID-19 Vaccine Ministers
From:	Joanne Gibbs, National Director, COVID Vaccination and Immunisation Programme
For your:	Information

Purpose

1. This paper provides a progress update on work underway to develop a New Zealand issued digital COVID-19 vaccination certificate. As requested at your earlier meeting, it also discusses some of the international developments for vaccination as a border entry requirement.

Recommendations

We recommend you:

- a) **Note** that a New Zealand issued digital vaccination certificate will be in a technical pilot at the end of September and made widely available by the end of November 2021.
- b) **Note** that the design of the New Zealand issued digital vaccination certificate will be aligned to the international standards to support interoperability.
- c) **Note** that the Ministry of Health is working closely with other government agencies involved in the Travel Health Declaration system, and the Reconnecting New Zealand work programme.
- d) **Note** that the Ministry of Foreign Affairs and Trade are monitoring international developments regarding COVID-19 vaccination requirements in other countries.

Background

2. Increasingly countries are requiring proof of COVID-19 vaccination (including what type of vaccine, when it was administered and where), and/or test results as part of the bundle of measures that determine if, and under what conditions, a person may cross their borders.

3. A growing number of countries are also requiring proof of vaccination domestically, to access services such as restaurants, bars and hair salons, or venues such as sports matches, cinemas, and museums. The introduction of these requirements varies and appears to be in part to manage the potential for transmission but also to incentivise vaccination.
4. Given the benefits of vaccination and the high risk of COVID-19 transmission there is a need for a high level of confidence about a person's COVID-19 health status. This is driving the push for verifiable credentials that can provide a high level of confidence about the bearer of the certificate's COVID-19 health status.
5. As paper documents are more open to fraud or falsification and can be easily lost or damaged, digital certificates that have features such as a scannable QR code and cryptographic country security signatures can provide greater confidence in the authenticity of the credential.
6. Furthermore, a growing black market in fake COVID-19 vaccination and test certificates is another motivator for the adoption of global standards and minimum requirements for these credentials.
7. The Ministry of Health considers providing a verifiable credential that can prove vaccination status and/or test results using a single standard is required. Such credentials will be necessary for people vaccinated or tested in New Zealand who are wishing to travel overseas where countries with these requirements in place. They will also allow us to operationalise assessment of vaccination requirements for return entry into New Zealand, as part of Reconnecting New Zealanders strategy.
8. Global standards are beginning to emerge with the European Union Digital COVID-19 Certificate (EU DCC) and the International Civil Aviation Organisation (ICAO) Visible Digital Seal (VDS) as the front-runners. Both approaches are aligned to the recently published World Health Organisation guidance for Digital Documentation of COVID-19 Certificates (WHO DDCC).

A New Zealand digital vaccination certificate is in development

9. As you have been previously advised, work is underway to develop a system to produce New Zealand issued digital COVID-19 certificates for people vaccinated or tested in New Zealand.
10. The priority is currently on the vaccination certificate. Work around digital COVID-19 test certificates will follow, but in slower time.
11. The Ministry of Health is designing the New Zealand issued vaccination certificate to be compatible with emerging international standards, so it can be recognised by as many countries as possible. The first version of New Zealand's digital COVID-19 vaccination certificate will use a format that is aligned with the EU DCC.
12. We are continuing to engage with other emerging standards, including the ICAO VDS, to ensure we are able to generate health credentials that meet requirements of different jurisdictions. The goal is for those vaccinated in New Zealand to be able to generate both EU DCC and ICAO VDS COVID-19 health credentials. Supporting multiple different certificate formats will provide New Zealand with greater flexibility for international travel.

13. The proposed solution will build on the capability of the 'My COVID Record' web app that will enable consumers to securely log in to a website and view their personal COVID Immunisation Register (CIR) records.
14. People who have been vaccinated in New Zealand will be able to request or 'generate' a health certificate with the web app, triggering data for the certificate generator for digital signing and rendering. Certificates will be able to be printed out on paper or presented digitally, for example on a smartphone. A specimen example of what a paper version might look like is set out in annex 1. You will note there is a QR code that allows the information to be collected and verified.
15. Access to a vaccination certificate would be available through two primary channels:
 - a. Digital Self-Service – through secure login to the My COVID Record web app and triggering certificate generation, viewing, printing or downloading.
 - b. Call Centre Assisted Channel – Ministry of Health and/or national call centre agents will be able to identify a caller and trigger the emailing and/or postage of a certificate to them.
16. Other countries including Australia have recognised that people will use different names in the health system to those used in official documents (e.g. passports). Care will need to be taken in the development of the solution and supporting business processes to ensure that the details of the certificate match the details on the travel or identification documents that it will be used with. For the purposes of international travel, it will be important that the name and date of birth on the certificate match the person's passport number.
17. The security seal is provided by the passport service – this confirms that the content on the certificate (in the QR code) has not been altered.
18. The New Zealand issued certificate would only be available to people who have received their COVID-19 vaccinations in New Zealand, as the record will rely on information in the COVID Immunisation Register. We are still working through a solution for people who have received an initial vaccination overseas and one in New Zealand.
19. The initial standard we intend to follow (EU-DCC) does not require a passport number on the vaccination certificate. Name details and date of birth on the certificate are the method for linking this to an individual.
20. We are conscious that applying a passport level security model to the certificate will reduce the ability for New Zealanders to participate. We expect that this may change over time and our solution will be able to accommodate these changes.
21. In order to deliver the self-service solution, which is by far the most efficient and cost-effective method for the health system we require the services associated with this to be robust and scalable. This is currently underway with testing of the My Health Account and My COVID Record. Normally a product such as this would take many years to establish. For example the My Health Record in Australia took five years to develop and deploy.

22. Due to the security and privacy requirements for the vaccination certificate and the current testing of My COVID Record with a limited number of users we expect that there will be a technical trial of these together from the end of September 2021.
23. The digital vaccination certificate is currently targeted to be publicly available by the end of November 2021 through both direct digital channel and an assisted option through calling an 0800 number.
24. We expect due to our approach we will then rapidly be able to add additional certificate formats and similar certificates for proof of testing.
25. We recognise that Ministers are eager for this to be available as soon as possible. A digital certificate will be a key tool to support New Zealanders to be able to travel internationally and enable a traveller risk-based approach under the Reconnecting New Zealanders strategy.
26. The Ministry continues to work alongside Customs, Immigration New Zealand and other agencies on the Travel Health Declaration System to support a process for the assessment and transaction of COVID-19 health credentials under the proposed traveller risk-based approach.
27. As part of the policy work on health requirements for inbound travellers, officials are working through a process to determine:
 - a. which vaccines New Zealand would recognise
 - b. what fully vaccinated means (number of doses, dose interval, etc)
 - c. what form of proof of vaccination New Zealand would accept.

International developments

28. Over 100 countries have introduced COVID-19 vaccination as a condition of entry or to be exempt from or to be granted reduced quarantine requirements. At this stage, however, only a handful of countries, have introduced proof of vaccination as a *mandatory* requirement (including Samoa, Papua New Guinea, Indonesia, Grenada, Azerbaijan and Palau)
29. This is a rapidly evolving environment, with country requirements often changing at short notice. The Ministry of Foreign Affairs and Trade have established an international tracker to monitor these requirements which is circulated to key government agencies on a fortnightly basis.
30. In addition, officials across Government are engaged with both with international standard setting bodies (the WHO and ICAO), through multilateral groups (for example the Five Country Human Biosecurity Working Group (HGB5), and through bilateral engagements. It is likely to continue to remain a complex environment as systems for generating the certificates and processes for country-to-country recognition of COVID-19 certificates evolve.
31. At this stage, what form of proof countries recognise varies considerably. As a general observation, where COVID-19 has become endemic, the standards of proof appear to be less stringent. Where countries are placing a very high priority on using their border as a key defence to keep COVID-19 out, the standards tend to be higher and more defined.

32. As an interim measure until the digital vaccination certificate becomes available, and while international travel remains severely restricted, those vaccinated in New Zealand and who are travelling internationally tend to be using either a confirmation of vaccination letter from the Ministry of Health, a COVID-19 vaccination card, or print-out from their GP.
33. Noting the variety of approaches emerging, the mutual recognition of COVID-19 health credentials is quickly becoming important. New Zealand's position is that any discussion on mutual recognition of COVID-19 health credentials will focus on the technical aspects of verifying authenticity of credentials, as opposed to harmonising border entry requirements. The New Zealand Government will continue to reserve its sovereign right to establish and adapt border measures over time that reflect New Zealand's domestic context and national COVID-19 management strategy.
34. Officials are currently working through the process for engaging with other countries about recognising vaccination certificates. As a first step, we are applying for New Zealand to be granted 'third country' status with the EU digital COVID-19 certificate framework. Being accepted as a 'third country' to the EU DCC trust framework would enable New Zealand border agencies to recognise and have high confidence in the vaccination certificates issued by countries in the EU scheme, and in turn, New Zealand issued certificates would be recognised by all countries who have joined the scheme.
35. We understand a number of countries are in discussions with the EU around joining the framework, including the United Kingdom, the United States, Malaysia, South Korea, Singapore and Canada.

Australia and the Pacific

36. New Zealand officials are in regular discussion with Australian counterparts on COVID-19 health credentials. Australia is also developing a digital vaccination certificate, using the ICAO VDS standard. While it will be the first country to use this standard, it is not too dissimilar to the EU DCC standard New Zealand will be using. We have confidence that our border agencies will be able to work through a solution to electronically transact and verify Australian digital vaccination certificates for inbound travel to New Zealand. We understand Australia expect to have its digital vaccination certificate ready for use around October this year.
37. Pacific countries will also likely need to be able to provide verifiable digital COVID-19 health certificates to ensure those vaccinated in those countries can travel overseas. In addition, some Pacific countries (namely, Samoa) have already introduced vaccination as a mandatory entry requirement, and so will be seeking verified evidence that travellers entering have had appropriate vaccination. It will be important that the Pacific countries have access to a solution that aligns with international standards as far as possible. This will be challenging as both the ICAO and EU standards require a high level of technological capability to be able to generate the certificates.
38. As New Zealand's work in this space evolves, we will share information with Pacific Island governments. There is risk that the framing and regulation of this approach could become fragmented in the Pacific. Systems invented outside the region may not be fit for purpose or operationally practical for a number of smaller island states. The Ministry of Foreign Affairs and Trade is scoping work to explore these issues alongside

Australia and Pacific Island countries including options for a harmonised approach between countries within the region.

Next steps

39. At the request of the Department of Prime Minister and Cabinet, this paper will be shared with the Reconnecting New Zealanders Ministerial Group for their meeting on 31 August 2021.
40. As part of the suite of report-backs from the July *Reconnecting New Zealanders with the World* Cabinet paper, the Ministry of Health is preparing a Cabinet paper for the Minister for COVID-19 Response on progress in developing the New Zealand issued digital vaccination certificate. This is expected to go to Cabinet by the end of September.

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Appendix 1.

Example of what a New Zealand issued vaccination certificate could look like



MATTR

MoH Domestic Passes Decision Discussions

Prepared for Ministry of Health Manatū Hauora
20 Sep 2021

Released under the Official Information Act 1982

Solution – Domestic Passes (Vaccination and Test Result)

Domestic Pass(es) to support:

- Health Certificates (Vaccination and Test Results)
- Use at large scale events
- Low cost to operate
- Privacy preserving features
- Accessibility considerations for people – specifically paper based digitally verifiable credentials and digital first credentials
- Accessibility issues for verifiers
 - Cheap and easy to use
 - Ability to be embedded into existing systems (ie ticketing systems)
- Flexibility by decoupling from ePassport PKI which was designed for a very different purpose

With these requirements the natural solution candidate at a technical level would be:

- New health Trust Model using DPKI for scalability, flexibility and low cost – recommendation DID Web for discoverability and security of government domain
- W3C Verifiable Credentials (with BBS+ Signatures for selective disclosure features in digital journey's that use the JSON-LD variant)

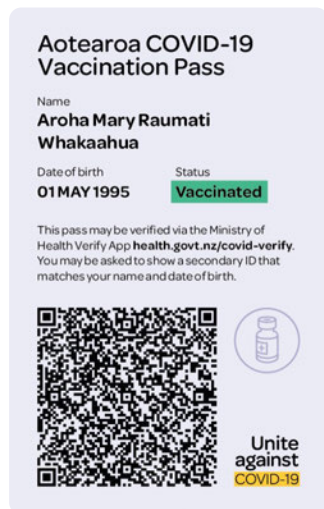
This solution would allow the most advanced privacy preserving features for domestic use. It would also align directionally with the DIA Digital Trust Framework that is coming in December.

In order to progress this solution we would need validation of 5 assumptions. If these assumptions are not true, an alternative solution candidate would need to be considered

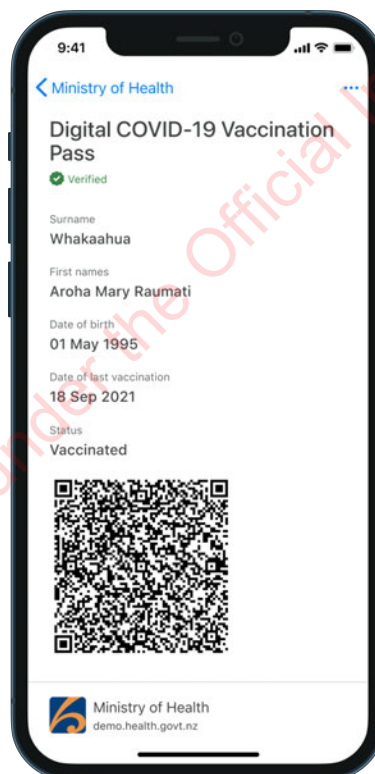
Accessibility and inclusion through an 'UPGRADE MODEL'

Credentials can be 'upgraded' as we move through the lifecycle, depending on constraints at issuance time, holder capability and verification assurance requirements.

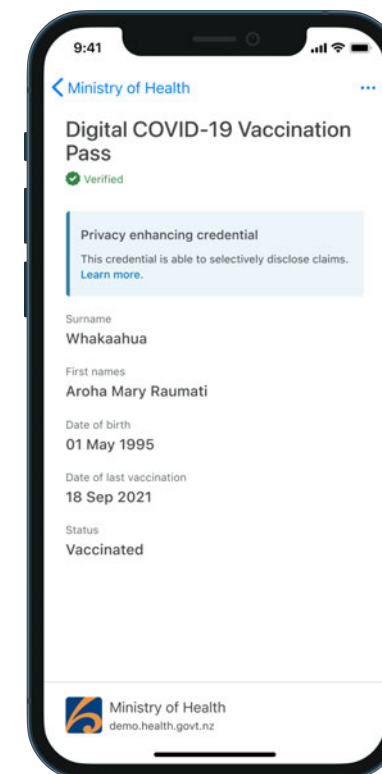
PAPER CREDENTIAL



LOFI DIGITAL

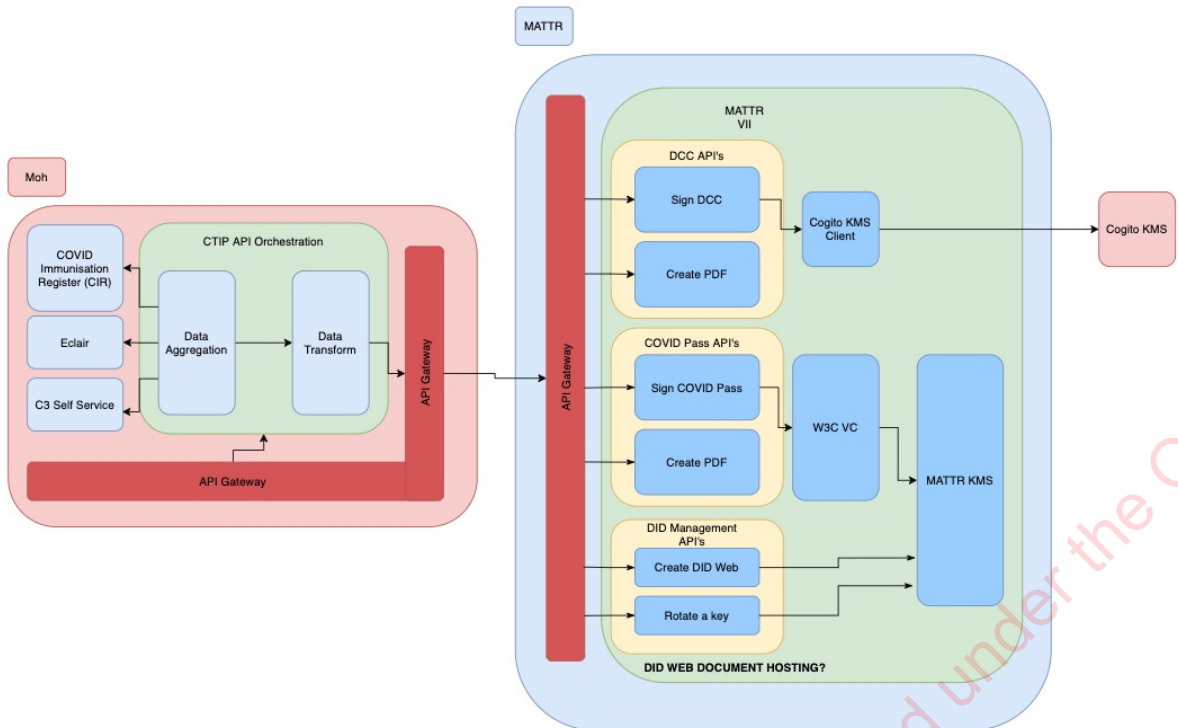


DIGITAL FIRST



Selective disclosure capabilities dependent on use of BBS+ signatures

Phase 1 E2E Solution Considerations



Consideration	Description	Delivery Considerations
Issuer Identifier and Trust Model	Moh issue credentials using a public key which is resolvable using Did Web and establishes the basis of trust.	Allocation of a government subdomain for DID resolution and confirmation that domain validation mechanisms meet government requirements and wider implications on key rotation. Note: Due to the requirements to resolve a DID, Verification can only be done online today (this can be extended for offline).
Revocation	Are domestic credentials revocable?	Assumption is this would not be delivered in the Phase 1 timeframe but could be added later.
Credential Format	What credential format will be used for the domestic solution?	Assumption is W3C VC.
Middleware Integration	Do we minimise the work required by Middleware by creating specific APIs for MoH?	MATTR could create “DCC Like” APIs for W3C which would minimise the impact on Middleware, however these would be use case specific and in the future Middleware would need to onboard to the normal VII APIs to issue other credential types.

Key decisions that impact solutioning

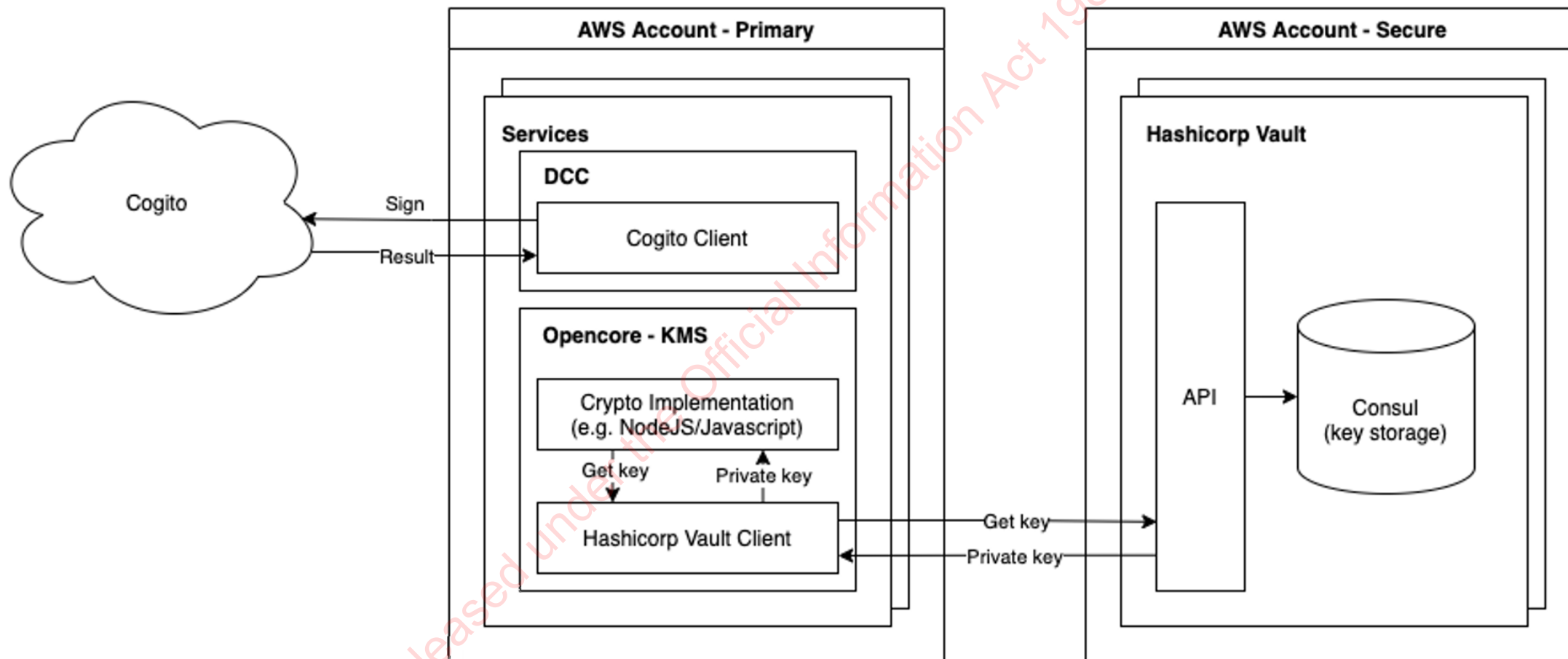
Released under the Official Information Act 1982

Decision 1a: Health PKI

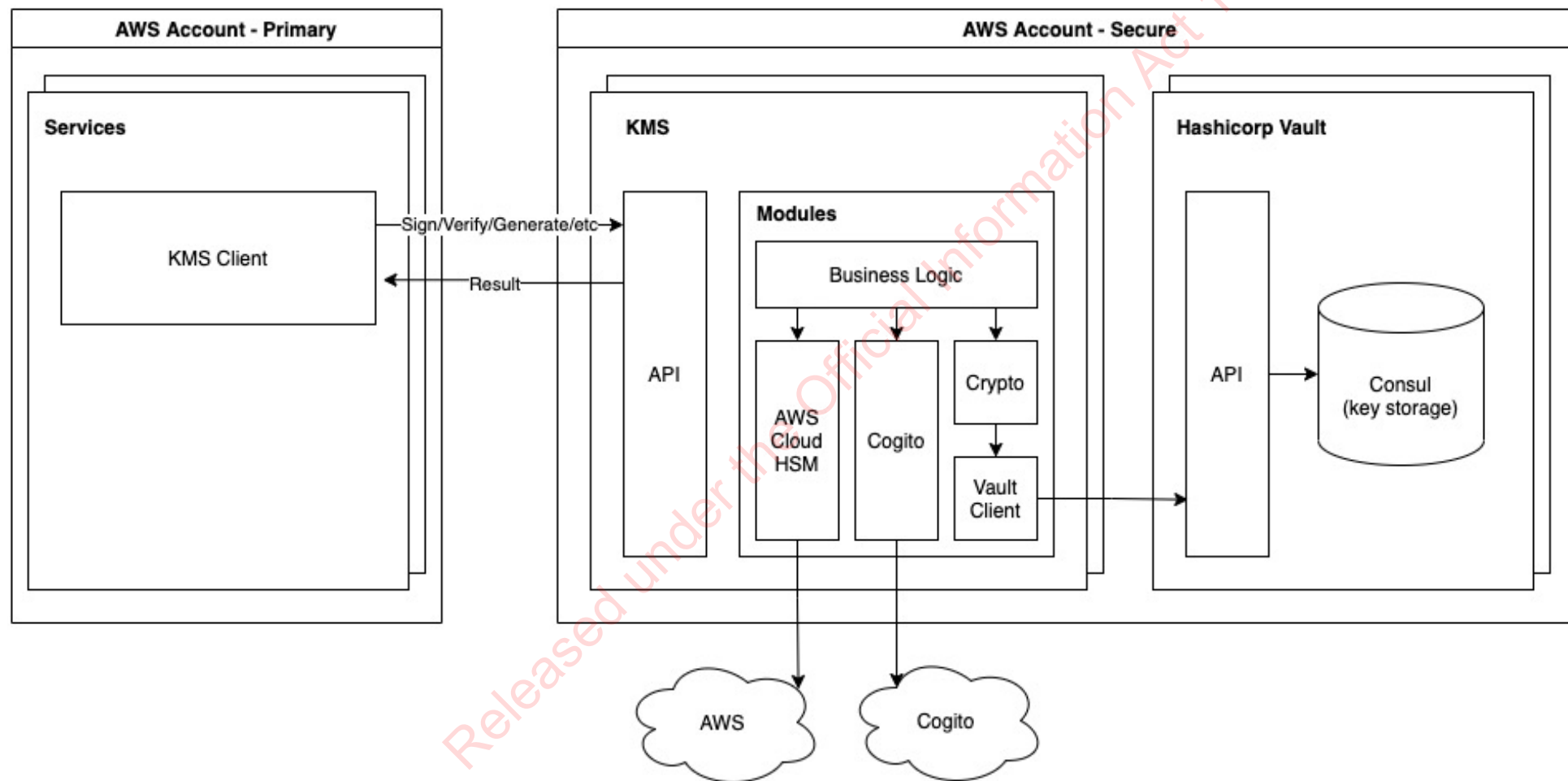
- Choices on trust model
 - Multi-tier (CSCA + Doc Signers) application specific (e.g. e-Passports) vs General Purpose Web PKI (e.g. SHC)
- Choices on key management - MATTR KMS (see next slides)
 - Keypair generation responsibility and choice of key types (see next slide)

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Current KMS Architecture



MATTR KMS Architecture (Future)



Decision 1b: Cryptography & Signature Scheme

Current PKI and Key Management Assumptions and Considerations

- If DID: Web is used Health CSCA and Document Signer Certificates would not be required as DID:Web uses a different underlying trust model
- Phase 1 would use the existing MATTR KMS architecture (no external KMS/HSM etc) – see previous slide.
- MATTR & MoH would agree to an appropriate set of Key Management controls and supporting processes including Key Access, Key Rotation etc.
- Cogito would continue to be used for EU-DCC signing

There are a number of considerations in terms of the choice of cryptography (both for Phase 1 and longer term) as shown in the table below:-

Cryptographic Curve	International Approvals	NZISM Approved	MATTR Support	Key Considerations
Nist P Curves P256, P384 & P521	NIST Approved	Yes	P256 has been implemented in MATTR KMS for DCC services (but not W3C VC services)	DCC uses P256, although NZISM recognises P256, they recommend the use of P384. If P384 were a requirement this would need to be added to MATTR KMS and VC Services.
<u>ED25519</u>	NIST Underway	No	Yes	This is a widely adopted curve and signature scheme (e.g. used in the Signal App) as regarded as faster and more secure. Given lack of NZISM compliance would MoH consider its use?
<u>BBS+</u>	At DIF crypto working group with view to take to IETF CFRG in the future	No	Yes	Required to enable selective disclosure capabilities (e.g. where the holder discloses a subset of the claims in the credential) – more of a consideration for future use cases and Verifiable Credential Ecosystem. There is growing support for the use of BBS+ internationally due to its unique properties.

Decision 2: Wallet

THESE OPTIONS ARE NOT MUTUALLY EXCLUSIVE

Option 1 – Create ability to store LoFi digital pass in the Covid Tracer App + possibly store in native OS wallets like Apple and Google

Benefits

- High penetration rate of use already
- People already associate the Covid Tracer App with Ministry of Health

Drawbacks

- Covid Tracer App not associated with privacy and likely to create suspicion in segments of the community
- Doesn't allow for more advanced privacy respecting features.
- Doesn't allow for high assurance levels (ie is this person the person that the certificate relates to)

Option 2 – New government provided general purpose digital wallet (which can support LoFi and digital first credentials)

Benefits

- The wallet will have general utility beyond one credential.
- Aligns to the DIA Digital Identity Trust Framework proposed approach
- Supports both LoFi and digital first credentials
- Can support higher assurance levels and selective disclosure for privacy
- Supports consent management and audit trails
- Supports authenticated access (FaceID, TouchID, PIN)

Drawbacks

- New app for people to download (but journeys can be designed to make claiming very easy)
- Government would need to decide which agency provides this capability and what to call it.

Option 3 – Government / MoH endorse multiple private sector solutions for people to use (might start with one but could be many in time)

Benefits

- The wallet will have general utility beyond one credential.
- Aligns to the DIA Digital Identity Trust Framework proposed approach
- Supports both LoFi and digital first credentials
- Can support higher assurance levels and selective disclosure for privacy
- Supports consent management and audit trails
- Supports authenticated access (FaceID, TouchID, PIN)

Drawbacks

- New app for people to download (but journeys can be designed to make claiming very easy)
- Some people may not trust the wallet if it isn't provided by government!

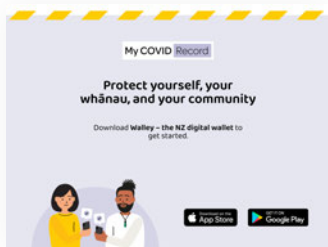
**OPTIONS 2 AND 3 COMBINED REPRESENT THE BEST LONG-TERM DIRECTION.
THIS IS A CRITICAL PATH DECISION**

Decision 3: Claiming Journeys for general purpose wallet

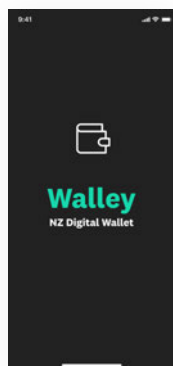
General purpose wallet

Phase 1: In app experience that would kick off an 'in-app' browser (doesn't have to be OIDC based)

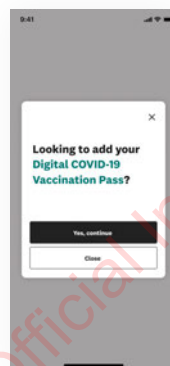
Digital based obtaining



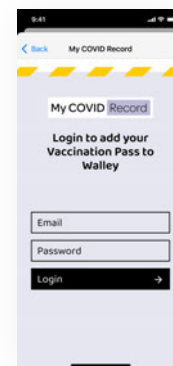
Navigate to My COVID Records, instructed to download the wallet app



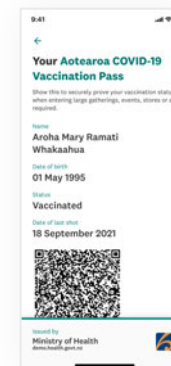
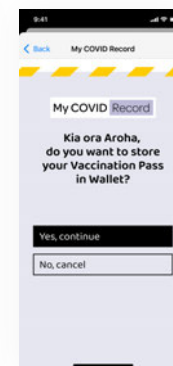
Wallet onboarding



Modal popup asking if you would like to get the Vax Pass (campaign)

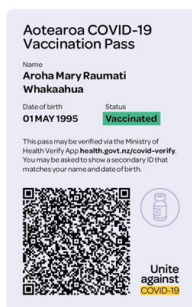


Authenticate into My COVID Records and able to store it in wallet.

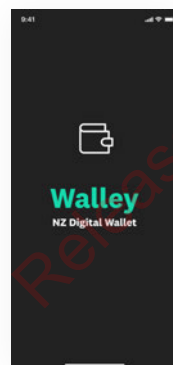


Stored in wallet

Paper based obtaining



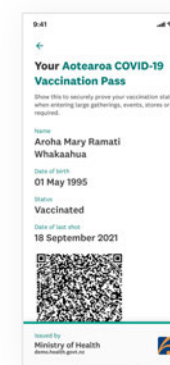
Physical card with a QR code



Wallet onboarding



Using the QR code scanner inside the wallet app to scan the QR code on the card

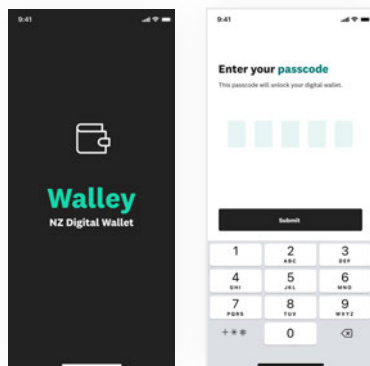


Digital version now stored in wallet

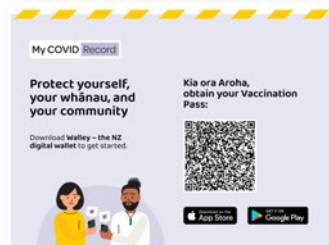
Decision 3: Claiming Journeys for general purpose wallet

General Purpose Wallet

Beyond phase 1 : OIDC based journey surfaced by C3 for authenticating the end user and binding the credential to a device

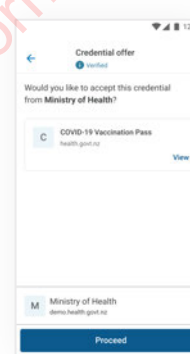
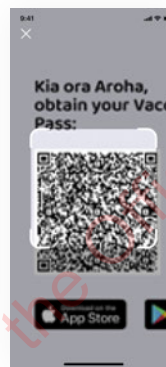


Wallet onboardings

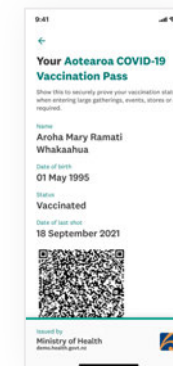
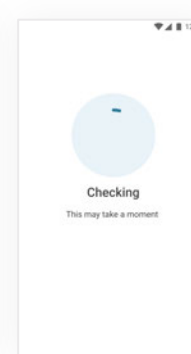


Variation of onboarding methods (OIDC):

- Deeplink
- QR code
- in-app button



Credential offer



Stored in wallet

Appendix

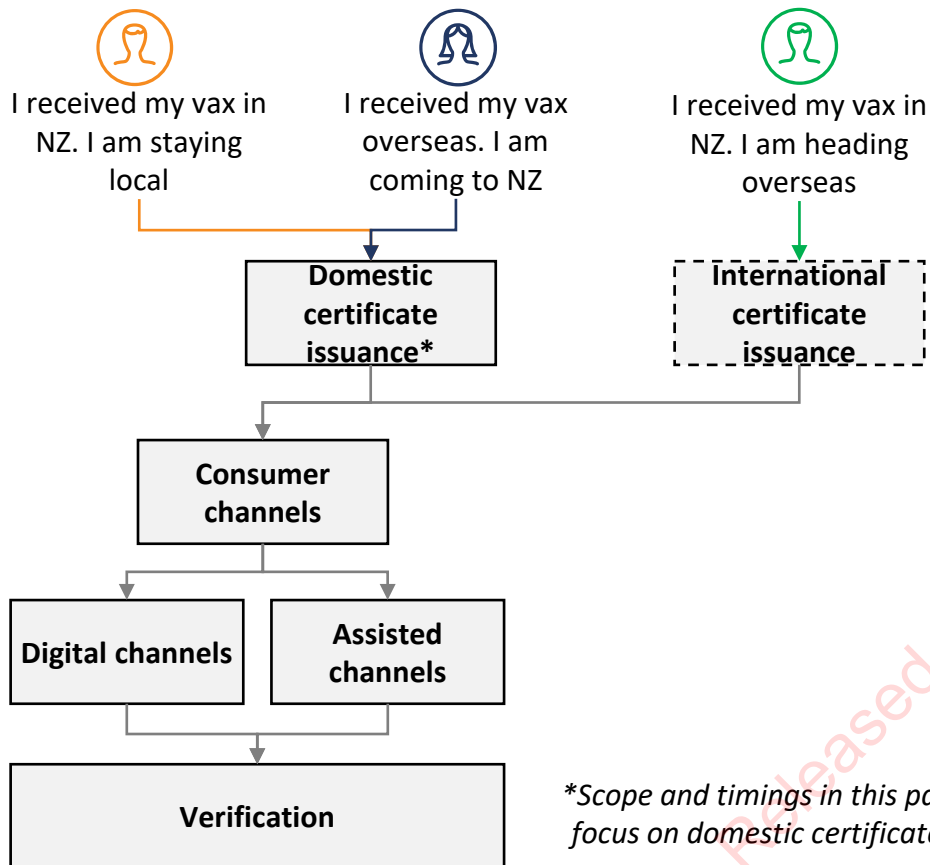
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Vaccine Certificates Update 2 October

Released under the Official Information Act 1982

Covid-19 Vaccine Certificate Overview

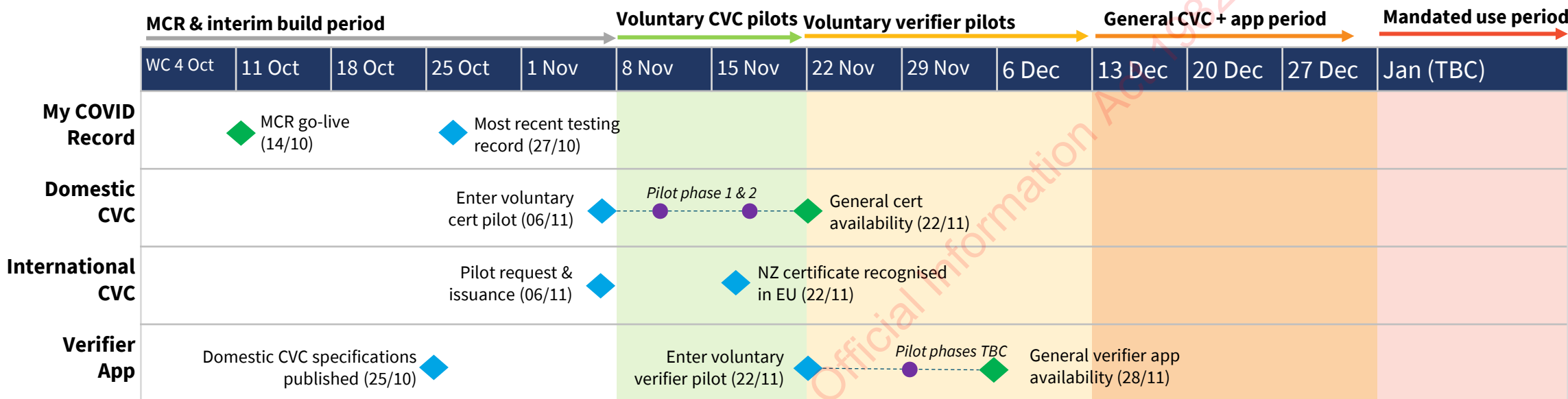
Vaccine certificates are complex instruments with many moving parts across many organisations and have the potential to have significant impact on the lives of New Zealanders. Vaccine certificates are a critical component of Reconnecting New Zealand and the shift to containment. The pressure to deliver quickly with evolving requirements remains continues to challenge all teams. Technology will deliver MVPs in November for piloting and testing prior to general availability at the end of November or early December.



**Scope and timings in this pack focus on domestic certificates*

Area	Ownership	Description
Domestic certificate issuance	CVIP	Digitally verifiable record based on the information recorded in the CIR that the issued person is considered vaccinated for COVID-19.
Domestic verifications	MBIE	Businesses and events managers verify CVCs and the identity of employees, visitors and participants.
Overseas vaccinations & exemptions requesting domestic cert	Public Health & Clinical	The requirements and eligibility for issuing domestic CVCs based on overseas vaccinations.
Outbound international certificates	Policy & MFAT	The requirements for international certificates and the acceptance of those certificates at international borders.

Schedule and considerations



Why have a gap between technology readiness and operational readiness?

- Changing requirements
- Public awareness, time to respond and social licence
- Processing certificate requests and operational fixes
- Exemptions process
- Business readiness

Key considerations for proposed timings

- These are the earliest possible dates for these activities in so far as we could delay for operational or political reasons.
- The certs do not include Test results as an alternative.
- Neither the pilot activities nor roll-out activities have yet to be confirmed
- In advance of pilots the following are required - Customer Support, Technical support, Privacy and Security approval

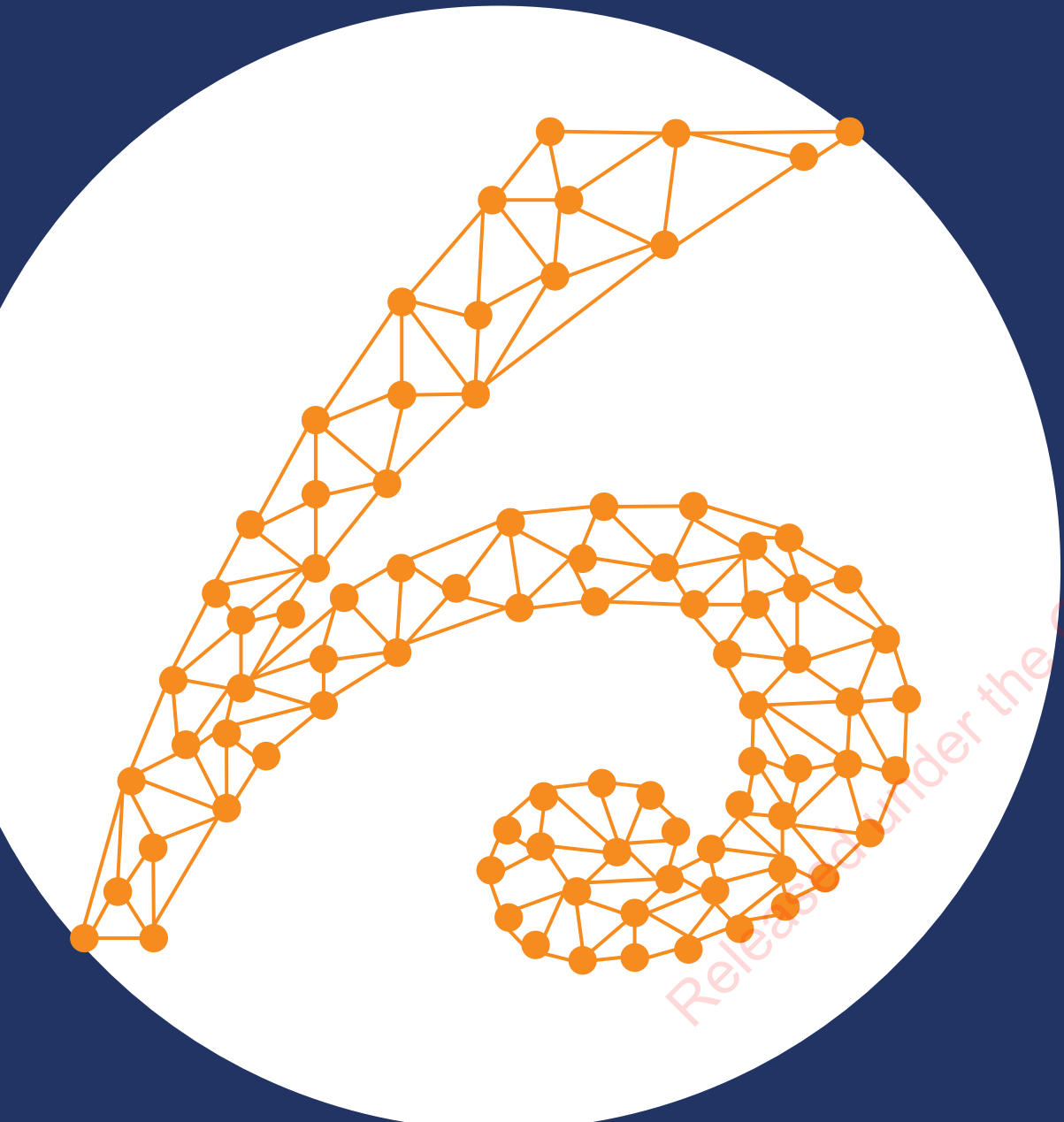
What's top of mind

1. Business ownership – There are many stakeholders and contributors. We are working on defining clear ownership of the various requirements e.g. business compliance.
2. Data integrity – ~2% of CIR records require manual intervention to match individuals and with their CVC. A high number of international certificates will require manual intervention on names and identity to match passport.
3. Covid-19 integrated strategy – the shift to containment has consequences for the population and Covid customer journeys for testing, contact tracing, isolation, border etc. This work is being done within a context of integration of data and systems, and businesses across these services. Vaccination certificates are a critical new instrument to that still forming strategy.
4. Remaining policy and operational questions

Remaining policy and operational questions

All to be finalised by beginning November:

- 1) Timing since last dose to be eligible (MoH)
- 2) Acceptance of overseas vaccines – which ones are acceptable, and a process for creating confirmation within Covid Immunisation Register (MoH)
- 3) Compliance and enforcement provisions. Infringement fees etc (DPMC)
- 4) Acceptance of alternative proof of vaccine – likely answer is that Covid Vaccine Certificate is the only one (MoH)
- 5) Medical exemptions process (MoH)
- 6) Proof of identity expectations (DPMC/MoH)



Domestic COVID-19 Vaccination Certificates

Update and Naming for Approval
Michael Dreyer, MoH

29 October 2021

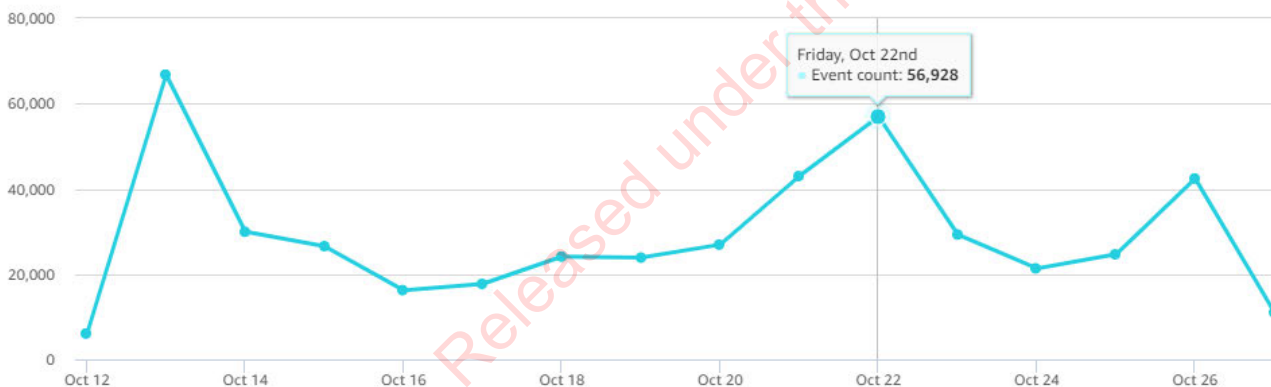
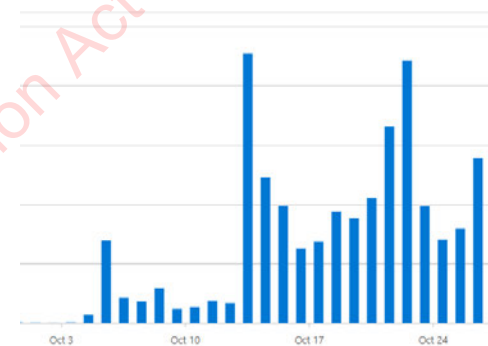
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Uptake since launch on 13 Oct 21

My Health Accounts

(total)

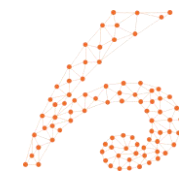
390k



My Covid Record

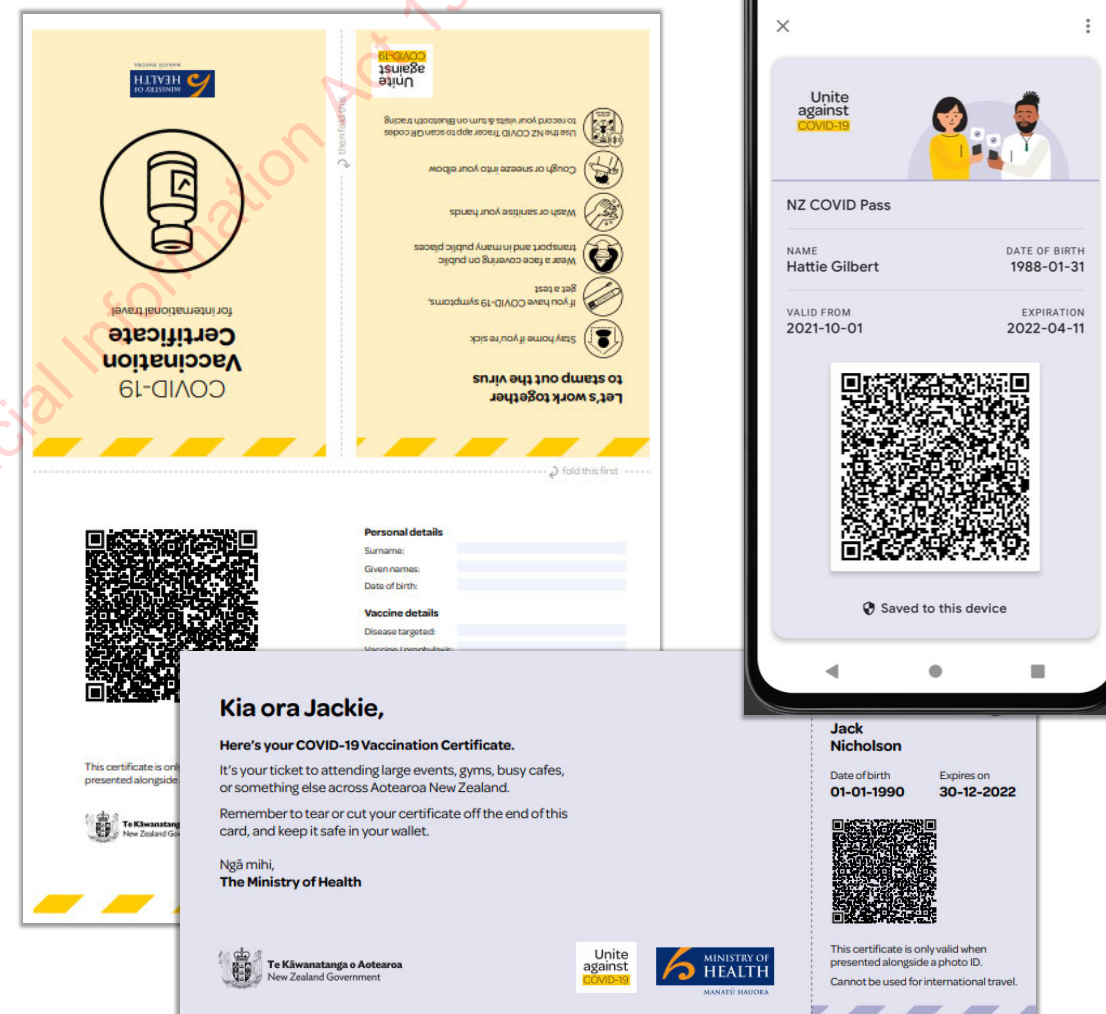
(average daily logins)

32k



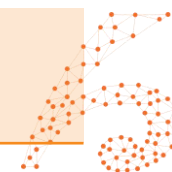
Domestic Vaccination Certificate Naming

- Recommended: My Vaccine Pass
- Why we chose this
 - We need to be clear and literal as to what our pass is and what it does.
 - The word pass positively reflects something that gets you somewhere
 - 'Pass' can fit into our advertising concepts
 - We need clear different names for what might be a suite of certificates, such as regional boundary crossing, test results and mask mandate exemptions.
- The international certificates are yet to be named.



Comms and Support

Audience	Consumers	Businesses	ICT Vendors
Lead Agency	<ul style="list-style-type: none"> • MoH 	<ul style="list-style-type: none"> • MBIE 	<ul style="list-style-type: none"> • MoH
Free Tools	<ul style="list-style-type: none"> • My Covid Record • 0800 Assisted Channel(s) 	<ul style="list-style-type: none"> • Verifier App • DIY Verifiers 	<ul style="list-style-type: none"> • CVC Tech Spec
Channels	<ul style="list-style-type: none"> • MoH Website • UAC website • MoH Assisted Channels (0800 initially, In Person to follow) • Social Channels • Direct Invitations • Marketing / Advertising 	<ul style="list-style-type: none"> • Unite against Covid Website • MBIE Website(s) - www.business.govt.nz / DM's • MBIE Call Centre • Worksafe / compliance • Operational/Policy support 	<ul style="list-style-type: none"> • TBC
Direct Engagement	<ul style="list-style-type: none"> • Invitation Strategy – email/txt those vaccinated • Hosted webinars Hui's 	<ul style="list-style-type: none"> • Major events sector Hui's • Industry Bodies • Enforcement Agencies, Worksafe & Police 	<ul style="list-style-type: none"> • Point of Sale (POS) providers • Event ticketing systems
Indirect Engagement	<ul style="list-style-type: none"> • Equity Groups • Health Sector / Primary Care 	<ul style="list-style-type: none"> • Industry Groups 	



Assisted Channels

- **Phone-assisted (to be ready at launch):**

- People will be able to call the Ministry's call centre or Whakarongorau to request a CVC.
- There will be an option to either have a PDF of the CVC emailed or a physical copy posted out.
- Whakarongorau have a Māori and Pacific pathway, as well as a disability line, that will also be able to support this.

- **Face-to-face (TBC):**

- The Ministry is looking at non-digital pathways for consumers to request a CVC which would then be delivered by email or post. This includes looking at engaging different community services, disability information advisory services, and GPs. We are assuming this is free.

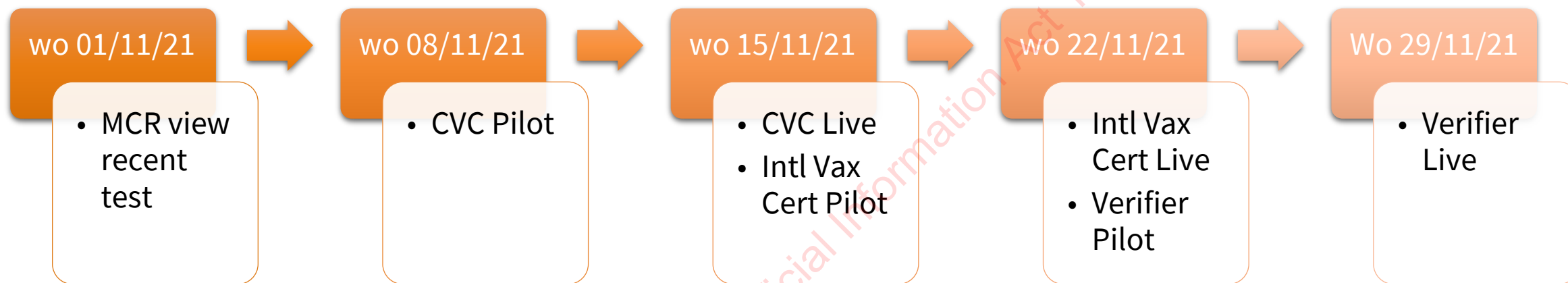
- **On behalf (TBC):**

- The Ministry is actively looking at how people can request a certificate on behalf of a dependent provided they confirm they have that person's consent or are authorised.

Note – if proof of testing is required in the future an alternate options to posting out certificates / passes will be needed to address equity given the 72-hour expiry on such certificates / passes.



Domestic Vaccination Cert / Pass Delivery Timeline

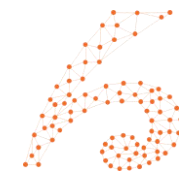


Note

- Milestones include operational readiness to support and promote

s9(2)(b)(ii)

[Redacted content]



Policy / Legislation Timelines

The Bill will amend the Covid-19 Public Health Response Act 2020 (the Act) and be passed under urgency. It acknowledges the need to manage COVID-19 impacts, permits differentiating based on vaccination status, and addresses the employment issues arising.

S9(2)(g)(i)

Drafting instructions for Bill to PCO	28 Oct
Cabinet approve Bill for introduction	22 Nov
Bill introduced	22 Nov
Royal assent	26 Nov
Orders gazetted	29 Nov
Orders come into force	30 Nov

Released u



Example – Domestic Vax Assisted Channel Printed

**Kia ora Jack,
Here's your Vaccine Pass.**

This is your ticket to attending large events, festivals and entering businesses that require you to show proof of vaccination.

Please cut out your pass and keep it somewhere safe.

Ngā mihi,
The Ministry of Health

 **Te Kāwanatanga o Aotearoa**
New Zealand Government

 **Unite
against
COVID-19**

 **MINISTRY OF
HEALTH**
MANATŪ HAUORA

My Vaccine Pass 

Name
**Jack
Nicholson**

Date of birth Expires on
01-01-1990 30-12-2022



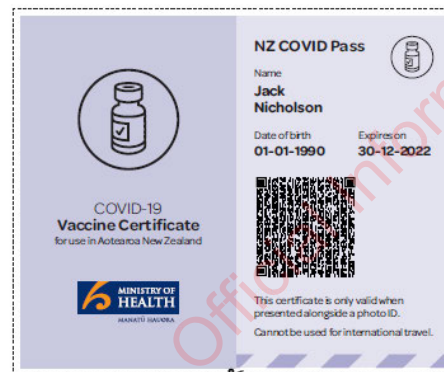
This certificate is only valid when presented alongside a photo ID.
Cannot be used for international travel.



Example – Domestic Vax PDF Emailed Out

Kia ora Jack,
Here's your NZ COVID Pass.

This is your ticket to attending large events, festivals and entering businesses that require you to show proof of vaccination.



Please cut out your pass and keep it somewhere safe.

Let's work together to stamp out the virus

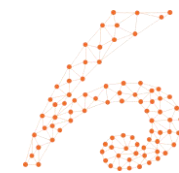
-  Stay home if you're sick
-  Wash or sanitise your hands
-  If you have COVID-19 symptoms, get a test
-  Cough or sneeze into your elbow
-  Wear a face covering on public transport and in many public places
-  Use the NZ COVID Tracer app to scan QR codes to record your visits & turn on Bluetooth tracing



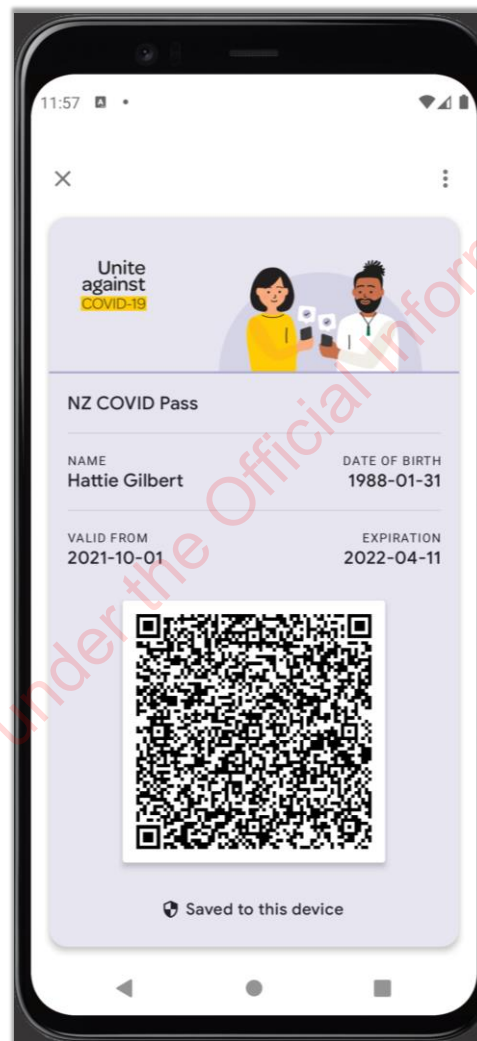
Thank you for protecting New Zealand.



M01-0303(3) v0.1 | HP7890



Example – Domestic Vax in Digital Wallet



Released under the Official Information Act 1982



Example – International Vax PDF Emailed Out

MINISTRY OF HEALTH

COVID-19 Vaccination Certificate for international travel

then fold this

fold this first

Let's work together to stamp out the virus

Stay home if you're sick

If you have COVID-19 symptoms, get a test

Wear a face covering on public transport and in many public places

Wash or sanitise your hands

Cough or sneeze into your elbow

Use the NZ COVID Tracer app to scan QR codes to record your visits & turn on Bluetooth tracking

Unite against COVID-19

Personal details

Surname: _____

Given names: _____

Date of birth: _____

Vaccine details

Disease targeted: _____

Vaccine / prophylaxis: _____

Medicinal product: _____

Manufacturer: _____

Vaccination details

Dose number: _____

Total series of dose: _____

Date of vaccination: _____

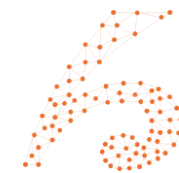
This certificate is only valid when presented alongside a photo ID.

Te Kōwhiriwhiri o Aotearoa
New Zealand Government

Please keep this vaccination certificate, which includes medical information about the vaccination you have received.

M3-C93K(V)-01 | 497888

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Example – International Vax Assisted Channel Printed



COVID-19
Vaccination
Certificate
for international travel



Let's work together
to stamp out the virus

- Stay home if you're sick
- If you have COVID-19 symptoms, get a test
- Wear a face covering on public transport and in many public places
- Wash or sanitise your hands
- Cough or sneeze into your elbow
- Use the NZ COVID Tracer app to scan QR codes to record your visits & turn on Bluetooth tracing

United against COVID-19

then fold this

fold this first

This certificate is only valid when presented alongside a photo ID.



Te Kāwanatanga o Aotearoa
New Zealand Government

Personal details

Surname:

Given names:

Date of birth:

Vaccine details

Disease targeted:

Vaccine / prophylaxis:

Medicinal product:

Manufacturer:

Vaccination details

Dose number:

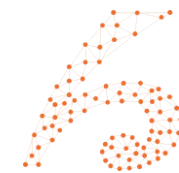
Total series of dose:

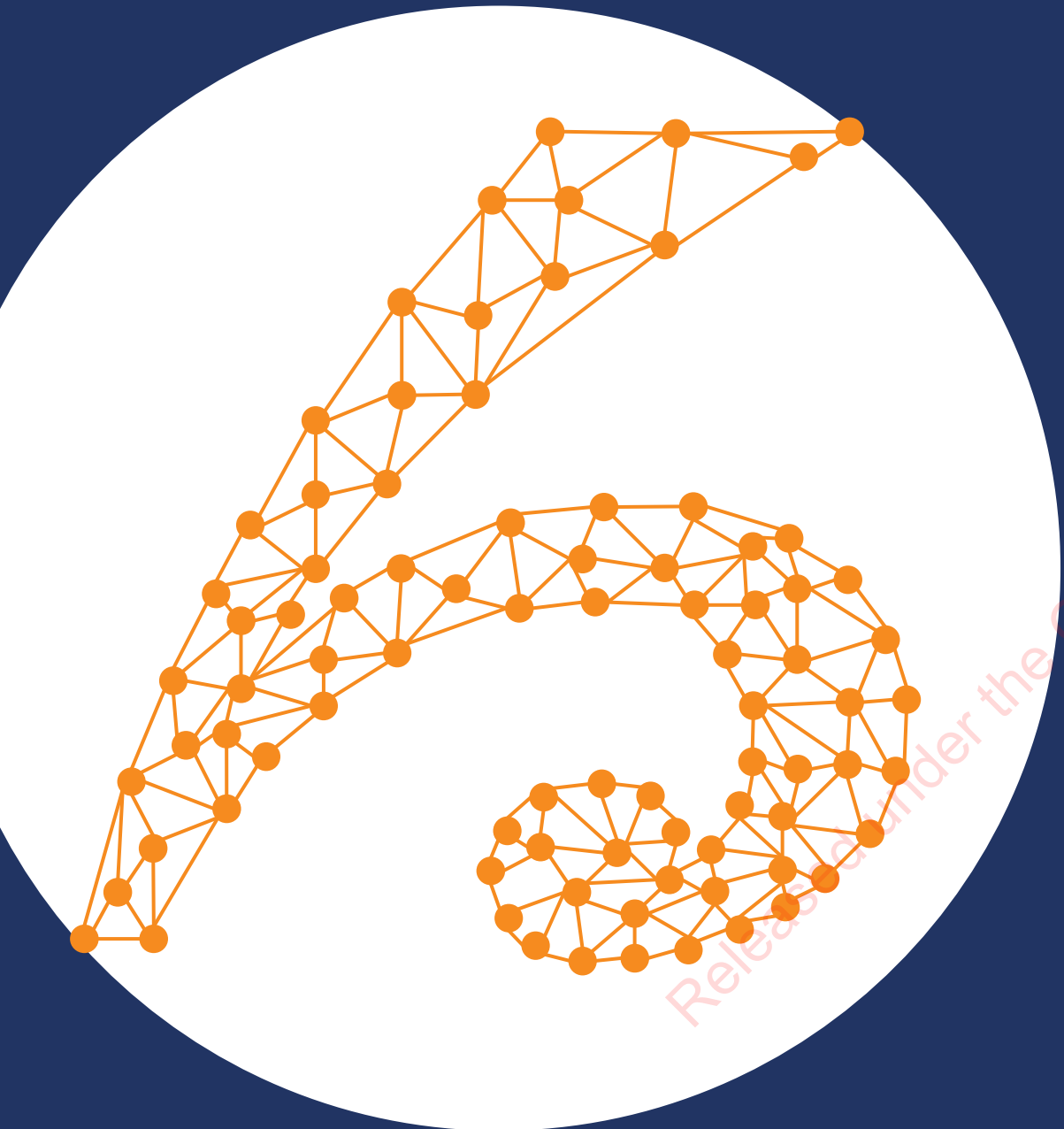
Date of vaccination:

Please keep this vaccination certificate, which includes medical information about the vaccination you have received.

W33-0302(1) v1.0 | 4/2021

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Appendix 3 Domestic COVID -19 vaccination and test certificates

Solution approach for a “Summer Pass”

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Background

- Work began in April to establish My Health Account and My COVID Record. This work is foundational for the wider health reforms and the investment announced in Budget 21 for the Hira Programme
- Similar work in other jurisdictions has been a multi-year effort, with Australia taking five years to establish similar services (ie. My Health Record)
- Now these foundations are in place, they allow us to build more features on top of them such as vaccination and test certificates, but also provide alignment to the Digital Identity Trust Framework that is currently in Select Committee in preparation for a first reading in the house.

Problem Statement

- Vaccination rates for the young and healthy are currently lagging the rest of the population
- Auckland and the rest of New Zealand continue to be at elevated alert levels, with internal boundaries in place
- s9(2)(g)(i)
[Redacted text]
- The solution needs to be support privacy and equitable access for the public at scale and itself be easy to access and use. This is important for social license
- Solution needs to be available as soon as possible, then rapidly iterated to improve consumer experience and remove requirement to present photo ID with certificate to link it to the consumer



Design and technical goals compared to EUDCC

How does this fit with Reconnecting New Zealand

- NZ is adopting the EUDCC (European standard) for international travel certificates.
- The EUDCC data specification has much more than needed if these were used domestically. The Office of Privacy Commissioner has expressed concerns about this being used domestically.
- EUDCC requires photo ID (e.g. a normal Passport) to be presented when verifying, to prove the holder is the owner.
- In addition, using the EUDCC domestically is likely to be confused by New Zealanders with international certificates and incorrectly presented to foreign border agencies.
- Not using EUDCC domestically might mean we need to offer visitors and those vaccinated overseas an ability to convert their international certificate.
- MoH recommend using a different approach for a domestic pass.

Design and Technical Goals

- Highly privacy preserving, only the minimum data set is disclosed to allow verification
- Non-digital options available first, people should not require a modern smartphone to participate
- Tamper and forgery resistant using electronic verification, it should be very hard for someone to fake one of these
- Quick to deliver, we may need the solution in place before summer
- Standards-based, use existing technology standards to support future intents rather than inventing something new
- Open and transparent, we should publish documentation so others can build on it with creative ways to enable the public - as recently seen with examples Locations of Interest, Timeline or Vaxx.



Approach for domestic certificate

Develop an “NZ COVID Pass”

- A QR code containing consumer’s name and date of birth, minimum data for proving health status, and a digital signature to prove authenticity and tamper resistance.
- Leverage same technology platform used for international travel certificates, but use different data standards and signature (trust framework)
- Provides freedom to modify domestic certificate for domestic needs, including additional privacy protections and verifier capabilities.
- Can be printed on paper, and also leverages native support for ‘passes’ in Apple and Android phones, reducing reliance on another MOH-owned app to store it. Also will support other standards-based wallets.
- Based on W3C Verifiable Credentials standards, aligned to future digital identity trust framework legislation under consideration by parliament. Also forwards compatible with emerging SMART Health Cards standards from US/UK.

Verifier (to check the passes) ecosystem:

- We should support verifiers to implement verification capabilities into existing workflows (e.g. Ticketek), rather than requiring them to use a new app & hardware.
- Develop documentation and test suites for implementing third party verifier apps. Publish this publicly and engage larger partners (e.g. WhosOnLocation) to adapt existing scanning technology for events or entry control to business or buildings.
- Publish standards & guidelines for verifiers to evaluate certificate claims (e.g. time since vaccination)
- Implement an MOH-branded verifier app, using above documentation & standards, and publish open source on GitHub as a reference implementation. This would be available for those who don’t have existing verification hardware.

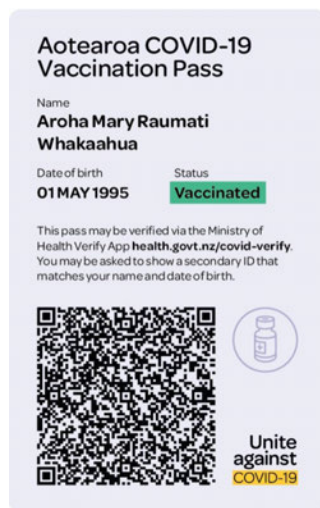


Two stage delivery

To accommodate timelines, we propose a two stage process.

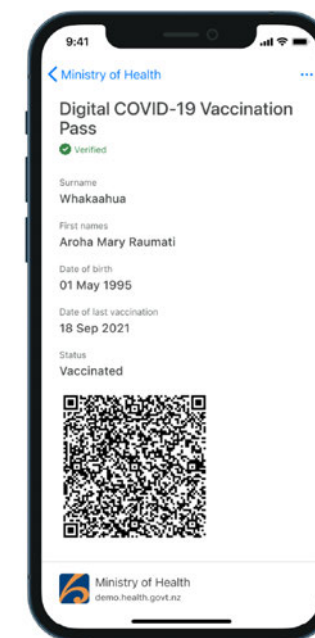
Stage 1: Paper & Lo-fidelity Digital

- Paper based certificate that can be stored within iOS/Android operating system wallets.
- No native app required.
- 5-7 weeks



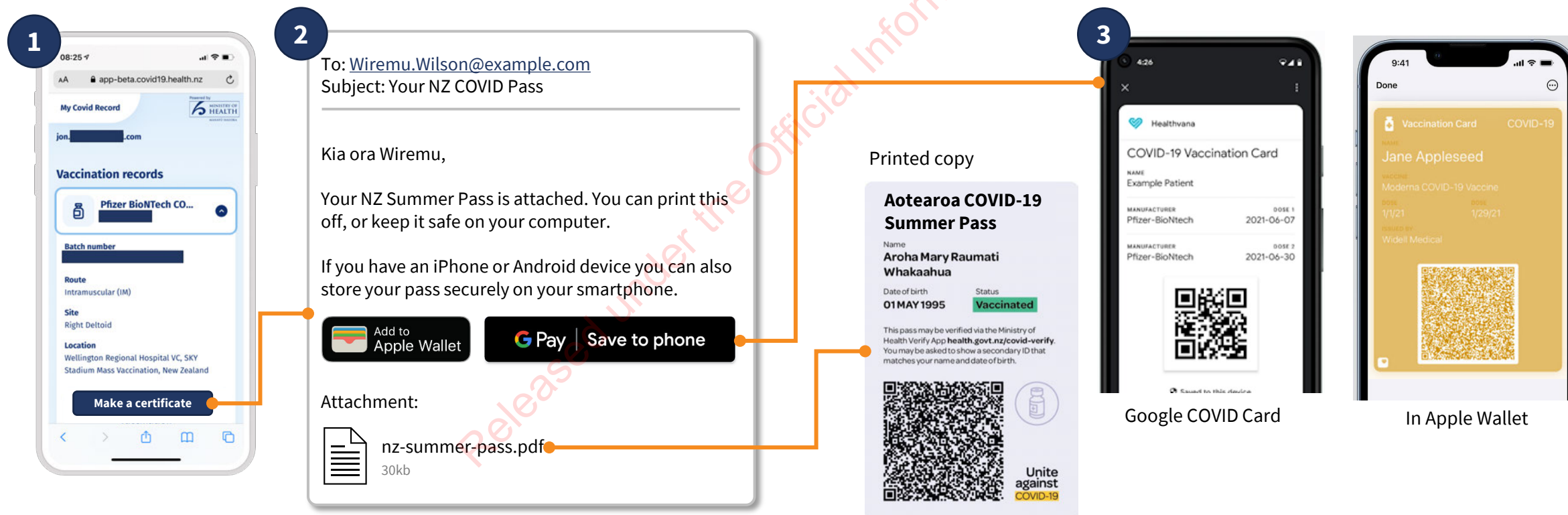
Stage 2: Digital native

- Native app with a digital wallet. Supports additional privacy enhancements
- Supports more of the future Digital Identity Trust Framework and may allow a person to prove their identity as well.
- 3-6 months

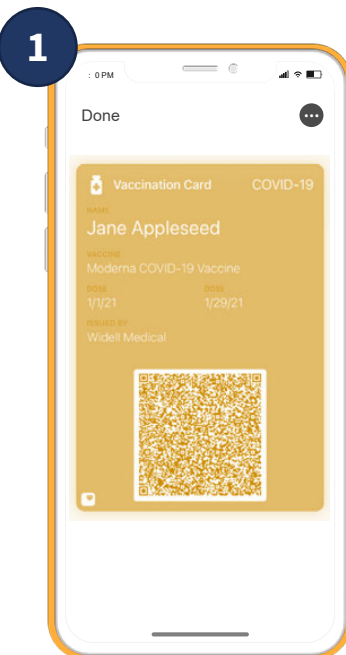


Consumer experience – Stage 1

- Log into My Covid Record to request a domestic certificate (needs My Health Account)
- Domestic branded PDF emailed to consumer
- Buttons in the email allow to add the pass to Apple Wallet on iOS or G Pay on Android.

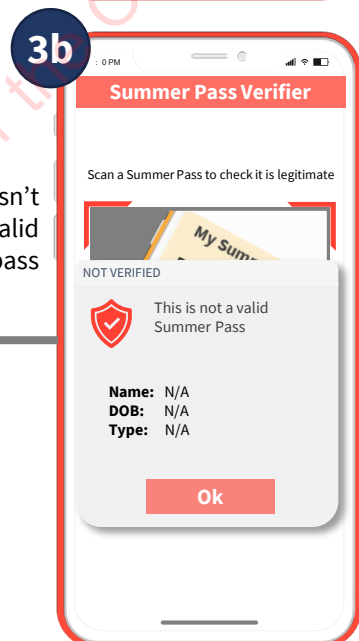
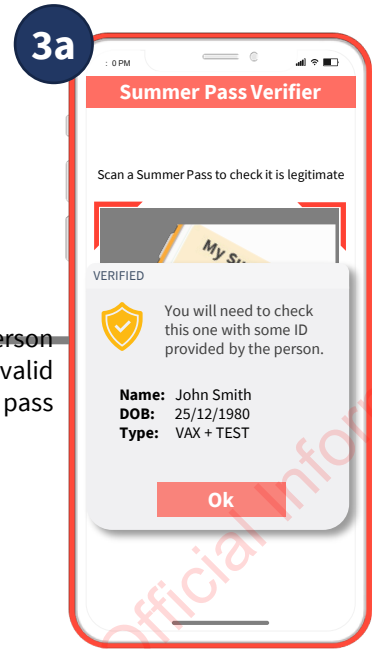


Verifier experience



Person provides a valid summer pass

Person doesn't provide a valid summer pass



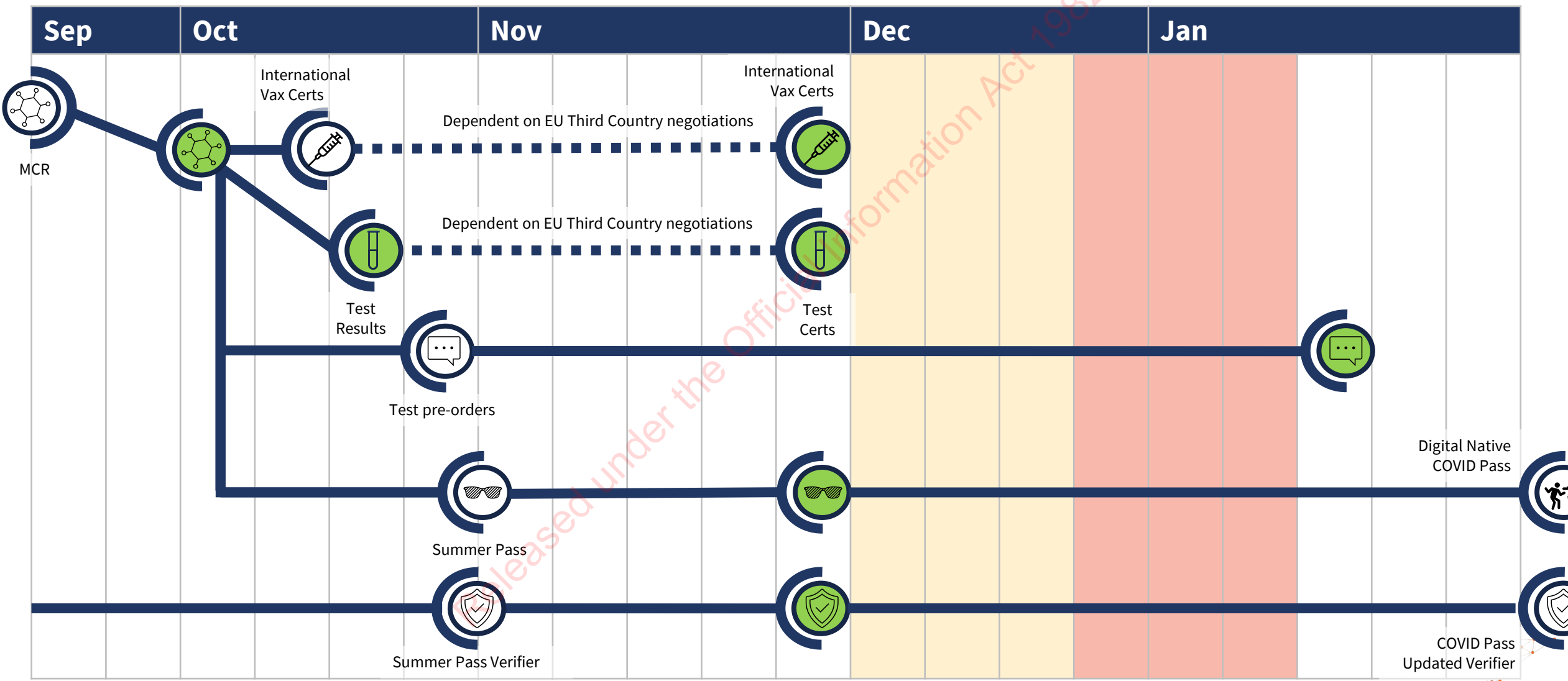
1. Consumer presents their NZ COVID Pass via smartphone or printed copy
2. Verifier scans with Verifier App
3. Verifier app checks the signature is authentic, and the certificate claims pass requirements
 - a. If the details are valid the verifier is shown enough detail to verify the holder's identity
 - b. If the signature is invalid, or the data doesn't meet requirements (e.g. it has expired) the verifier sees an error message

We could offer different requirements for different venue or event types or internal boundaries (e.g. fully vaccinated more than 14 days ago, vaccinated in the last 6 months, test completed in last 2 weeks, etc) **but simple is better.**

For Stage 1 it is incumbent on the verifier to confirm the identity of the consumer matches the details on the Pass. Stage 2 adds additional assurance and this step could be removed.



Roadmap



Closed Beta Version General Availability



Consumer experience – Stage 2

- The Stage 1 approach serves our immediate needs, but could be improved:
 - We can take advantage of our My Health Account and biometrics in the phone to remove the need for a consumer to have to provide a photo ID at the same time.
 - Further enhance privacy by allowing just-in-time disclosure of specific data to a verifier, while still having the certificate being digitally verifiable (known as Selective Disclosure).
- Both these features currently require that we develop a native smartphone app, and do not work for paper-based representations. This means they will only be available for digitally included cohorts.
- The supporting technology for this is complex, and while it works technically there's additional discovery work required to understand the UX implications and how we make it accessible to the general population.
- As we seek to reconnect New Zealand and eventually to run a containment approach and "flatten the curve" we will require greater automation and self-serve for management of people with Covid and at risk of Covid.
- Demand exists for self-serve capability for Covid services such as self isolation, contact tracing, daily health checks, test ordering and results, exemptions, adverse reactions and self-update of personal information.
- In this context Health would likely use My Health Account and My COVID Record to become the first and anchor implementation of the governments intended Digital Identity Trust Framework.
- There are strategic advantages in a generic Health App which has high uptake across the population. Longer term opportunities exist around population health services such as immunisations and screening.





Visit our
website to
learn more

www.digital.health.nz



Appendix 1: What about NZ COVID Tracer?

- NZ COVID Tracer is positioned as an **anonymous** digital diary for contact tracing. Accounts were removed in late 2020, and there are no strong ties to the identity of the user within the app.
- By their nature, health certificates require strong binding to a digital identity. This somewhat contradicts the privacy and anonymity stance of NZ COVID Tracer.
- We could implement a simple wallet, where you request the certificate outside app and simply use it as storage mechanism (fulfilling a similar function to the native iOS/Android wallets in Stage 1). This is the approach taken by the Republic of Ireland in COVID Tracker.
- However, when we get to Stage 2 we require an integration into My Health Account to be able to properly bind the certificate to a device. Doing this in COVID Tracer poses an interesting social licence question, would the public accept introducing a digital identity that requires an ID document to set up into COVID Tracer?
- There are additional developer rules that are levied by Apple/Google for apps that use Exposure Notifications, including restrictions on including personal details and strong identity binding. Some other countries have opted to implement vaccination certificates in a separate app due to this (e.g. NHS).



Appendix 2: PKI and Trust - Technical

- Certificates are digitally signed to prevent tampering and forgery. Verifiers need to obtain an official public key from the issuer (Ministry of Health) to verify the signature is authentic.
- Providing a secure way for verifiers to get this public key is essential to establishing trust in the system
- health.govt.nz is a recognised and trusted domain name within New Zealand, and verifiers can be confident that information published on health.govt.nz domains is authorised by the Ministry.
- Each certificate contains a reference to a health.govt.nz web address that contains the public key corresponding to the private key used to sign the certificate.
- Verifier apps only download this public key if its comes from health.govt.nz, using a valid SSL certificate.
- This model leverages existing web security standards, and is a known and established technology pattern, reducing security and compliance efforts.





Part 1: Request for Proposals

System for Digital COVID-19 Health
Certificates

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Section 6 : Definitions

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Section 1: Overview of this opportunity

1.1 Opportunity overview

This Request for Proposal (RFP) is an invitation to suitably qualified Respondents to submit a Proposal for the System for Digital COVID-19 Health Certificates opportunity. This system is to support the Ministry of Health to create and distribute digital verifiable health certificates related to COVID-19. These certificates can be issued to people who have received a COVID-19 vaccination, a COVID-19 test, or have proof of having recovered from COVID-19 in New Zealand.

This RFP is a closed competitive tender process. It is a single step procurement process.

Section 2: Instructions for preparing and submitting your Proposal

2.1 Format overview

This RFP contains several key documents. The following table provides an overview of these key documents.

RFP Part	Description
Part 1: Request for Proposals	Part 1 (this document) sets out our Requirements, instructions and the RFP process, terms and conditions.
Part 2: Proposal Response Form	This is provided for Respondents to use to complete their Proposal (except for their pricing response).

2.2 Timeline and events during this RFP

2.2.1 Timeline for Proposal development and submission

The following table provides the timeline for this RFP:

Event	Date
Deadline for Questions	14 July 2021 at 2:00pm
Deadline for Proposals	16 July 2021 at 2:00pm

All dates and times are dates and times in New Zealand. Any change in dates or times will be communicated by Liam McDonald

2.2.2 Offer Validity Period and finalisation of the Contract

Offer Validity Period:

In submitting a Proposal, the Respondent agrees that their offer will remain open for acceptance by the Ministry for 12 calendar months from the Deadline for Proposals.

2.3 Ministry Point of Contact and communications during this procurement

2.3.1 Respondent communications with the Ministry prior to the Deadline for Proposals

If you have a question about this RFP which arises prior to the Deadline for Proposals, submit your question to Liam McDonald (liam.mcdonald@health.govt.nz.).

Please note that it is a breach of the RFP-Terms to seek information through contacts other than our designated Point of Contact.

All questions about the RFP should be asked before the Deadline for Questions (although the Ministry may answer questions after this date at our discretion). See the RFP-Terms for more information about how the Ministry manages Respondent questions.

2.3.2 Contacting the Ministry following the Deadline for Proposals

If you need to communicate with us after the Deadline for Proposals (e.g. to inform us of conflict), please contact the Point of Contact using the following email address.

Email: liam.mcdonald@health.govt.nz

2.3.3 Informing you of any changes

If we make any changes to the RFP or the RFP process prior to the Deadline for Proposals, we will contact you through your point of contact.

2.4 Submission of your Proposal

2.4.1 Submission method

Submit your Proposal electronically to the point of contact – Liam McDonald – who will acknowledge receipt. Please ensure that:

- your Proposal is submitted on time and is complete (otherwise it may not be accepted)
- all documents provided as part of your Proposal are less than 50.0 MB
- you contact the Ministry Point of Contact promptly if there are extraordinary circumstances which are preventing submission.

2.4.2 Summary of documents to be submitted

Please note:

- the following table provides an overview of the documents that Respondents must provide
- all content that you would like to be evaluated should be addressed in the main body of your Proposal – please do not provide additional documents or embed hyperlinks.

Document	Instructions
Completed Part 2: Proposal Response Form	Submit your response (excluding price) using the Part 2: Proposal Response Form provided. You may use Microsoft Word or PDF format.
Completed Part 3: RFP Pricing Template	Submit pricing separately from your Part 2: Proposal Response Form. Submit your alternative pricing response in excel or Microsoft Word format.

Section 3: Our Requirements

3.1 Overview

The Ministry of Health's approach to technology considers the health system to be an ecosystem. As such as we proceed in with this procurement we will be considering how this solution fits with the Digital Health Strategic Framework and the role of Data and Digital in the health system. Our minimum requirements (<https://www.health.govt.nz/our-work/digital-health/digital-health-sector-architecture-standards-and-governance/digital-data-and-technology-services-minimum-requirements>) should provide respondents with some understanding of how we expect to work with others as we do our job.

Further we have established as a part of our response to COVID-19, a set of APIs for partner integrations (<https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-resources-and-tools/nz-covid-tracer-app/work-us-integrating-ministrys-contact-tracing-apis>). These APIs have associated documentation that describe our approach to working with partners and respondents should see this as an indicator of our intent over the medium to long term.

Increasingly countries are requiring proof of COVID-19 health status as part of measures that determine if, and with what conditions, a person may enter that country. Digital COVID-19 health certificates provide a verifiable means of proving vaccination status, a recent negative test result, and/or proof of recovery in this context.

The Ministry of Health has been evaluating a range of possible technology options for issuing digital COVID-19 health certificates for New Zealanders. There are many emerging international frameworks and standards, and the Ministry anticipates that multiple formats may be required to satisfy the requirements of different countries.

There are broadly two distinct aspects of a solution to create digital health certificates;

- a. the credential generator, which is responsible for assembling and formatting the data contained within the credential, aligned to the relevant standards for presentation and verification
- b. the trust framework and certificates to sign the credential so it can be verified by a relying party (e.g. an international border agency).

In late June the Ministry of Health, in collaboration other border agencies, completed a proof-of-concept and technical evaluation of two candidate certificate formats, the European Union Digital COVID Certificate (EUDCC) and the International Civil Aviation Organization Visual Digital Seal – Non Constrained (ICAO VDS-NC). This evaluation was to select candidate format to form the basis of an initial technical solution, with scope to incorporate or adjust to additional international standards as they emerge.

The EUDCC was selected as the initial credential format, using the existing NZ CSCA and ICAO PKD infrastructure and trust framework. Work will also continue investigating other formats, including the ICAO VDS-NC and alternative trust frameworks like the EUDCC Gateway.

This procurement is secure a partner to continue this work, establishing technology and infrastructure to;

- a. create EUDCC-compliant digital health certificates,
- b. integrate with the NZ CSCA and ICAO PKD

It is noted that precisely how this integration will work is subject to further discovery work, and it is expected that the successful partner will be an important contributor to the final solution design. Given the emergent nature of international standards, lack of formalised policy positions both internationally and domestically, and the pace the solution has been scoped, the Ministry must remain flexible to adapt the solution to meet new requirements as they become known.

The Ministry may see the final solution as a useful prelude to the use of Verifiable Credentials more broadly in the New Zealand health ecosystem. Respondents should consider in their response and in how they

partner with the Ministry, how the final solution deployed could be used in other ways to support the growth of verifiable credentials beyond this initial use case should that be required.

3.1.1 Capability required

The Ministry is seeking a partner with the capability to provide the following:

- Technology and infrastructure to generate compliant digital certificates, aligned to agreed international standards.
- Integration with or establishment of public key infrastructure for digital health certificates
- Operational support for software and the infrastructure supporting digital health certificates
- Expertise and an established track record in building and operating similar solutions
- Knowledge and experience with current and emerging standards for verifiable credentials within a health context, with specific interest in standards supporting COVID-19 health credentials.
- Expertise and an established track record in government/enterprise standards for securely managing private key material, trust frameworks, and supporting the establishment of governance for this.
- Existing organisational and technology accreditations, or an ability to be accredited against recognised security standards such as SOC 2 and/or ISO27001.

International requirements and standards are rapidly evolving and changing. The Ministry wants to work with a partner that can not only help with technical implementation, but to help assess this changing landscape and provide advice to ensure New Zealand remains adaptable to these changing needs.

3.1.2 Capacity required

The Ministry is seeking a partner with the necessary capacity to deliver to our immediate needs, while remaining flexible to scale up or down as required. Our indicative milestones are:

- a. A production-capable solution, including the ability to generate an EUDCC-compliant certificate, is available by the start of September 2021. This would mean the bulk of any development and integration activity will need to complete during August for user acceptance testing and security review procedures. This iteration is likely to initially be required to support a low volume of certificates being generated using assisted service channels (e.g. a Ministry of Health call centre).
- b. A fully functional production system, generating certificates on-demand from a range of self-service and assisted-service channels, in place by the start of November 2021, before the end of year change freeze.

These milestones are indicative and depend on several key workstreams and policy decisions. However, it is possible we may be required to move faster than outlined or you may be able to deliver more quickly than this. The Ministry expects the successful partner will be able to work collaboratively with us on what is reasonable within the time allowed, what opportunities exist to streamline or simplify delivery schedules, and what trade-offs may need to be made to accommodate accelerated timelines.

3.1.3 Commercial approach

Noting the flexibility needed in the solution capability and capacity, the Ministry expects this flexibility will need to extend to the commercial and pricing structure. This Ministry is open to proposals on a suitable commercial and pricing methodology. To help provide some guidance, respondents should take the following into account when preparing their response;

- a. For professional services and/or bespoke solutions, the Ministry will need to assess the resources being proposed, an approximate burn rate for those resources on a weekly basis (based on a rate card), and an approximate number of weeks those resources would be needed to complete their objectives.
- b. For Software-as-a-Service and/or turnkey solutions, the Ministry prefers a pricing model that is up-front rather than 'pay-as-you-go'. If pricing is based on a volume basis, a breakdown of expected costs at different volumes, e.g. 500k, 1m, 3m, 10m certificates, should be provided.

- c. Pricing information is requested to help inform financial planning and forecasting; however the Ministry acknowledges that it may be difficult to provide fixed pricing. On this basis, we are looking for estimates of overall costs, broken down by upfront investment and ongoing operational support on a monthly basis.

3.2 Information about the solution required

3.2.1 Digital COVID-19 Health Certificate generation service

Key Requirements

The Ministry has identified the following requirements:

1. Technology and infrastructure to generate and manage the generation of compliant digital certificates, aligned to agreed and emerging international standards. This could be provided as a bespoke solution, or an existing product or service that meets our requirements. This includes:
 - a. API(s) and documentation required for external services to call with the required data elements in order to create a compliant certificate, or an appropriate error message if incorrect or invalid data is provided.
 - b. Supporting technology infrastructure that the solution is deployed to. The solution will need to support being deployed into:
 - i. one of the Ministry's current approved Cloud Environments (Amazon Web Services or Microsoft Azure), and subject to existing security and configuration standards, or
 - ii. a similar dedicated hosting environment that meets standard Government cloud security standards. If the solution is provided as Software-as-a-Service, it is preferred that the solution is not multi-tenant or that guarantees can be made that Ministry data will not be mixed with other customers.
 - c. API(s) will need to support being served behind the Ministry of Health API Gateway
2. Operational support for the software and infrastructure that will create and manage digital health certificates. The Ministry does not currently have capacity to manage the ongoing operation and maintenance of the solution directly. This support includes:
 - a. Performance monitoring and uptime reporting
 - b. On-call and reactive support for production incidents and downtime
 - c. Proactive maintenance and software patching to ensure the solution remains secure and up to date
 - d. Integration into Ministry change control and incident management processes
 - e. A service desk for technical support query escalations that front-line support teams can't resolve directly.
3. Expertise and an established track record building and operating similar solutions. We are looking for partners that can demonstrate previous experience developing or running a solution that;
 - a. can generate verifiable credentials
 - b. record relevant audit information for each credential for compliance purposes
 - c. support multiple credential formats depending on the use case
 - d. support integrations with multiple different front ends
4. Knowledge and consultancy on current and emerging standards for verifiable credentials within a health context, with specific interest in standards supporting COVID-19 health credentials. Alongside our existing engagement channels, we are looking for partners that can demonstrate knowledge and expertise in;
 - a. the WHO DDCC and SVC working groups

- b. the ICAO VDS-NC and supporting standards
 - c. the EUDCC framework and gateways
 - d. the Good Health Pass and Global Covid Certificate Network
5. Expertise and an established track record in government/enterprise standards for securely managing private key material, trust frameworks, and supporting governance. The Ministry does not have a formalised PKI Strategy at this stage, although work is underway. It is anticipated these two streams of work will influence each other.
 6. Existing organisational and technology accreditations, or an ability to be accredited) against recognised security standards such as SOC 2 and/or ISO27001. Given restricted timelines this accreditation helps to streamline our security and compliance processes

Key deliverables

Specific deliverables for the initial release include:

1. API interface(s) and pipelines to create a health certificate aligned to agreed standards
2. Documentation for the API interfaces(s) for other development teams to integrate with
3. Solution architecture documentation for review and acceptance and as-built documentation for the end to end solution

Additional information

The following assumptions were used to inform the key requirements:

- Must support paper-based representation (i.e. it can be printed and carried around)
- Must support being electronically verified offline (i.e. an active network connection or lookup is not required)
- Should be forwards compatible with being stored in a digital wallet, e.g. Apple Wallet on iOS
- Must support post-event (re)issuing, and should support revocation (with known offline limitations)
- Must be verifiable by other government border agencies, using a trusted PKD (Public Key Directory)
- Must be verifiable by NZ border agencies, ie. it should be scannable at a NZ Idemia SmartGate
- Any technology we develop now should have APIs that other third party applications can use to deliver the same functions consistent with our architecture standards (<https://www.health.govt.nz/our-work/digital-health/digital-health-sector-architecture-standards-and-governance/health-sector-architecture-resources>)
- Focus on the areas we can control today, and ensure the solution is flexible to adjust to changing international and domestic requirements
- The solution should be consistent with our current and planned Health Information Standards
- Anything people or process related that needs change at a vaccination or testing event will require a decent lead time and thorough assessment of operational, equity, accessibility, and inclusion impacts.

The Ministry has noted the following goals of an initial version of this solution:

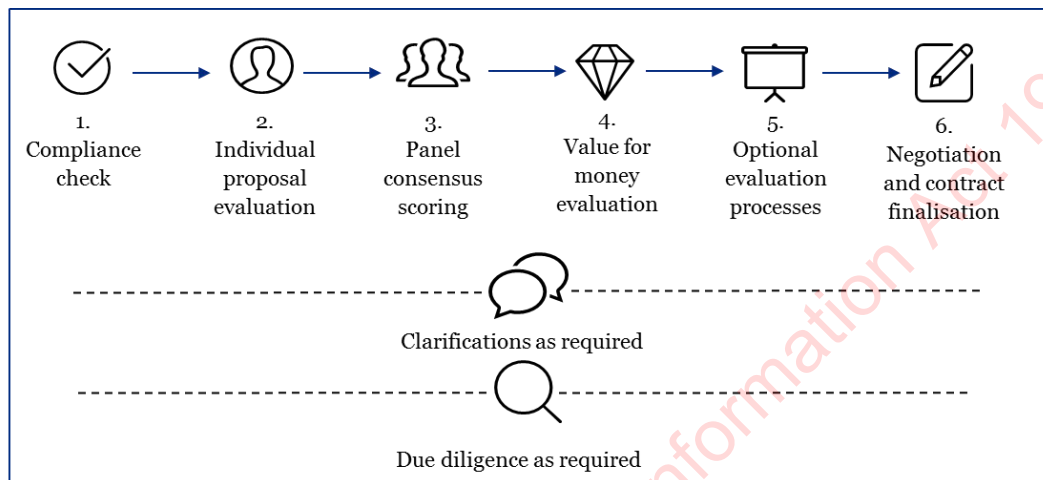
- Meets the assumptions listed above
- Provide a good-enough way for people to get or request a copy of their vaccination certificate that;
 - Prioritises self-service over assisted-service, to reduce the operational impacts on the health system.
 - Provides a way to get a health certificate via non-digital means.
- The certificate meets initial agreed standards, with flexibility to accommodate other certificate formats in the future as needed.
- The solution will ideally replace the current manual Privacy Act letter process as soon as possible

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Section 4: Evaluation Approach and selection processes

4.1 Selection process overview

The following diagram provides an overview of our general approach to selecting the Successful Respondent. Further explanation is provided about each step in the rest of this section.



4.1.1 Compliance check

We will check that your Proposal is complete and is received on time. Late or incomplete Proposals may be excluded.

4.1.2 Individual evaluation

Evaluators will undertake an individual review and assessment of your Proposal against the evaluation criteria in the table below.

Questions that relate to these criteria are listed in the Response Form. Your response to these questions will be scored against the evaluation criteria as part of the initial evaluation of your Proposal.

Please pay careful attention to our evaluation questions in the Response Form and any additional information provided with the evaluation questions.

Evaluation criteria	Weighting
1. Solution (Capability)	60%
2. Capacity	20%
3. Price	20%
Total	100%

4.1.3 Scoring scale

Evaluation against the evaluation criteria will be supported by the following scoring scale. The scoring scale gives a sense of the features commonly considered when assessing Proposals. This does not limit the range of relevant considerations that we may take into account in evaluating your Proposal against our evaluation criteria.

Score	Indicative features	Confidence
5 Excellent	Significant strengths and comprehensive evidence that the Respondent can meet the Requirements. Exhibits outstanding capability, knowledge, creativity, innovation or other factors which establish excellent performance. No material weaknesses.	Very high
4 Strong	Provides significant evidence that the Respondent can meet the Requirements. Shows significant strengths relevant to the evaluation criteria.	High
3 Some strengths	The Proposal provides sufficient evidence to clearly substantiate that the Respondent can meet the Requirements and demonstrates some strengths in relation to the evaluation criteria	Confident
2 Acceptable	The Proposal provides evidence that the Respondent can meet the Requirements. There are some reservations or matters that are not clearly substantiated.	Mostly confident
1 Reservations	The Proposal demonstrates that the Respondent can partially meet the Requirements, but does not provide sufficient evidence to overcome reservations.	Low
0 Unacceptable	The Proposal meets very few to none of the Requirements. There is insufficient evidence to overcome major reservations.	Very low/no confidence

4.1.4 Panel consensus

Following individual evaluation, the evaluation panel will meet, discuss their individual assessment against the evaluation criteria, and seek to reach a shared panel understanding of the strengths and weaknesses of your Proposal.

This is an initial score, and may be revised by the panel as clarifications or further evaluation processes occur. Respondents that are assessed as being able to sufficiently meet the Requirements will be taken through to the next stages of the evaluation.

4.1.5 Value for money evaluation

A value for money analysis will be conducted. The assessment is focused on a consideration of the qualitative differences between Proposals and the cost implications of the different options put forward by Respondents. The purpose is to decide which Proposal offers the best value for money over the whole-of-life of the goods or services. At this stage of the process, the Respondent's Pricing will be reviewed as a component of this assessment.

Please note:

- value for money evaluation may include consideration of all relevant matters, including the combination of qualitative benefits, risks and costs to the Ministry
- costs considered may include anything relevant to the total cost to the Ministry, such as costs that will need to be incurred in order to transition to, or manage, the different shortlisted Proposals, and the sustainability of the pricing
- we may also take into account the impacts of any proposed changes to our contract.

4.1.6 Other due diligence

In addition to reviewing your due diligence declaration in the Response Form and speaking to your nominated referees, we may assess additional information to verify that it is appropriate for us to proceed to contract. We may take into account any information from any source (including information held by the Ministry) and conduct due diligence at any time during the selection process.

We may exclude a Respondent at any time if there is evidence of a good reason to do so, or take the information attained into account during the selection process. Please refer to the RFP – Terms and Conditions for more information.

4.1.7 Negotiation and Contract finalisation

The Ministry may invite one or more Respondents to negotiate with the Ministry.

Released under the Official Information Act 1982

Section 5: RFP Process, Terms and Conditions

Standard RFP process

5.1 Preparing a Proposal

- 5.1.1 Respondents are to use the Response Form provided and include all information requested by the Ministry in relation to the RFP.
- 5.1.2 By submitting a Proposal the Respondent accepts that it is bound by the RFP Process, Terms and Conditions (RFP - Terms) contained in this Section 5.
- 5.1.3 Each Respondent will:
- i. examine the RFP and any documents referenced in the RFP and any other information provided by the Ministry
 - ii. consider all risks, contingencies and other circumstances relating to the delivery of the Requirements and include adequate provision in its Proposal to manage such risks and contingencies
 - iii. document in its Proposal all assumptions and qualifications made about the delivery of the Requirements, including any assumption that the Ministry or a third party will deliver any aspect of the Requirements or incur any cost related to the delivery of the Requirements
 - iv. ensure that pricing information is quoted in NZ\$ exclusive of GST
 - v. if appropriate, obtain independent advice before submitting a Proposal
 - vi. satisfy itself as to the correctness and sufficiency of its Proposal, including the proposed pricing and the sustainability of the pricing.
- 5.1.4 There is no expectation or obligation for Respondents to submit Proposals in response to the RFP solely to remain on any prequalified or registered supplier list. Any Respondent on such a list will not be penalised for failure to submit a Proposal.

5.2 Joint Proposals

- 5.2.1 Respondents may submit a Joint Proposal provided that the Joint Proposal complies with the RFP-Terms and the instructions in the RFP documents (including the Response Form).
- 5.2.2 If a Joint Proposal is successful, the Ministry may:
- i. contract with a lead Respondent only (i.e., so that the lead Respondent is liable to the Ministry for delivering all Requirements under the Contract, and/or
 - ii. require that the parties to the Joint Proposal be jointly and severally liable under the Contract/s, and/or
 - iii. contract individually with each Respondent to a Joint Proposal.

5.3 Offer Validity Period

- 5.3.1 Proposals are to remain valid and open for acceptance by the Ministry for the Offer Validity Period.

5.4 Respondents' Questions

- 5.4.1 Each Respondent should satisfy itself as to the interpretation of the RFP. If there is any perceived ambiguity or uncertainty in the RFP document/s, Respondents should seek clarification before the Deadline for Questions.

- 5.4.2 All requests for clarification must be made to the point of contact or by email to the Ministry's Point of Contact (refer to the process for asking questions about the RFP that is set out in Section 2.2.2).
- 5.4.3 The Ministry may provide details of the question and answer to other Respondents. In doing so the Ministry may summarise the Respondent's question and will not disclose the Respondent's identity. The question and answer may be emailed to participating Respondents. A Respondent may withdraw a request at any time prior to the Ministry posting the question and answer.
- 5.4.4 In submitting a request for clarification a Respondent is to indicate, in its request, any information that is commercially sensitive. The Ministry will not publish such commercially sensitive information. However, the Ministry may modify a request to eliminate such commercially sensitive information, and publish this and the answer where the Ministry considers it of general significance to all Respondents. In this case, the Respondent may be given an opportunity to withdraw the request or remove the commercially sensitive information.

5.5 Submitting a Proposal

- 5.5.1 Each Respondent is responsible for ensuring that its Proposal is received by the Ministry at the correct address on or before the Deadline for Proposals. The Ministry will acknowledge receipt of each Proposal.
- 5.5.2 The Ministry intends to rely on the Respondent's Proposal and all information provided by the Respondent (e.g. correspondence and negotiations). In submitting a Proposal and communicating with the Ministry, each Respondent must ensure that all information it provides to the Ministry is:
- i. true, accurate and complete, and not misleading in any material respect
 - ii. does not contain Intellectual Property that will breach a third party's rights.
- 5.5.3 Where the Ministry requires the Proposal to be delivered in hard and soft copies, the Respondent is responsible for ensuring that both the hard and soft copies are identical.
- 5.5.4 If the Ministry requires a two envelope RFP process, the following applies:
- i. each Respondent must ensure that all financial information and pricing components of its Proposal are provided separately from the remainder of its Proposal
 - ii. financial information and pricing must be contained either in a separate sealed envelope or as a separate soft copy file (whichever option has been requested by the Ministry)
 - iii. the pricing information must be clearly marked 'Financial and Pricing Information.' This is to ensure that the pricing information cannot be viewed when the package containing the other elements of the Proposal is opened.
- 5.5.5 If after submitting a Proposal a Respondent notices an inaccuracy in its Proposal, it must notify the Ministry's Point of Contact immediately. The Respondent must also notify the Ministry's Point of Contact during the RFP process if it becomes aware of relevant or material information in the Proposal that has changed since the time the Proposal was submitted.

5.6 Evaluation panel

- 5.6.1 The Ministry will convene an evaluation panel comprising members chosen for their relevant expertise and experience. In addition, the Ministry may consult or invite independent advisors or Ministry advisors to evaluate any Proposal or any aspect of any Proposal, or to make decisions that may influence the outcome of the RFP (such as the preferred service mix).
- 5.6.2 As panel members and advisors are chosen for their relevant expertise and experience, they may have some previous knowledge of Respondents or experience with the Respondents in a professional capacity. Panel members and advisors may apply this knowledge to the evaluation or due diligence processes.

5.7 Third party information

- 5.7.1 Each Respondent authorises the Ministry to collect additional information, except commercially sensitive pricing information, from any relevant third party (such as a referee or a previous or existing client) and to use that information as part of its evaluation of the Respondent's Proposal.
- 5.7.2 Each Respondent is to ensure that all referees listed in support of its Proposal agree to provide a reference.
- 5.7.3 To facilitate discussions between the Ministry and third parties each Respondent waives any confidentiality obligations that would otherwise apply to information held by a third party, with the exception of commercially sensitive pricing information.

5.8 Ministry's clarification

- 5.8.1 The Ministry may, at any time, request from any Respondent clarification of its Proposal as well as additional information about any aspect of its Proposal. The Ministry is not required to request the same clarification or information from each Respondent.
- 5.8.2 The Respondent must provide the clarification or additional information in the format requested. Respondents will endeavour to respond to requests in a timely manner. The Ministry may take such clarification or additional information into account in evaluating the Proposal.
- 5.8.3 Where a Respondent fails to respond adequately or within a reasonable time to a request for clarification or additional information, the Ministry may cease evaluating the Respondent's Proposal and may eliminate the Proposal from the RFP process.

5.9 Evaluation

- 5.9.1 A general description and overview of the Ministry's evaluation and selection processes is set out in Section 4. The Ministry may amend this process, including expanding or reducing aspects of the evaluation and selection process, as the Ministry considers appropriate in the circumstances.
- 5.9.2 The Ministry bases its evaluation on the Proposals submitted in response to the RFP, but may also adjust its evaluation of a Proposal following consideration of any clarification, relevant additional information, or due diligence.
- 5.9.3 While the weighted evaluation criteria set out in Section 4 are provided to support Respondents to develop their responses, the Ministry's decision regarding the preferred Respondent/s to award the Contract may take into account any additional matters or information relevant to determining which Respondent/s both:
- i. demonstrate full understanding of the Requirements, and capability to fully deliver the Requirements and meet the terms and conditions of the Proposed Contract, and
 - ii. offer the best value-for-money over the whole-of-life of the goods or services (or, if price is the only criterion, offer the lowest price).
- 5.9.4 In deciding the preferred Respondent/s to award a Contract, additional matters or information the Ministry may take into account include, but are not limited to:
- i. the results from reference checks, site visits, product testing, health and safety reviews, and any other due diligence
 - ii. the ease of contracting with a Respondent based on that Respondent's feedback on the Proposed Contract
 - iii. any matter that materially impacts on the Ministry's trust and confidence in the Respondent
 - iv. any other relevant information that the Ministry may have in its possession.
- 5.9.5 While the Ministry is still in the process of evaluating Proposals or negotiating a Contract, the Ministry generally will not make public the names of shortlisted or preferred Respondents.

5.10 Negotiations

- 5.10.1 The Ministry may invite any Respondent/s to enter into negotiations.
- 5.10.2 The Ministry may initiate consecutive or concurrent negotiations with more than one Respondent. Where the Ministry decides to enter concurrent negotiations regarding competing Proposals, the Ministry will hold separate negotiation meetings in relation to each Proposal.
- 5.10.3 Where the outcome or state of negotiations is unsatisfactory to the Ministry, it may discontinue (for a period) or end negotiations with any Respondent/s, and may initiate negotiations with any other Respondent/s.
- 5.10.4 Being invited to enter negotiations, or participating in negotiations, does not constitute acceptance by the Ministry of the Respondent's Proposal or imply or create any obligation on the Ministry to award a Contract for delivery of the Requirements to any Respondent/s.

5.11 Respondent's debrief

- 5.11.1 The Ministry will offer all Respondents the opportunity to request a debrief. Each Respondent will have 30 Business Days, from the date of offer, to request a debrief. When a Respondent requests a debrief, the Ministry will provide the debrief within 30 Business Days of the date of the request, or of the date the Contract is signed by all parties, whichever is later.
- 5.11.2 The debrief may be provided by letter, email, phone or at a meeting. The debrief will:
- i. provide the reasons why the Proposal was or was not successful
 - ii. explain how the Proposal performed against the pre conditions (if applicable) and the evaluation criteria
 - iii. indicate the Proposal's relative strengths and weaknesses
 - iv. explain, in general terms, the relative advantage/s of the successful Proposal
 - v. seek to address any concerns or questions from the Respondent
 - vi. seek feedback from the Respondent on the RFP and the RFP process.

5.12 Notification of outcome

- 5.12.1 At any point after conclusion of negotiations, but no later than 30 Business Days after the date the Contract is signed by all parties, the Ministry will inform all unsuccessful Respondents of the name of the Successful Respondent, if any. The Ministry may make public the name of the Successful Respondent and any unsuccessful Respondent.

5.13 Issues and complaints

- 5.13.1 A Respondent may, in good faith, raise with the Ministry any issue or complaint about the RFP, or the RFP process at any time.
- 5.13.2 The Ministry will consider and respond promptly and impartially to the Respondent's issue or complaint.
- 5.13.3 Both the Ministry and Respondent agree to act in good faith and use their best endeavours to resolve any issue or complaint that may arise in relation to the RFP.
- 5.13.4 The fact that a Respondent has raised an issue or complaint will not be used by the Ministry to unfairly prejudice the Respondent's ongoing participation in the RFP process or future contract opportunities.

Standard RFP conditions

5.14 Ministry's Point of Contact

- 5.14.1 All communications regarding the RFP must be directed to the Ministry's Point of Contact^{2.2.2}. Respondents must not directly or indirectly approach any other Ministry representative or person related to the Ministry to solicit information concerning any aspect of the RFP.
- 5.14.2 Only the Point of Contact, and any other person authorised by email to the Respondent, are authorised to communicate with Respondents regarding any aspect of the RFP. The Ministry will not be bound by any statement made by any other person.
- 5.14.3 The Ministry may change the Point of Contact at any time. The Ministry will notify Respondents of any such change. This notification may be sent by email.
- 5.14.4 Where a Respondent has an existing contract with the Ministry then business as usual communications, for the purpose of managing delivery of that contract, will continue using the usual contacts (unless otherwise advised in writing by the Ministry). Respondents must not use business as usual contacts to lobby the Ministry, solicit information or discuss aspects of the RFP.

5.15 Conflict of Interest

- 5.15.1 Each Respondent must complete the Conflict of Interest declaration in the Response Form and must immediately inform the Ministry should a Conflict of Interest arise during the RFP process. A material Conflict of Interest may result in the Respondent being disqualified from participating further in the RFP, or being required to agree to an appropriate process for managing the Conflict of Interest as a condition of further participation in the RFP process.

5.16 Ethics

- 5.16.1 Respondents must not attempt to influence or provide any form of personal inducement, reward or benefit to any representative of the Ministry in relation to the RFP.
- 5.16.2 A Respondent who attempts to do anything prohibited by paragraphs 5.14.1, 5.14.4 and 5.16.1 may be disqualified from participating further in the RFP process.
- 5.16.3 The Ministry reserves the right to require additional declarations, or other evidence from a Respondent, or any other person, throughout the RFP process to ensure probity of the RFP process.

5.17 Anti-collusion and bid rigging

- 5.17.1 Respondents must not engage in collusive, deceptive or improper conduct in the preparation of their Proposals or other submissions or in any discussions or negotiations with the Ministry. Such behaviour will result in the Respondent being disqualified from participating further in the RFP process. In submitting a Proposal the Respondent warrants that its Proposal has not been prepared in collusion with a Competitor.
- 5.17.2 The Ministry reserves the right, at its discretion, to report suspected collusive or anti-competitive conduct by Respondents to the appropriate authority and to give that authority all relevant information including a Respondent's Proposal.
- 5.17.3 A Joint Proposal must not be used as a cover for price fixing between Competitors. Respondents must ensure that their Proposal does not breach the Commerce Act or other restrictions on anti-competitive conduct.

5.18 Confidential Information

- 5.18.1 The Ministry and Respondent will each take reasonable steps to protect Confidential Information and, subject to paragraphs 5.18.3 and 5.24.3 and without limiting any confidentiality undertaking agreed between them, will not disclose Confidential Information to a third party without the other's prior written consent.

5.18.2 The Ministry and Respondent may each disclose Confidential Information to any person who is directly involved in the RFP process on its behalf, such as officers, employees, consultants, contractors, professional advisors, evaluation panel members, partners (including a partnering party in a Joint Proposal), principals or directors, but only for the purpose of participating in the RFP.

5.18.3 Respondents acknowledge that the Ministry's obligations under paragraph 5.18.1 are subject to requirements imposed by the Official Information Act 1982 (OIA), the Privacy Act 1993, parliamentary and constitutional convention and any other obligations imposed by law. The Ministry will not be in breach of its obligations if Confidential Information is disclosed by the Ministry as a result of its legal obligations, disclosed to the appropriate authority because of suspected collusive or anti-competitive tendering behaviour, or disclosed as part of the Ministry's due diligence process of validating information. Where the Ministry receives an OIA request that relates to a Respondent's Confidential Information, the Ministry may consult with the Respondent and ask the Respondent to explain why the information is considered by the Respondent to be confidential or commercially sensitive, and what predicted harm or prejudice would likely result from its release.

5.19 Confidentiality of RFP information

5.19.1 For the duration of the RFP, to the date of the announcement of the Successful Respondent, or the end of the RFP process, the Respondent agrees to keep the RFP strictly confidential and not make any public statement to any third party in relation to any aspect of the RFP, the RFP process or the award of any Contract without the Ministry's prior written consent.

5.19.2 A Respondent may disclose RFP information to any person described in paragraph 5.18.2 but only for the purpose of participating in the RFP. The Respondent must take reasonable steps to ensure that such recipients do not disclose Confidential Information to any other person or use Confidential Information for any purpose other than responding to the RFP.

5.20 Costs of participating in the RFP process

5.20.1 Each Respondent will meet its own costs associated with the preparation and presentation of its Proposal and any negotiations.

5.21 Ownership of documents

5.21.1 The RFP and its contents remain the property of the Ministry. All Intellectual Property rights in the RFP remain the property of the Ministry or its licensors. The Ministry may request the immediate return or destruction of any or all RFP documents and any copies. Respondents must comply with any such request in a timely manner.

5.21.2 All documents forming the Proposal will, when delivered to the Ministry, become the property of the Ministry. Proposals will not be returned to Respondents at the end of the RFP process.

5.21.3 Ownership of Intellectual Property rights in the Proposal remain the property of the Respondent or its licensors. However, the Respondent grants to the Ministry a non-exclusive, non-transferable, perpetual licence to retain, use, copy and disclose information contained in the Proposal for any purpose related to the RFP process.

5.21.4 Each Respondent warrants that its Proposal does not contain any Intellectual Property that will breach a third party's rights, or that would be infringed if the Ministry exercises its license (set out in paragraph 5.21.3 above).

5.22 No binding legal relations

5.22.1 Neither the RFP, nor the RFP process, creates a process contract between the Ministry and any Respondent. The RFP and RFP process also do not create any legal obligation between the Ministry and any Respondent, except in respect of:

- i. the Respondent's declarations in its Proposal
- ii. the Offer Validity Period

- iii. the Respondent's statements, representations and/or warranties in its Proposal and in its correspondence and negotiations with the Ministry
- iv. the standard RFP conditions set out in paragraphs 5.14 to 5.28
- v. any additional separate written agreement signed by both the Ministry and the Respondent in relation to the RFP process that is intended by both parties to be binding (e.g., a separate Confidentiality Agreement).

5.22.2 Each exception in paragraph 5.22.1 is subject only to the Ministry's reserved rights in paragraph 5.25.

5.22.3 Except for the legal obligations set out in paragraph 5.22.1 no legal relationship is formed between the Ministry and any Respondent unless and until a Contract is entered into between those parties.

5.23 Elimination

5.23.1 The Ministry may exclude a Respondent from participating in the RFP if there is a good reason for exclusion and the Ministry has evidence supporting the reason. Reasons for exclusion include, but are not limited to:

- i. the Respondent has failed to provide all information requested, or in the correct format, or has materially failed to comply with a term or condition of the RFP
- ii. the Proposal contains a material error, omission or inaccuracy
- iii. the Respondent is in bankruptcy, receivership or liquidation
- iv. the Respondent has made a false declaration
- v. there is a serious performance issue in a historic or current contract delivered by the Respondent
- vi. the Respondent has been convicted of a serious crime or offence
- vii. there is professional misconduct, or an act or omission on the part of the Respondent which adversely reflects on the integrity of the Respondent
- viii. the Respondent has failed to pay taxes, duties or other levies
- ix. the Respondent represents a threat to national security or the confidentiality of sensitive government information
- x. the Respondent is a person or organisation designated as a terrorist by New Zealand Police.

5.24 Due diligence

5.24.1 The Ministry may conduct due diligence. The Ministry is not obliged to conduct the same enquiries or the same level of enquiry with every Respondent. Due diligence enquiries may be made at any stage of the RFP process.

5.24.2 In undertaking due diligence, the Ministry may seek additional information from any source, including information known to the Ministry, its advisors, staff or evaluation panel members, and information from third parties.

5.24.3 To facilitate the conduct of due diligence, the Respondent waives any confidentiality obligations that would otherwise apply to the information, with the exception of commercially sensitive pricing information. By participating in this RFP, the Respondent consents to the Ministry disclosing the following for the purpose of conducting due diligence:

- i. the Respondent's identity
- ii. that the Ministry is conducting due diligence as part of a procurement process
- iii. any representations made in the Proposal (including in documents marked as confidential or commercially sensitive) which the person being contacted as part of the due diligence enquiry could reasonably be expected to validate or provide information about, other than commercially sensitive pricing information.

- 5.24.4 Depending on the nature and severity of any issues identified as part of due diligence, the Ministry may exercise its discretion as to the appropriate response. This may include, but is not limited to:
- i. if the Ministry considers there is a good reason for exclusion and the Ministry has evidence supporting that reason (refer to paragraph 5.23 above, which lists examples of reasons for exclusion), excluding the Respondent at any time
 - ii. if the issue or information is relevant to evaluation matters, taking this into account in the Ministry's evaluation or decisions regarding contracting
 - iii. if the Ministry considers that the matter is not sufficiently relevant or material to the RFP, deciding not to take the issue into account or not to exclude the Respondent.
 - iv. Respondents accept that the Ministry's due diligence processes may include gathering information from persons who provide that information subject to an obligation of confidence. The Ministry may withhold information from Respondents where there is a good reason to do so. This includes, for example, circumstances where the information was provided subject to an obligation of confidence, or where the disclosure of evaluative material would breach an express or implied promise to the person supplying it that their identity or the information would be held in confidence.

5.25 Ministry's additional rights

- 5.25.1 Despite any other provision in the RFP the Ministry may, on giving due notice to Respondents:
- i. amend, suspend, cancel and/or re-issue the RFP, or any part of the RFP
 - ii. make any material change to the RFP (including any change to the timeline, Requirements or Evaluation Approach) on the condition that Respondents are given a reasonable time within which to respond to the change.
- 5.25.2 Despite any other provision in the RFP the Ministry may, at its discretion:
- i. accept a late Proposal if it is the Ministry's fault that it is received late
 - ii. accept a late Proposal in exceptional circumstances if it considers that there is no material prejudice to other Respondents. The Ministry will not accept a late Proposal if it considers that there is risk of collusion on the part of a Respondent, or the Respondent may have knowledge of the content of any other Proposal
 - iii. answer a question submitted after the Deadline for Questions, if applicable
 - iv. accept or reject any Proposal or part of a Proposal
 - v. accept or reject any non-compliant, non-conforming, amended, clarified or alternative Proposal
 - vi. accept a proposal that is not the lowest priced or highest ranked conforming Proposal
 - vii. decide not to enter into a Contract with any Respondent
 - viii. liaise or negotiate with any Respondent without disclosing this to, or doing the same with, any other Respondent
 - ix. provide or withhold from any Respondent information in relation to any question arising in relation to the RFP
 - x. amend the Proposed Contract at any time, including during negotiations with a shortlisted Respondent (this may also include the Ministry using a different template than the initial Proposed Contract)
 - xi. waive irregularities or requirements in or during the RFP process, or provide any Respondent an opportunity to correct irregularities, where the Ministry considers it appropriate and reasonable to do so.
- 5.25.3 The Ministry may, at its discretion, appoint either a single or multiple Respondents to deliver the Requirements. The Ministry may also request that a Respondent/s agrees to the Ministry:
- i. selecting any individual element/s of the Requirements that is offered in a Proposal and capable of being delivered separately, unless the Proposal specifically states that the Proposal, or elements of the Proposal, are to be taken collectively

- ii. selecting two or more Respondents to deliver the Requirements as a joint venture or consortium
- iii. in relation to a Joint Proposal, selecting only one or some of the parties to the Joint Proposal to deliver the Requirements, or elements of the Requirements or Joint Proposal that are capable of being delivered separately
- iv. having the Respondent/s from one Proposal (or Joint Proposal) work with another Respondent/s or party to deliver the Requirements.

5.26 New Zealand law

- 5.26.1 The laws of New Zealand shall govern the RFP and each Respondent agrees to submit to the exclusive jurisdiction of the New Zealand courts in respect of any dispute concerning the RFP or the RFP process.

5.27 Disclaimer

- 5.27.1 The Ministry will not be liable in contract, tort, equity, or in any other way whatsoever for any direct or indirect damage, loss or cost incurred by any Respondent or any other person in respect of the RFP process.
- 5.27.2 Nothing contained or implied in the RFP, or RFP process, or any other communication by the Ministry to any Respondent shall be construed as legal, financial or other advice. The Ministry has endeavoured to ensure the integrity of such information. However, it has not been independently verified and may not be up to date.
- 5.27.3 To the extent that liability cannot be excluded, the maximum aggregate liability of the Ministry, its agents and advisors is \$1.

5.28 Precedence

- 5.28.1 Any conflict or inconsistency in the RFP shall be resolved by giving precedence in the following descending order:
- i. Section 5 (RFP-Terms)
 - ii. all other Sections of this RFP document
 - iii. any additional information or document provided by the Ministry to Respondents through the Ministry's Point of Contact .
- 5.28.2 If there is any conflict or inconsistency between information or documents having the same level of precedence the later information or document will prevail.

Section 6: Definitions

In relation to the RFP the following words and expressions have the meanings described below.

Business Day	Any week day in New Zealand, excluding Saturdays, Sundays, New Zealand (national) public holidays and all days from Boxing Day up to and including the day after New Year's Day.
Ministry	The Ministry of Health. The term 'Ministry' includes its officers, employees, contractors, consultants, agents and representatives.
Competitors	Any other business that is in competition with a Respondent either in relation to the goods or services sought under the RFP or in general.
Confidential Information	<p>Information that:</p> <ol style="list-style-type: none"> a. is by its nature confidential b. is marked by either the Ministry or a Respondent as 'confidential', 'commercially sensitive', 'sensitive', 'in confidence', 'top secret', 'secret', classified' and/or 'restricted' c. is provided by the Ministry, a Respondent, or a third party in confidence d. the Ministry or a Respondent knows, or ought to know, is confidential. <p>Confidential information does not cover information that is in the public domain through no fault of either the Ministry or a Respondent.</p>
Conflict of Interest	<p>A Conflict of Interest arises if a Respondent's personal or business interests or obligations do, could, or could be perceived to, conflict with its obligations to the Ministry under the RFP or in the provision of the goods or services. It means that the Respondent's independence, objectivity or impartiality can be called into question. A Conflict of Interest may be:</p> <ol style="list-style-type: none"> a. actual: where the conflict currently exists b. potential: where the conflict is about to happen or could happen, or c. perceived: where other people may reasonably think that a person is compromised.
Contract	The written Contract/s entered into by the Ministry and Successful Respondent/s for the delivery of the Requirements.
Contract Award Notice	A notice published on GETS pursuant to Rule 46 of the Government Procurement Rules when an agency has awarded a contract that is subject to the Rules.
Deadline for Proposals	The deadline that Proposals are to be delivered or submitted to the Ministry as stated in Section 2.2.
Deadline for Questions	The deadline for suppliers to submit questions to the Ministry as stated in Section 2.2, if applicable.

Evaluation Approach	The approach used by the Ministry to evaluate Proposals as described in Section 4 and in Section 5.
GETS	Government Electronic Tenders Service available at www.gets.govt.nz
GST	The goods and services tax payable in accordance with the New Zealand Goods and Services Tax Act 1985.
Joint Proposal	A Proposal in which multiple Respondents propose to deliver the Requirements jointly.
Joint Respondents	Each Respondent to a Joint Proposal
Intellectual Property	All intellectual property rights and interests, including copyright, trademarks, designs, patents and other proprietary rights, recognised or protected by law.
Offer Validity Period	The period of time when a Proposal (offer) is held open by the Respondent for acceptance by the Ministry as stated in Section 2.2.
Point of Contact	The Ministry and each Respondent are required to appoint a Point of Contact. This is the channel to be used for all communications during the RFP process. The Ministry's Point of Contact is identified in Section 2.2.2. The Respondent's Point of Contact is identified in its Proposal.
Price	The total amount, including all costs, fees, expenses and charges, to be charged by the Successful Respondent for the full delivery of the Requirements. Each Respondent's Proposal must include its Price.
Proposal	The response submitted by a Respondent (or Joint Respondents) in reply to the RFP. It comprises the Response Form, the Pricing Template (and/or any other document containing the Respondent's bid, financial and pricing information), and all other information submitted by the Respondent/s submitting the response.
Proposed Contract	The indicative contract template or other document setting out standard terms and conditions that the Ministry intends to use for contracting delivery of the Requirements. This document is referred to in Error! Reference source not found. and provided with the RFP documents.
RFP	Means the Request for Proposal.
Registration of Interest (ROI)	A formal request by a Ministry asking potential suppliers to register their interest in a procurement. It is the first step in a multi-step tender process.
Request for Proposal (RFP)	The RFP comprises the Advance Notice (where used), the Registration of Interest (where used), this RFP document (including the RFP-Terms) and any other schedule, appendix or document attached to this RFP, and any subsequent information provided by the Ministry to Respondents through the Ministry's Point of Contact or GETS.
RFP-Terms	Means the Request for Proposal - Process, Terms and Conditions as described in Section 5.
RFP Process, Terms and Conditions	The Ministry's standard process, terms and conditions that apply to RFPs as described in Section 5. These may be varied subsequent to the release of the RFP by the Ministry on giving notice to Respondents.

(shortened to RFP-Terms)	
Requirements	The goods and/or services described in Section 3 which the Ministry intends to purchase.
Respondent	A person, organisation, business or other entity that submits a Proposal in response to the RFP. The term Respondent includes its officers, employees, contractors, consultants, agents and representatives. The term Respondent differs from a supplier, which is any other business in the market place that does not submit a Proposal.
Response Form	The form and declarations prescribed by the Ministry and used by a Respondent to respond to the RFP, duly completed and submitted by a Respondent as part of the Proposal.
Successful Respondent	Following the evaluation of Proposals and successful negotiations, the Respondent/s who is awarded a Contract/s to deliver all or part of the Requirements.

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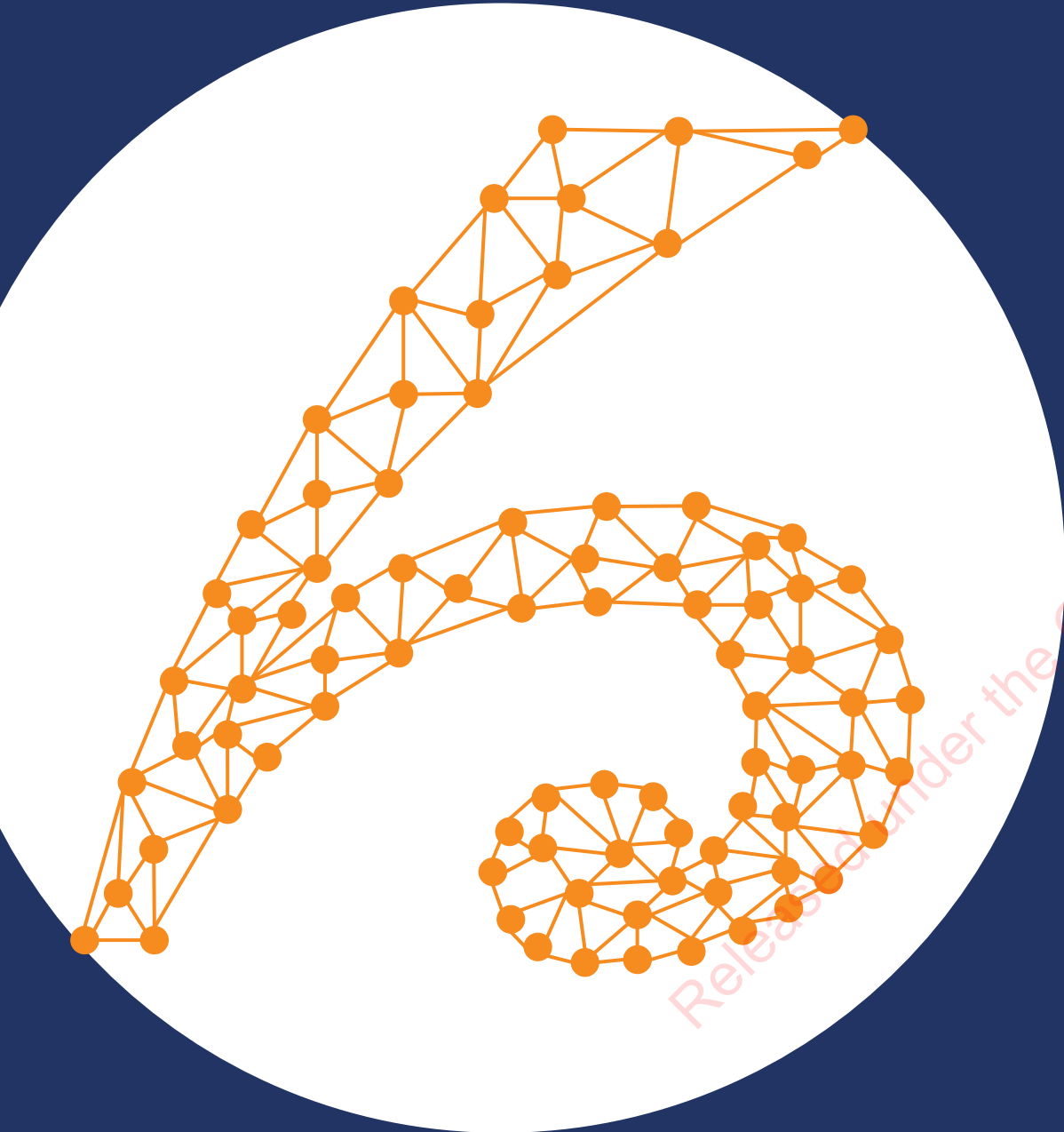
Vaccine Credentials

Jon Herries

Data & Digital

26/3/2021

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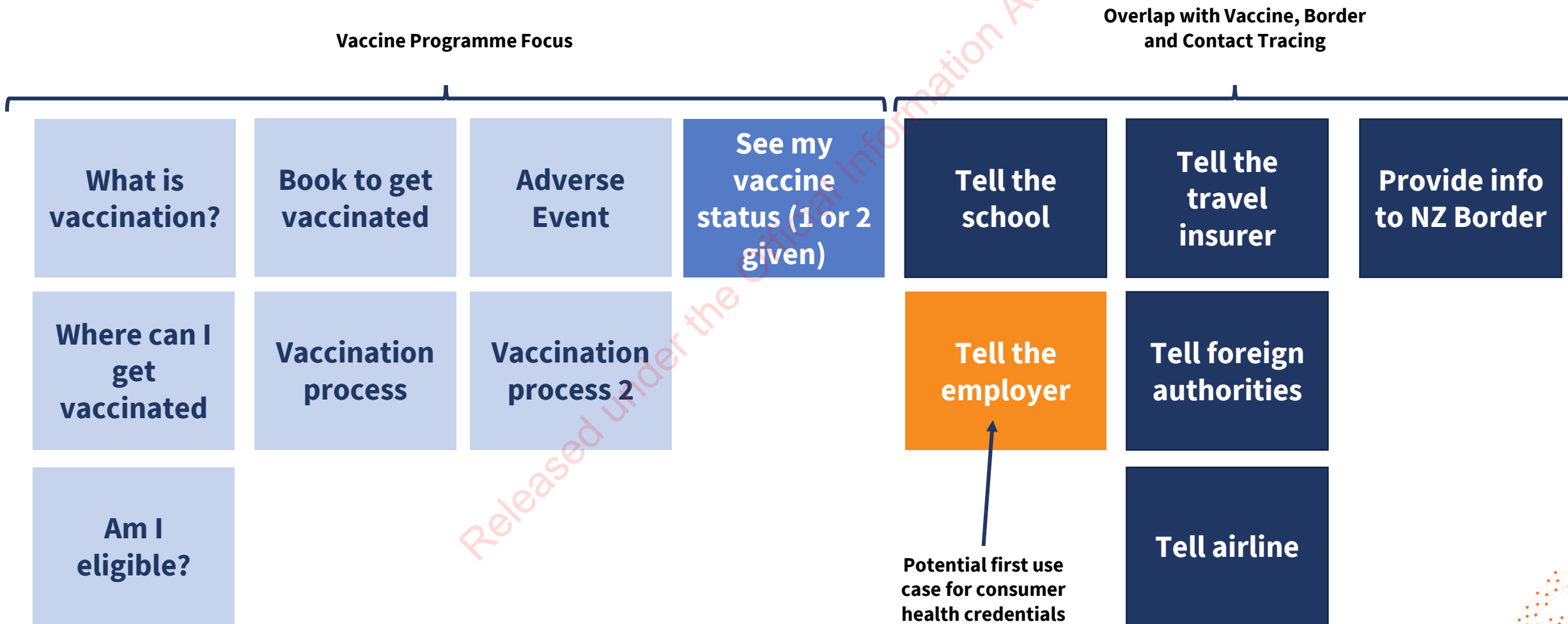
Context

- Quarantine free travel will become quickly contingent on the ability for a traveller to prove they won't bring/spread COVID-19 when they arrive
- This might mean a combination of testing and vaccination
- Presumably this should be provided to the traveller so they can share this with authorities in the receiving country

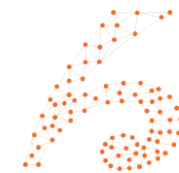
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Consumer Use Cases



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Current NZ Situation

Current Activities

Covid Imms Register will eventually replace NIR

Is a Salesforce implementation on AWS V1 in production

Will provide records of immunisation against an NHI using APIs

We are implementing B2C Identity

Is an Azure AD implementation Due in March

Will provide an ability for consumers to access health records

Other Active Work

Certification and CTIP

NZ COVID Tracer

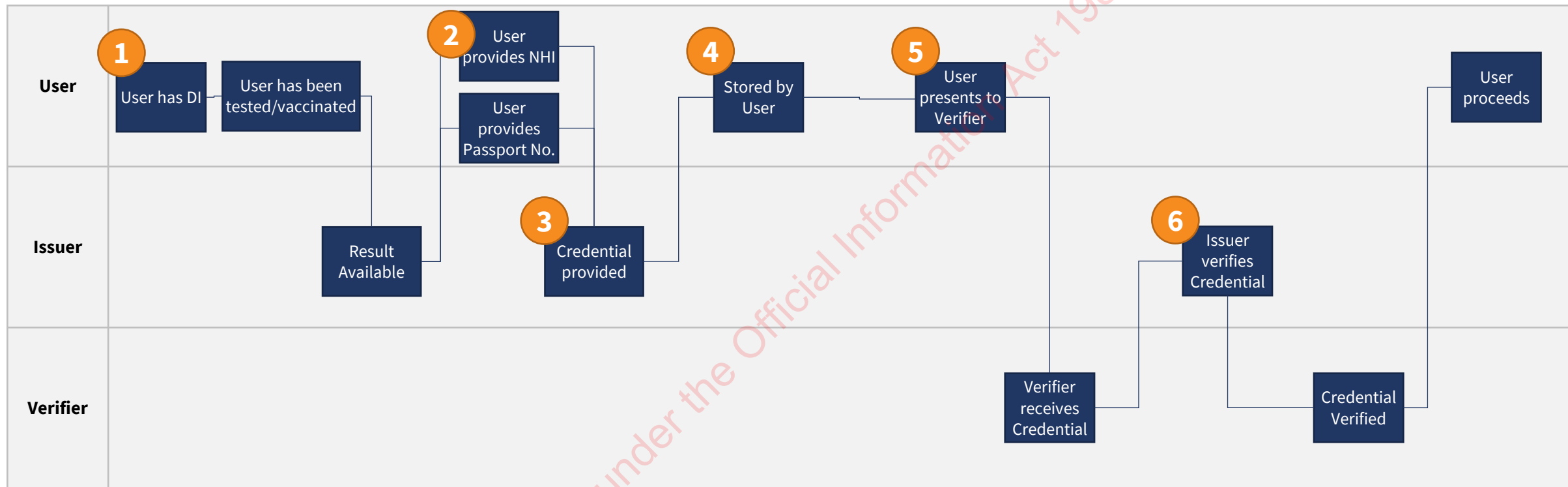
Passport Control

NCTS - Border

nHIP Consumer Channel



A Simple User Journey



Assumptions

1	Some sort of process is required to confirm that this person is entitled to the credential. The credential should be bound to an identifier that the verifier holds. This depends on the nature of the need for verification (confirming to your employer you have been tested vs to border staff you have been vaccinated)	4	The user should be able to request and store this in a default app – but should be able to transfer these to other apps easily.
2	Identifiers provided by the user represent those that would be checked against other credentials (eg. passport number at the border). Should be the minimum required for the verification action.	5	Presenting this could be done using a QR code (or reverse – but no offline) – to maximise interoperability the VC needs to be as small as possible (large credential = complex QR code to render).
3	The credential should have the minimum amount of information required to minimise risk of compromise. This may mean tokenising “test metadata” or “vaccine metadata”. Should include something like a date.	6	This needs to check the credential is valid (via public key), pull down any metadata and parse the identifier. This may also be completed offline.



Persona's



Brian

35yo

Kids and wife at home
is sole income earner.
Has just moved from
the airport to working
at the docks.

Behaviours

Uses his phone to message his friends, but isn't really interested in it
Gets paper season tickets to the rugby, and doesn't use mobile banking

Frustrations

Is annoyed with the Spotify free version but doesn't want/can't pay for the premium version and isn't able to connect it to his car via Bluetooth so wears earphones on his way to work.
Brian's kids use the internet all the time for their homework and Brian "doesn't really know what they do".

Needs

Starting at the docks, he needs to show Rodney he was vaccinated for COVID-19 when he was working at the airport.



Rodney

40yo

Rodney's kids have left home and he and his partner live in West Auckland.

Behaviours

Work provides a phone, which isn't great but Rodney won't buy another one.
He has a tablet for doing his work, but the interface isn't great and every time the enterprise software changes he takes a while to get used to it.

The tablet is a bit laggy, and he uses it outside with the team a lot and struggles to see the screen outside

Frustrations

The organisation often has health and safety rules that are over the top, Rodney has risen through the ranks and thinks "more common sense" is all many of the team needs.

Needs

Rodney is doing Brian's orientation, and on the top of the list is getting Brian vaccinated for COVID-19, as Rodney's boss has said that Brian can't start until he has been.



Testing Verifiable Credentials

<p>How will you deliver it?</p> <p>For our proof of concept relating to the use case identified around the persona's described we want to learn about:</p> <ul style="list-style-type: none"> Producing a Verifiable Credential Verifying the Verifiable Credential (online/offline) Explore the use of shared verification infrastructure for both paper and Digital verifiable credentials Undertaking Consumer/employer testing of the solution Engaging with border agencies on how the process works. End to End technical solution considerations or constraints Exploring different digital wallet approaches and implications Interoperability considerations including ability for the solution to align to WHO root of trust Identify any recommendations to support relying party accreditation/governance Developing an early understanding of the delta between MVP and production/operational readiness (Adoption strategy, production environment needs, operational approach and support, commercials etc.) 	<p>What is the Problem?</p> <ul style="list-style-type: none"> How do we present proof of Brian's vaccination to his new boss. This needs to happen in a way which is easy for Brian to comply with and easy for Rodney to capture. There is a need to keep a record that Brian has been vaccinated, but not the "health details" of this. <p>Plus</p> <ul style="list-style-type: none"> This might have to happen on site and is one of a number of tasks. Rodney thinks most of the other orientation tasks are more important. <p>What learnings do we want to capture?</p> <ul style="list-style-type: none"> What would make it easy for Rodney and Brian to complete this task? What else might you use this process for? What happens if the system is offline? What is shown to Rodney? Where does Brian keep his proof? <p>Unique Value Proposition?</p> <ul style="list-style-type: none"> We hold the vaccination records We are developing the digital health identity to surface this for consumers. Brian has more agency over his vaccination records 	<p>How does this align to our Strategy</p> <p>Being able to share health information with others is critical to consumer's being able to complete common tasks – this is often a low security process at the moment.</p> <p>What are the Risks?</p> <ul style="list-style-type: none"> Technically sound, but breaks in an operational environment Makes a low-risk high-trust paper process a high-risk low-trust digital process with unforeseen consequences <p>When will it be delivered?</p> <ol style="list-style-type: none"> 1) Problem Definition 2) Discovery – Resolve CX / Technical and other considerations, options and choices 3) Design – Develop CX and Technical Designs 4) Delivery – Build MVP / Proof of Concept and complexity customer testing and e2e technical testing 5) Closure – Document learning, remediate and iterate to pre production pilot <p>(Refer to Slide 8 for more information)</p>	<p>Who is involved?</p> <p>D&D Mattr Workplace – to be confirmed MoH Public Health – Caroline McElnay Moh Policy – Maria Cotter</p> <p>How much will it cost?</p> <p>What are you dependent on and who is dependent on you?</p> <ul style="list-style-type: none"> HISO Interoperability Considerations
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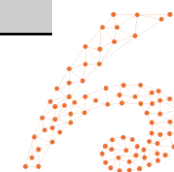
Questions to discuss

	Questions	
1	What information is displayed on the credential itself?	
2	What other uses do we have for VCs?	
3	How do we generate those QR codes in the vaccination process?	
4	That QR code is very dense – how do we manage this?	
5	The User Experience is critical – how do we make it simple to recognise	
6	Does the QR code invalidate itself after single use?	
7	Are these useful cases – are there others?	
8	Will the need for this go away when the world reaches herd immunity (when might this be)?	
9	How do we onboard NZers – are they interested in seeing their vaccination history?	
10	What happens when someone arrives without a recognised vaccine/system?	
11	How useful are the standards going to be (when should we start)?	
12	Do the ICAO PKI requirements add anything to this to we need to consider?	
13	Do we need other root certificates than we have at the moment?	Need to consider – NZers in a foreign domestic situation; non-NZ passport holders in NZ and in foreign domestic situation
14	What are the Identification Management Standards, how do they apply to the creation of certificates?	
15	Can we sweep up identity with second vaccine?	
16	Can we create verifiable credentials against other countries passports?	
17	What do we do with people who can't be vaccinated?	

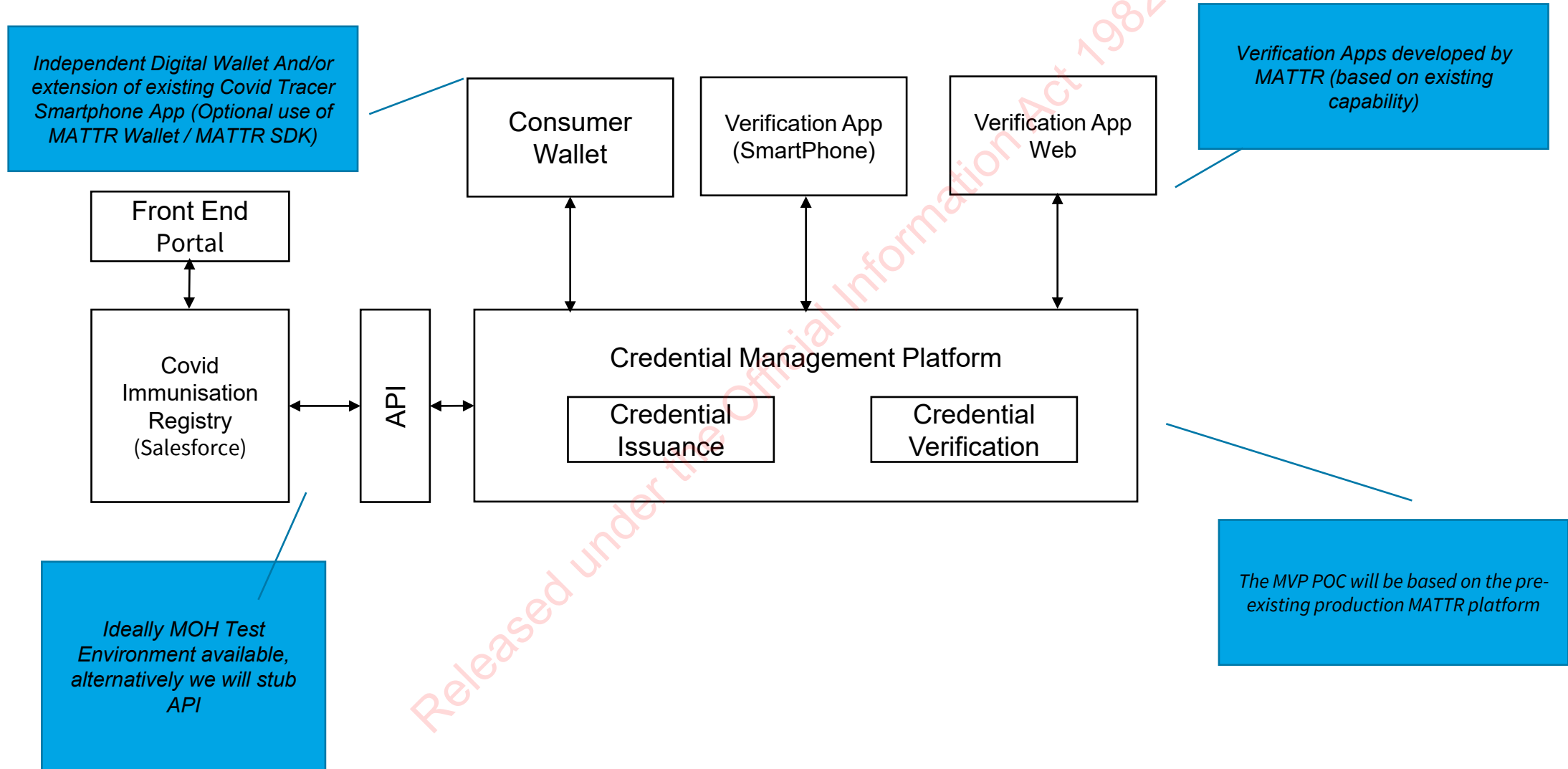


How will it be delivered

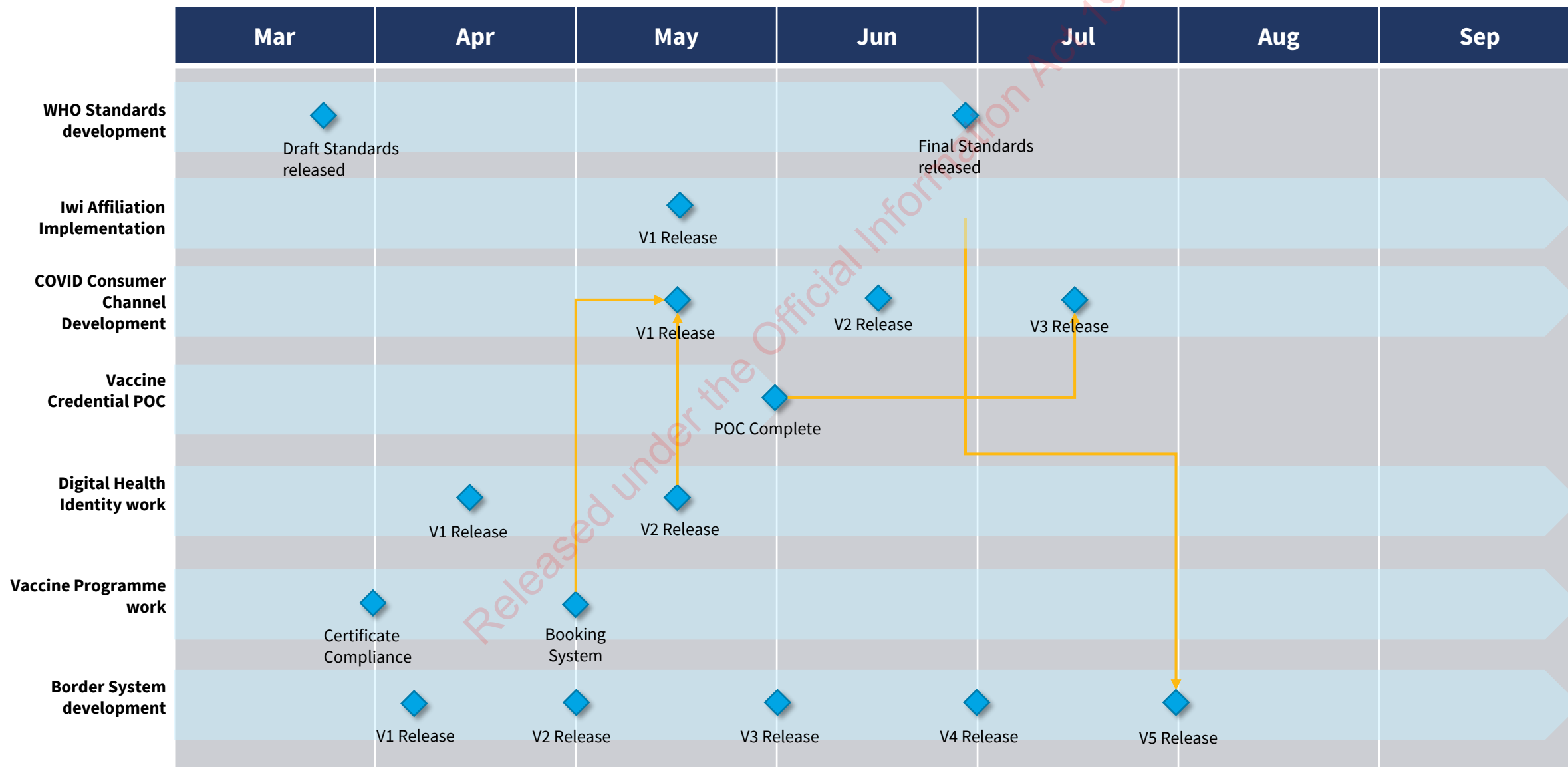
	Discovery	Design	Delivery	Closure
CX	<ul style="list-style-type: none"> Identify target customer testing group (based on personas identifies) Identify Relying party test group employers for test verification (Docks, Border Agencies etc.) Wallet Approach 	<ul style="list-style-type: none"> Design the Customer (Issuance) and Relying Party (Verification) journey experience 	<ul style="list-style-type: none"> Perform Customer Testing Perform Relying Party Testing 	<ul style="list-style-type: none"> Document Learnings and remediation plan (backlog for pathway to production)
MVP Solution	<p>Develop solution options and approaches for</p> <ul style="list-style-type: none"> Vaccination Receipt QR code (support for low fidelity camera, printer etc.) Solutions for preventing duplicate claiming Solutions for Identity Proofing, Capture and Binding Interoperability and International Standards (PKI, Root of Trust etc) 	<p>Design the e2e solution (integration with salesforce.com covid immunization registry) – ideally in a test environment or a test stub including:-</p> <ul style="list-style-type: none"> API Specs Vocabulary Integration Approach (e.g. OIDC) 	<p>Develop and Test the Credential Issuance Journey including approaches for</p> <ul style="list-style-type: none"> Paper based Journey Digital App based journey <p>Develop Online and Offline verification solutions (Smartphone Verification App followed Web based version)</p> <p>Perform E2E Testing</p>	<ul style="list-style-type: none"> Document Learnings and remediation plan (backlog for pathway to production)
Pathway to Production	<ul style="list-style-type: none"> Interoperability and International Standards proliferation Other Utility / Use Cases Commercial Considerations Production Requirements (Private Cloud etc.) Implementation & Rollout Planning Operation & Support Model (Non happy path/ exception flows) 	<ul style="list-style-type: none"> Adoption / Marketing / Education Strategy Relying Party Onboarding Approach 	<ul style="list-style-type: none"> Scope and roadmap baselined for production implementation and operations 	<p>Signoff on delivery plan for production and operationalisation</p>



MVP Solution/Environment



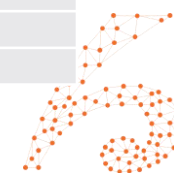
Initial Timeline



Global situation

Organisation	Initiative	Standards	Consumer	Health Records	Identity	Travel Rules/Process
WHO	Smart Vaccination Certificate Consortium	X				
WHO/Estonia	Pilot of Smart Vaccination Certificate		X	X	X	
Five Eyes	Human Biosecurity Group (HBG5)	X				
OECD/Spain	COVID-free mobility initiative					
Commons Project	CommonPass	X	X	X	X	X
IATA	IATA Travel Pass		X			X
International Chamber of Commerce	AOKpass					
Linux Foundation	COVID-19 Credentials Initiative (CCI)	X				
GoPassport Group	GoPassport					
IBM	IBM Digital Health Pass		X	X	X	
CANImmunize (a Canadian company)	CANImmunize					
Alipay and WeChat (Chinese entities)	Chinese QR code traffic-light coding system for health status administered through apps					
Healthvana (in partnership with LA County)	Healthvana					
Vaccine Credential Initiative (VCI)	Credentialising health records	X				
Singapore			X	X	X	X
Denmark			X	X	X	X
ICAO		X	X	X	X	X
EU		X				

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High level Requirements following the POC delivery

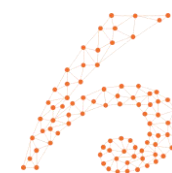
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Digital COVID-19 health certificates

- MOH has been evaluating a range of possible technology options for issuing digital COVID-19 health certificates, predominately a proof-of-vaccination, however the same principles apply to proof-of-recent-test.
- The Travel Health Pass (THP) working group met in late May and agreed the importance of developing digital COVID-19 health certificates, and set a timeline for July 2021 to report to Ministers on an approach.
- In late June, a preliminary approach of aligning to the EUDCC credential format backed by the ICAO PKD & trust framework was agreed between Ministry of Health, Customs, and DIA. This agreement was to use the EUDCC framework as a starting point, while continuing to engage and provide feedback for other emerging standards like ICAO VDS-NC and Good Health Pass.
- This pack outlines high level requirements that are required to support creating these health certificates.

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Trust and confidence

- Broadly speaking, there are two distinct assurance levels we need to issue a certificate in a digital context:

Confidence that the right person was vaccinated/tested

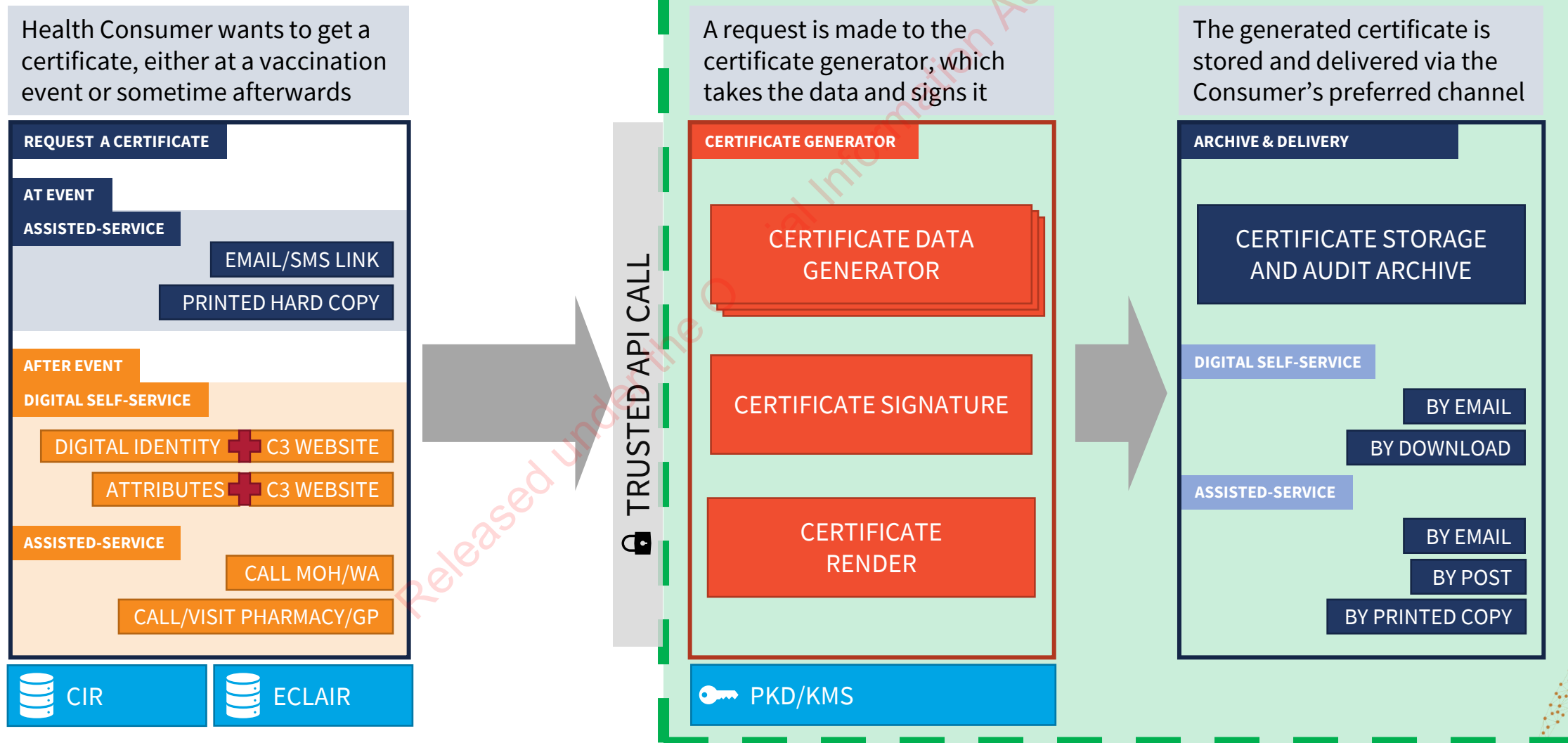
Assurance that the right person is accessing the digital certificate

- These two concepts are similar and easily confused with each other, but must be treated separately.
- For this pack, we assume
 - the current *verbal identity check* is sufficient to provide confidence the right person was vaccinated (or tested).
 - the ability to request a certificate is assumed to be available through a variety of self-service and assisted service channels calling an API to create the certificate. The API to request a certificate is *in scope*, and the other channels are *out of scope*.



High Level Target Components

There are three high level functional areas needed to deliver the solution, with several required and optional components spread across each area.



Requirements

The Ministry is seeking a partner to assist in the development of a solution for creating digital COVID-19 health certificates. At a high level this includes:

- Technology and infrastructure to generate compliant digital certificates, initially aligned to the EUDCC credential format.
- Integration with the New Zealand CSCA infrastructure and the ICAO PKD.
- Development or integration into the EUDCC gateway
- Operational support for any technical solution, including hosting, proactive and reactive maintenance, incident and event management, and key management.

Additional to the technology requirements, we are looking for a partner that has:

- Expertise and a track record in building and delivering similar solutions
- Knowledge of the current and emerging landscape supporting COVID-19 health certificates.
- Expertise and track record in government/enterprise standards for securely managing private key material, trust frameworks, and supporting governance.
- Organisational accreditations (or ability to be accredited) against recognised security standards, such as SOC2 or ISO27001

High level technical requirements are detailed in the attached document: *High Level Requirements*





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MATTR

Travel Health Pass

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Prepared for Ministry of Health Manatū Hauora
25 June 2021

Context for today

Multiple efforts to support vaccination certificates have evolved in parallel.

The focus for today's discussion is on the following:

- WHO SVC Working Group RC1
- European eHN DCC (formally Digital Green Certificate) initiative and roll out
- ICAO VDS-NC

Other significant efforts that are not the focus of today's discussion include:

- VCI
- GGHN

Further information on these efforts can be included in our report.

In preparing this analysis we have drawn on our work with the following international bodies and/or their work.



World Health
Organization



Homeland
Security

Science and Technology

W3C®

- Contextual requirements relevant to New Zealand's public health response and other local considerations have been integrated into the analysis with inputs from MoH, DIA, MFAT and Customs.
- Deployment ready prototypes are demonstrated as part of this session to illustrate the key findings and highlight end user experience considerations.

Today's objective

We need to consider potential solutions with two lenses.

Today we are seeking to decide what to do **first** whilst ensuring a broader alignment to the strategic direction of digital health certificates globally

Tactical

- What pre-existing infrastructure can we leverage?
- How fast can get a solution operational?
- What risks are trying to mitigate in production?

Strategic

- How do we align to what is ultimately a health centric infrastructure? i.e. closer to the WHO recommendations
- What things do we need to put in place now and 'upgrade paths' do we need to think about to enable this?

Key issues for consideration

Requirements are part of a public health response – with cross border travel providing specific needs

- Doesn't promote the digital divide – Must work in a paper based form
- Maintaining end user privacy / public confidence and concerns
- Compatible with holding/presenting digitally – QR codes must be render-able from a smartphone
- Offline verifiability – Must be able to work without online connectivity
- Must scale to meet a national and/or global health response around COVID-19

Implementation and risk management considerations

- Ability to leverage what's already deployed where it makes sense, with migration paths that don't constrain future options
- Recognition of technical constraints – QR Code limits
- Opensource reference implementations
- Test fixtures

Cross border travel requires global considerations

- Alignment with a global public health response – WHO SVC
- Trust Framework
- Interoperable
- Standards based
- Adoption momentum

Extensibility considerations

- Proof of Vaccination
- Proof of Recovery
- Proof of Negative Test Result
- Future potential
- And upgrade paths to support future needs

Two technology layers

Separation of concerns provides the ability to evaluate different permutations of the options

Public Key Infrastructure

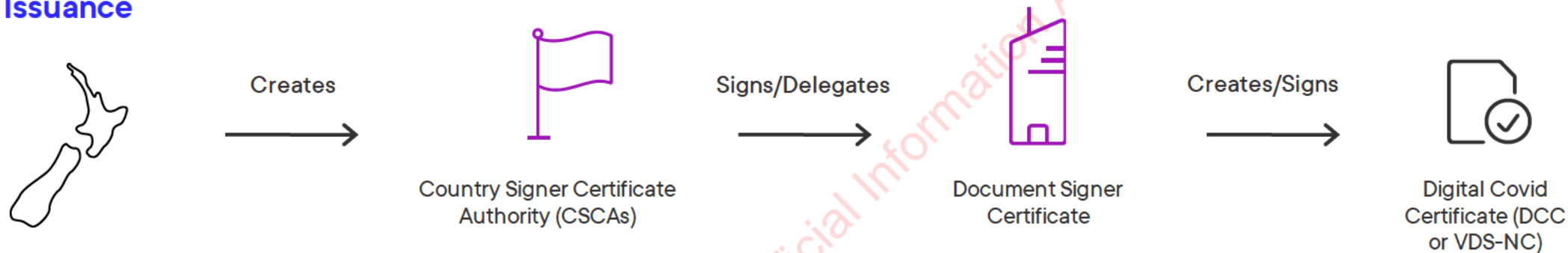
- How are public keys distributed for COVID certificates, how are they trusted, updated, access is managed?
- What trust framework does this infrastructure employ – Policy lense (e.g. key rotation policy, lifetime of keys, revocation lists etc)

Credential Format

- What concrete technologies are used to create COVID certificates?
 - Data encoding
 - Compression
 - 2D barcode technologies (QR Code, Aztec, Data Matrix, etc)
 - Digital signing procedure
 - Cryptography supported

CSCAs and DSCs – A Refresher

Issuance

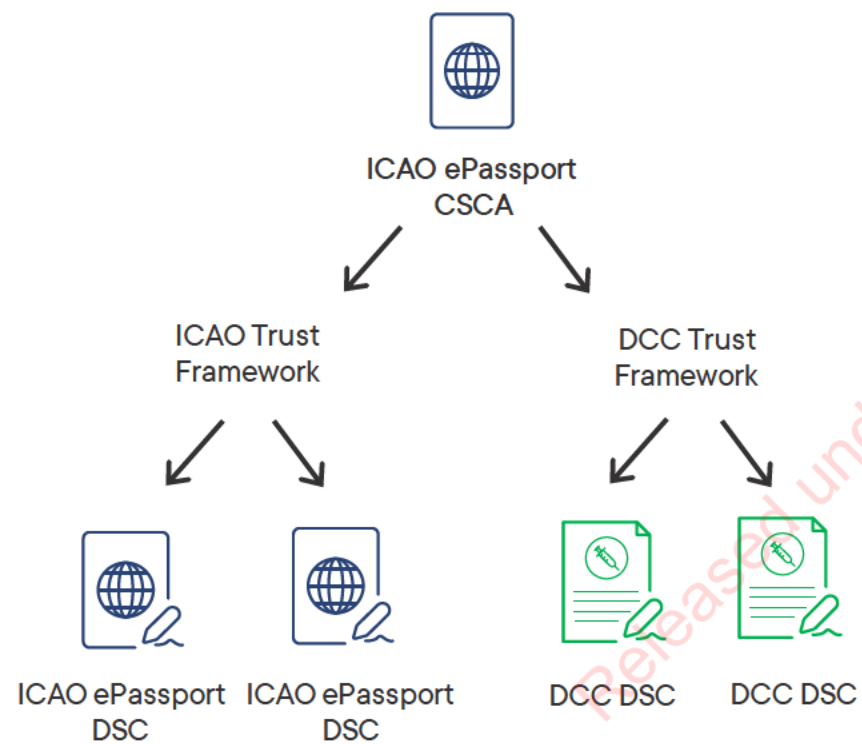


Verification

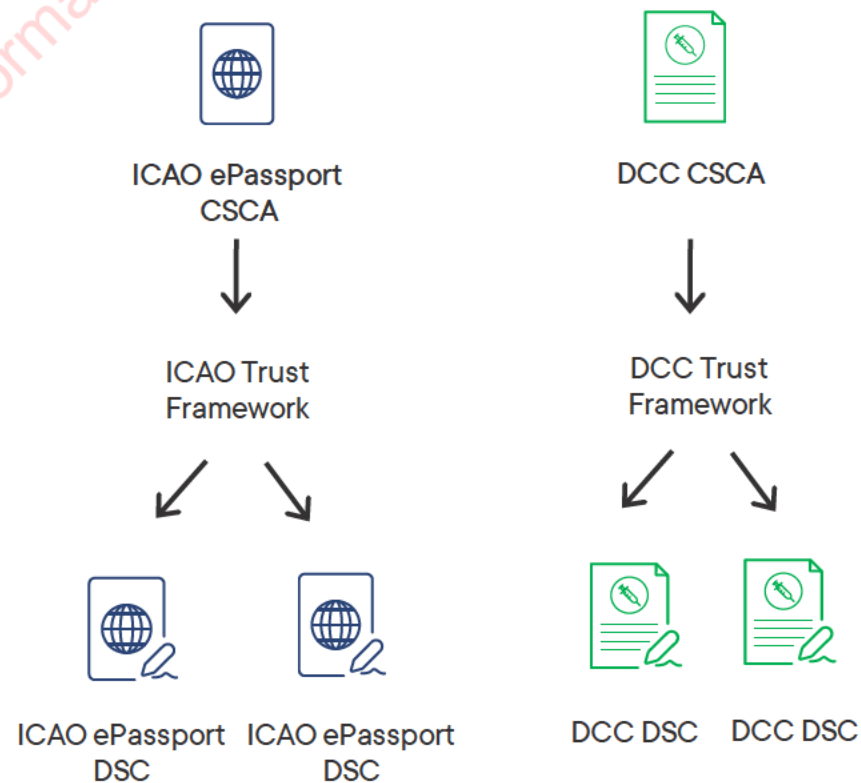


Usage of CSCA

Option 1: Reused ICAO ePassport CSCA

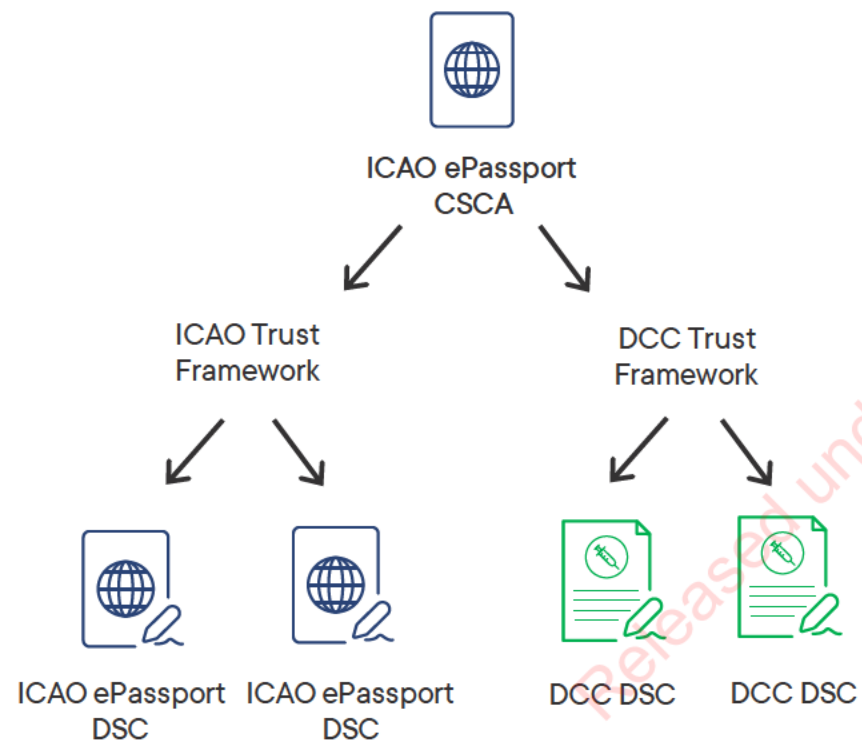


Option 2: New purpose specific CSCA

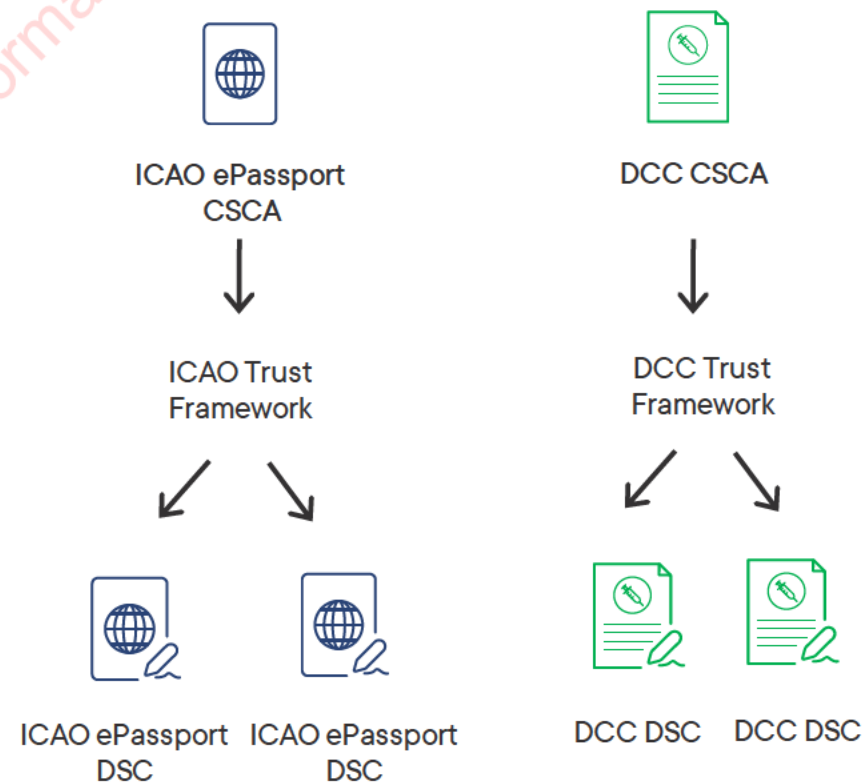


Usage of CSCA

Example Luxembourg:
Reused ICAO ePassport CSCA



Example Most of EU:
New purpose specific CSCA



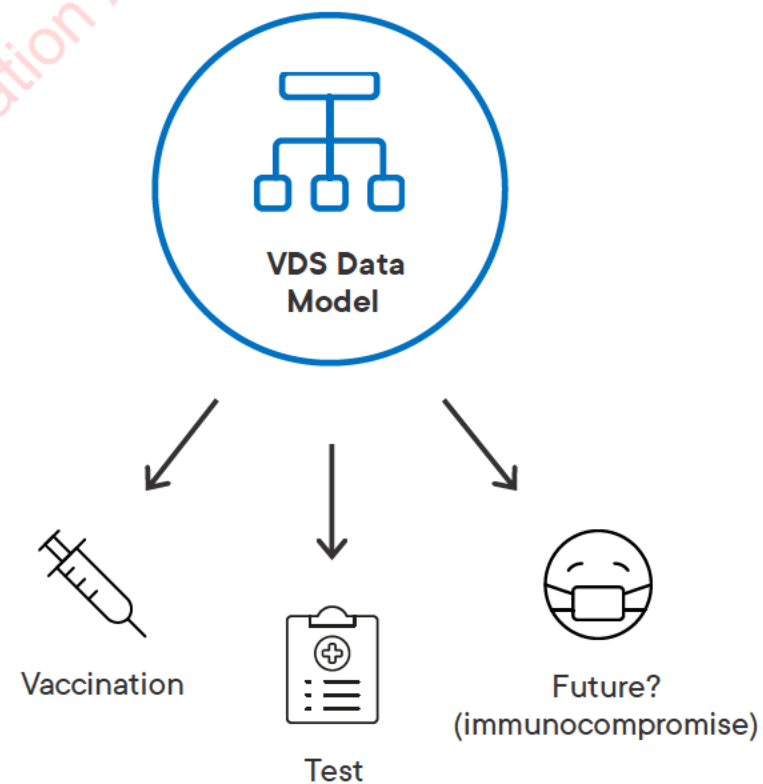
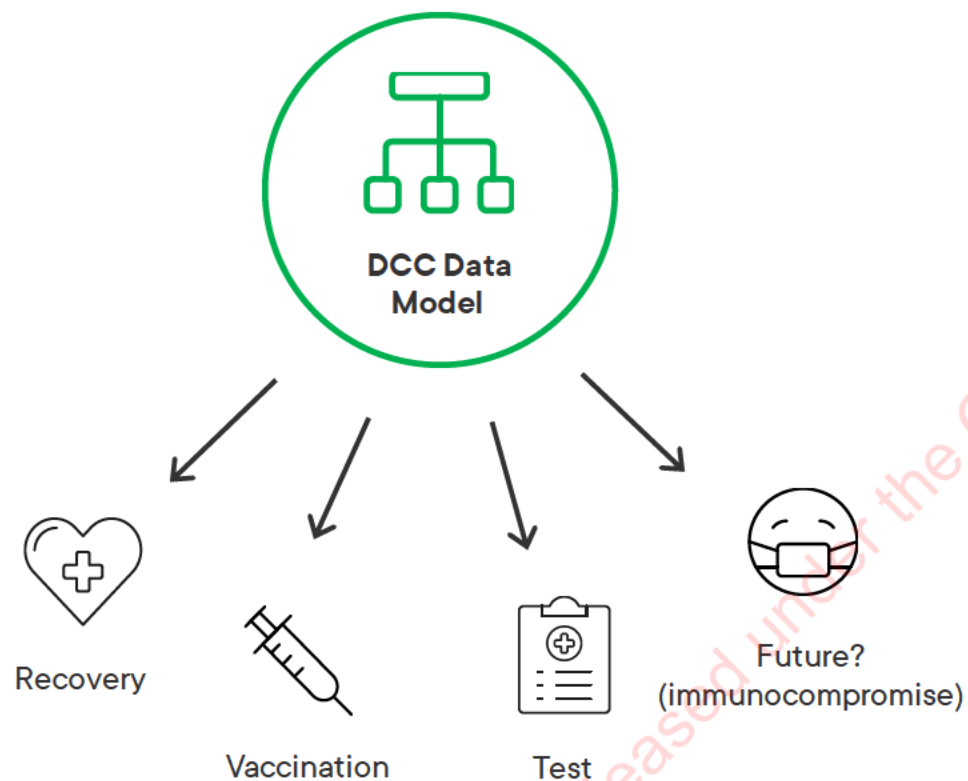
Deep dive on **DCC** and **VDS** Credential Formats

Explore the different approaches through the lenses of:

- Use case extensibility
- Issuance Pipelines
- Verification Pipelines
- QR code comparison
- Future design considerations, options and upgrade paths (DCC)

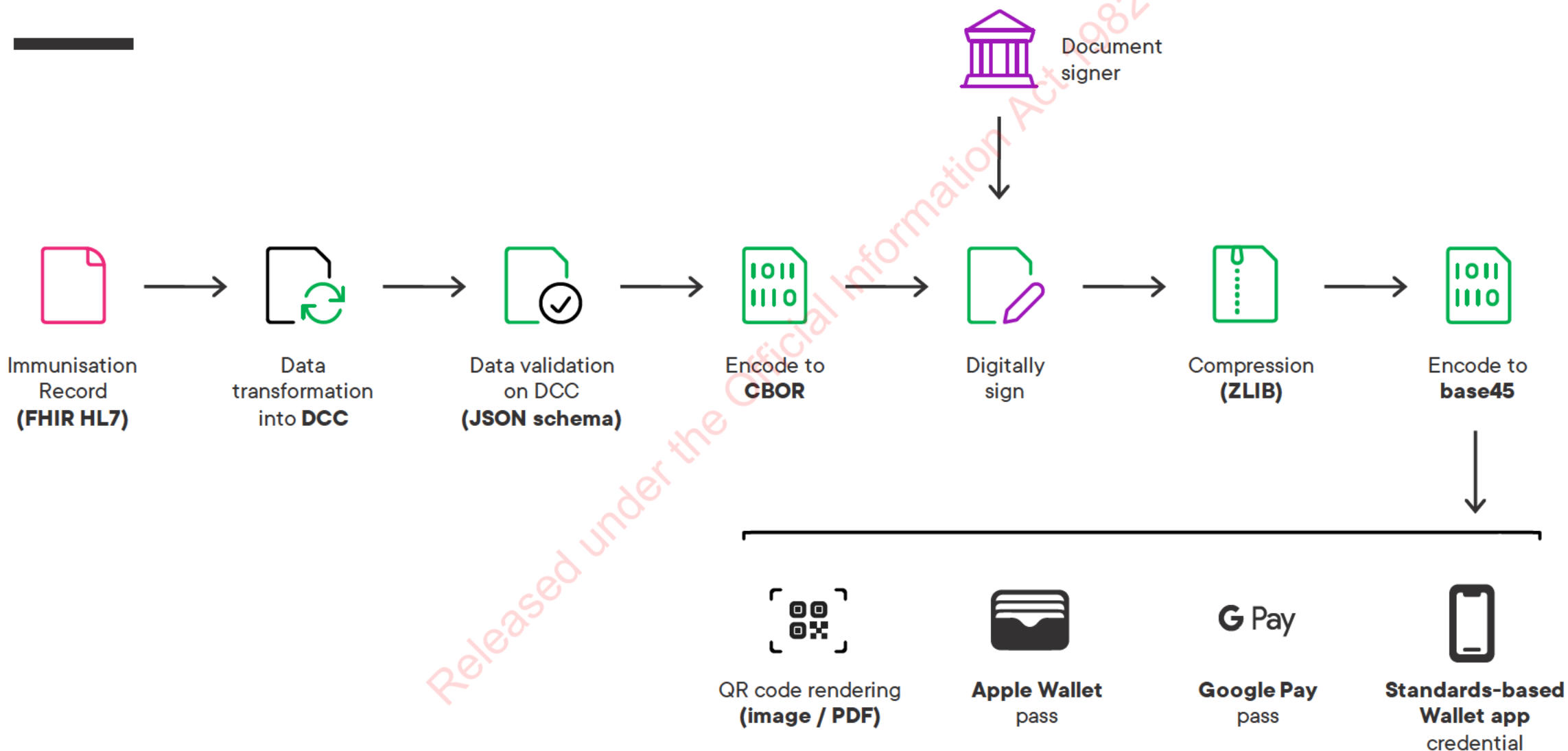
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DCC vs VDS-NC: Use case extensibility



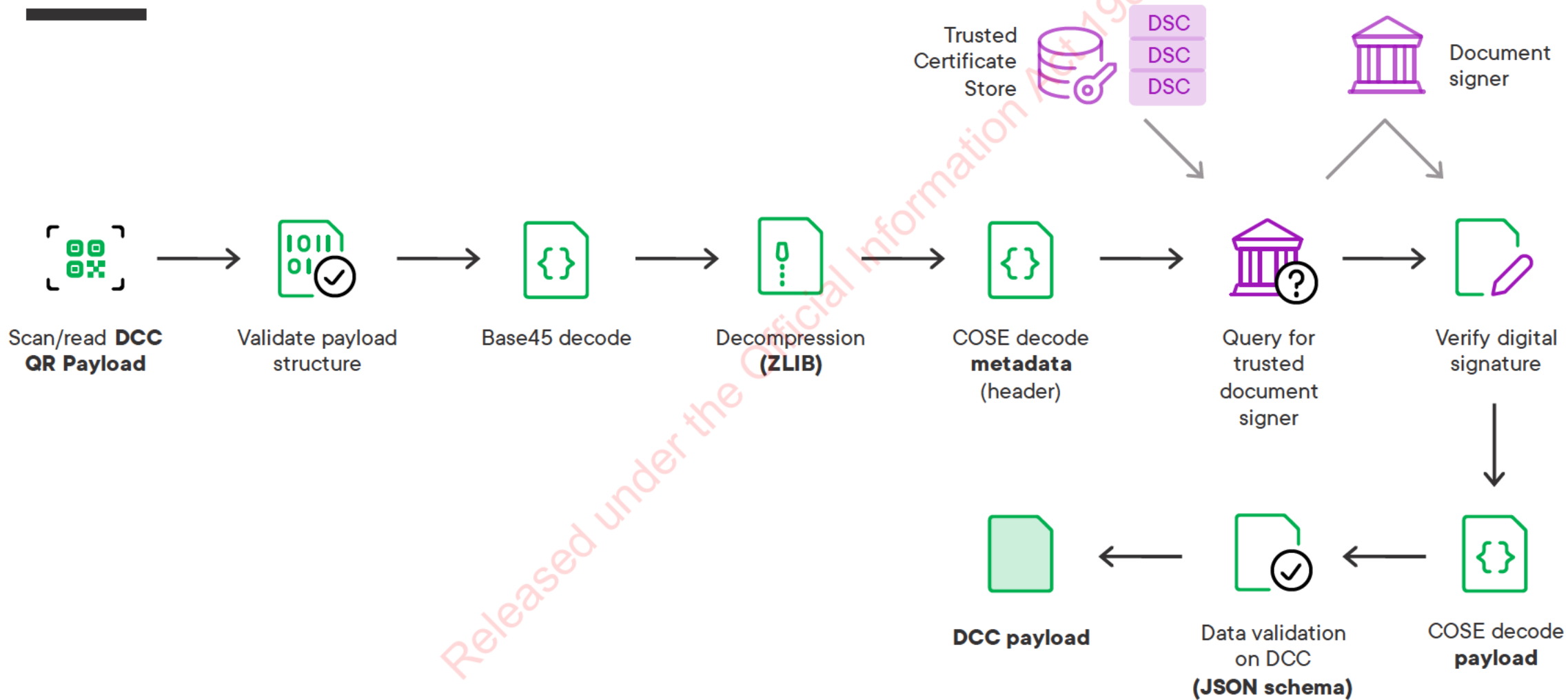
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DCC Issuance Pipeline

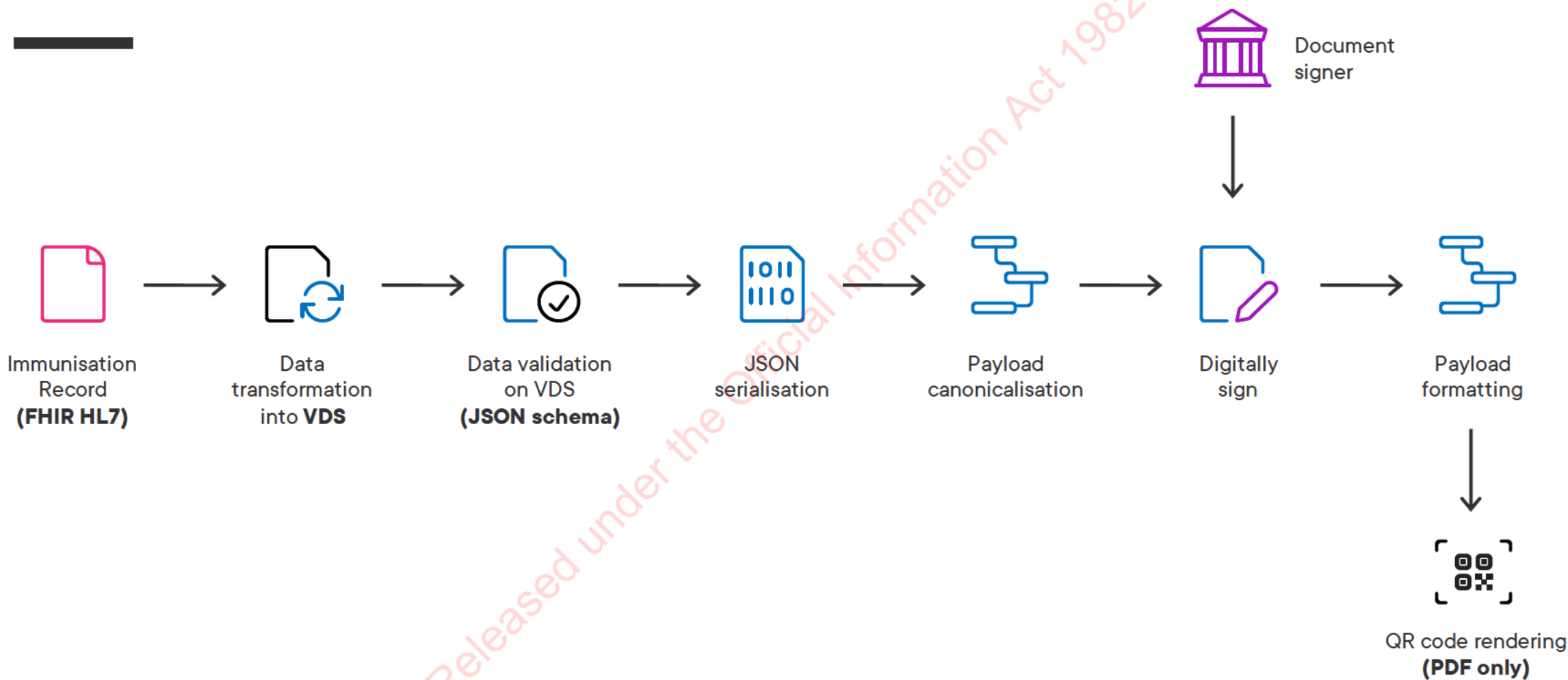


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DCC Verification Pipeline

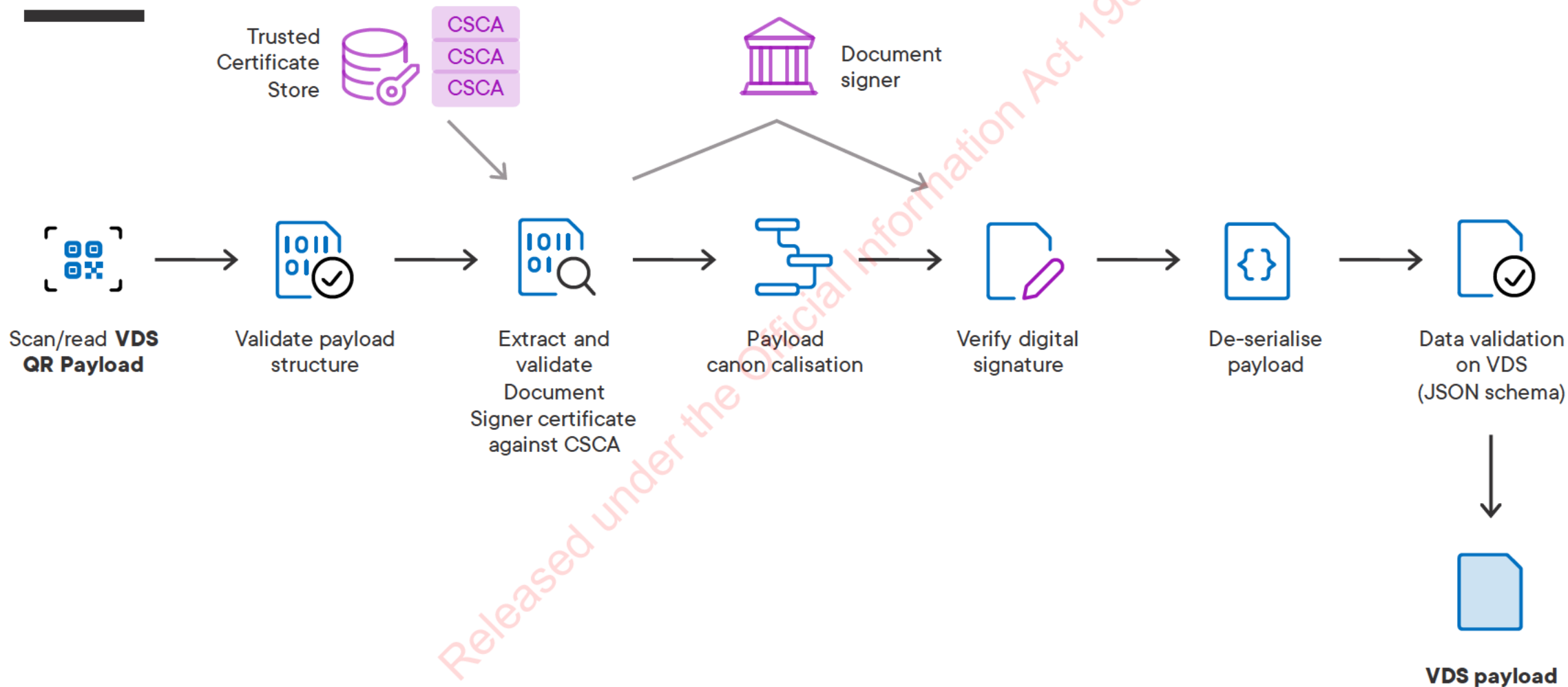


VDS Issuance Pipeline



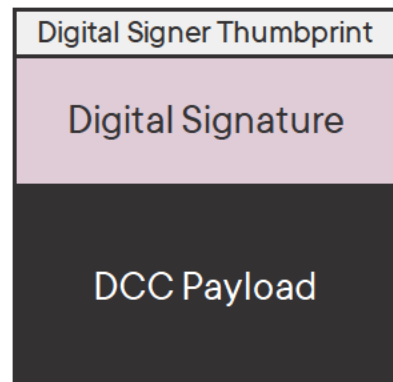
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VDS Verification Pipeline

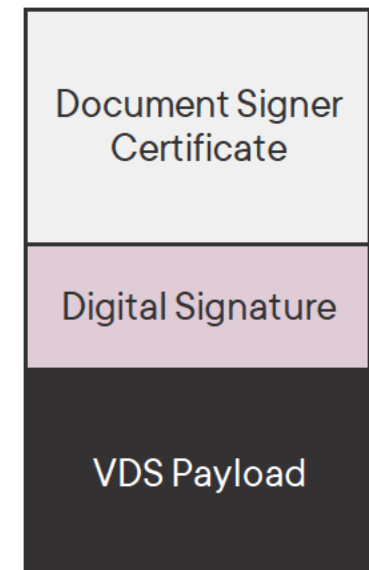


QR code size comparison

DCC



VDS-NC

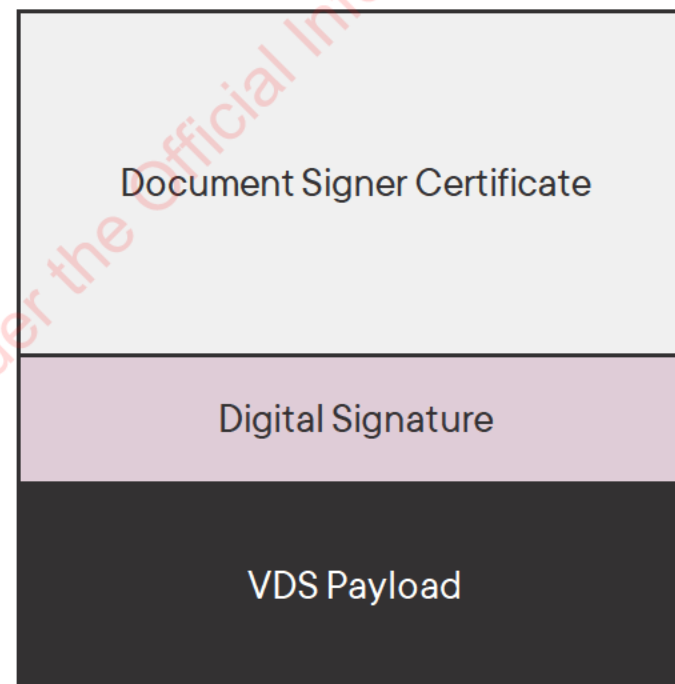
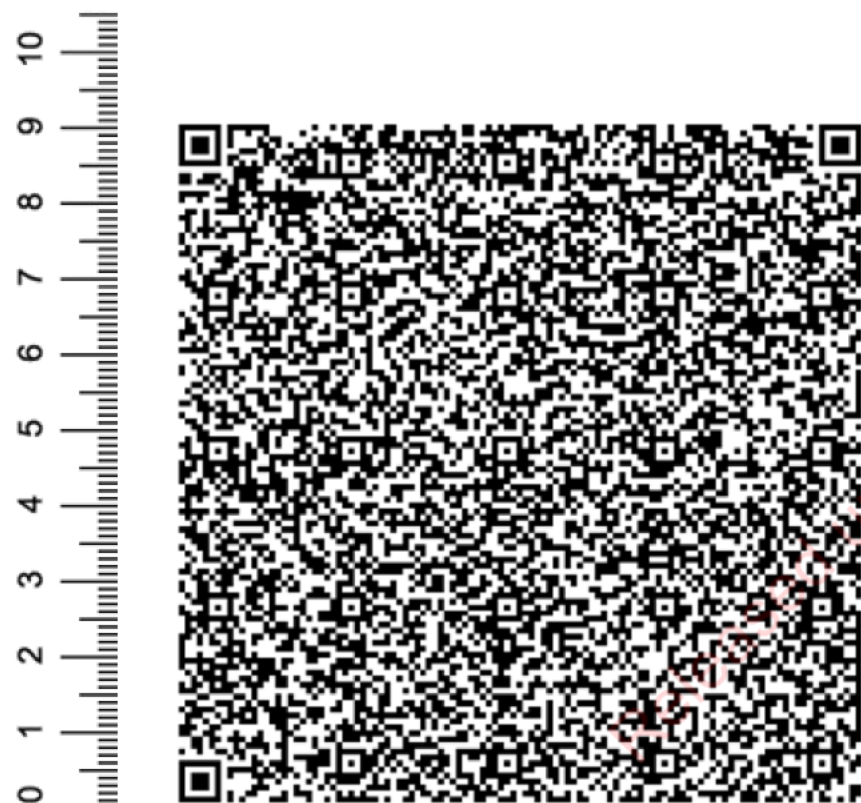


- ICAO PKD Compatible
- 500 byte payload
- QR Code Version: 17
- Min Rendered Size: ~5cm
- Standard COSE signed structure

→ ~10 sizes larger →

- ICAO PKD Compatible
- 1100 byte payload
- QR Code Version: 27
- Min Rendered Size: ~7.5cm
- Bespoke JSON based structure

VDS-NC: QR code size

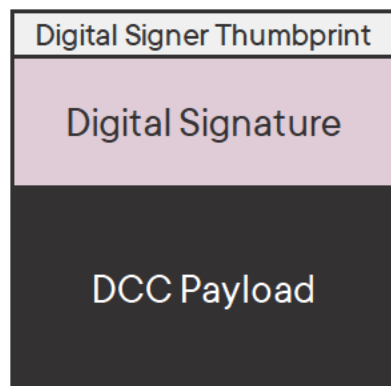


Feasibility of this solution is dependent on the cryptographic algorithm used in existing CSCAs

CSCAs – such as Luxemburg and many others – that use RSA will create very large QR codes that will be difficult to scan

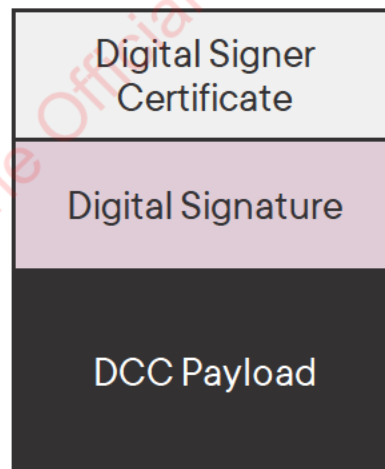
DCC Document Signer – By Reference or Value?

Current DCC Architecture



Document Signer
By Reference

Potential Future DCC Architecture

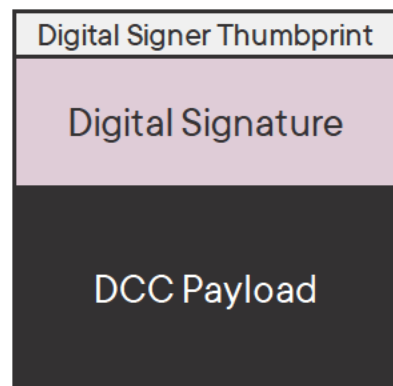


Document Signer By
Value

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DCC Document Signer – Upgrade option

Current DCC Architecture

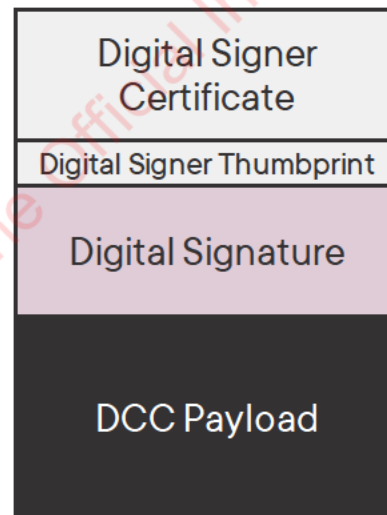


Document Signer
By Reference

Add DSC to existing
DCCs without
having to re-issue



Potential Future DCC Architecture



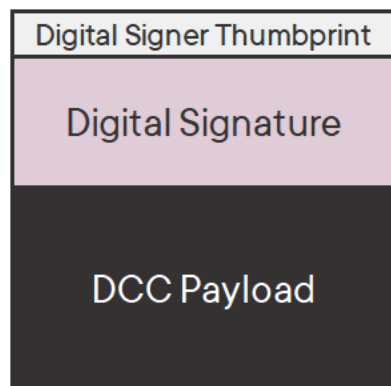
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DCC Document Signer – Upgrade option

Current DCC Architecture

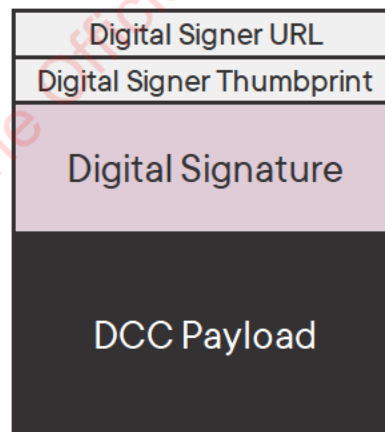


Document Signer By Reference

Add DSC to existing DCCs without having to re-issue



Potential Future DCC Architecture

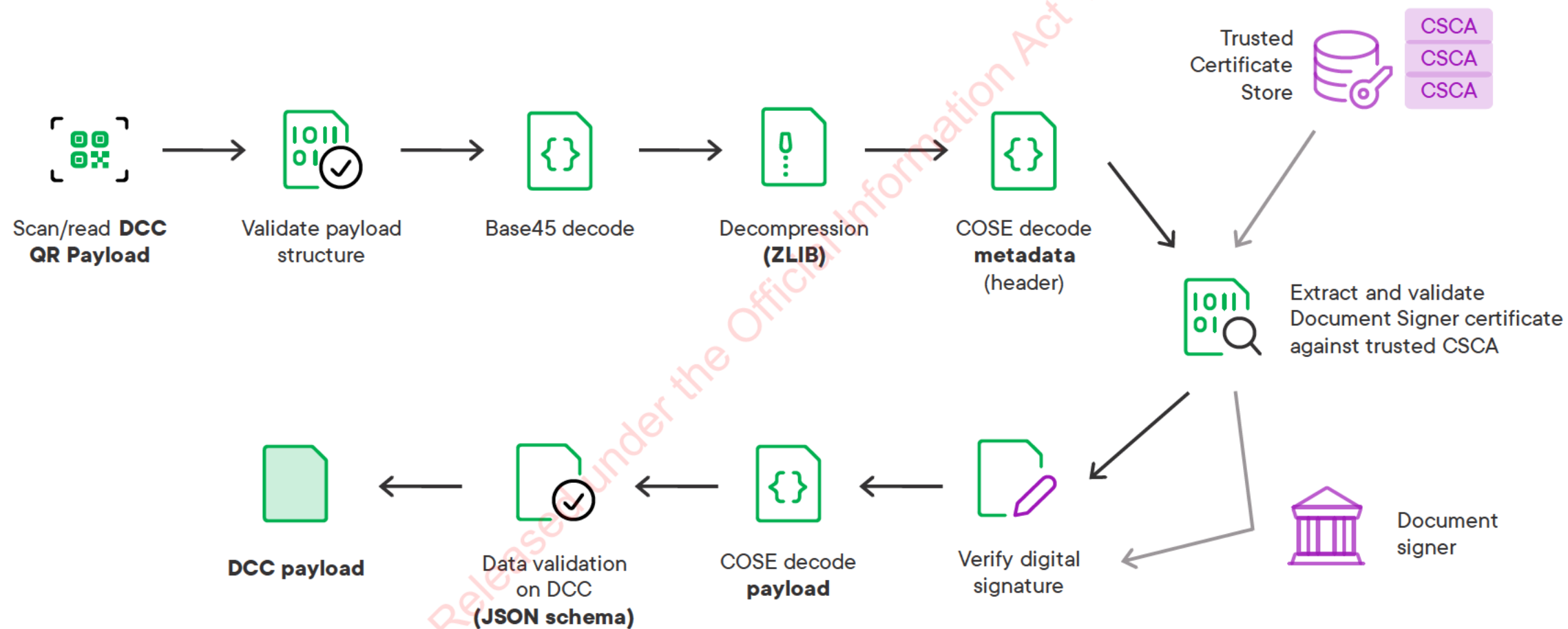


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DCC Verification Pipeline (Embedded DSC)



Example Journeys / Live Demos / Interoperability Testing

Note: Demonstrations are of DCC credential format

Issuance Journeys

- Admin portal issuance
- Self service issuance
 - Claiming via PDF
 - Claiming via Apple Wallet pass
 - Claiming via Google Pay pass
 - Claiming via Standards-based Wallet app

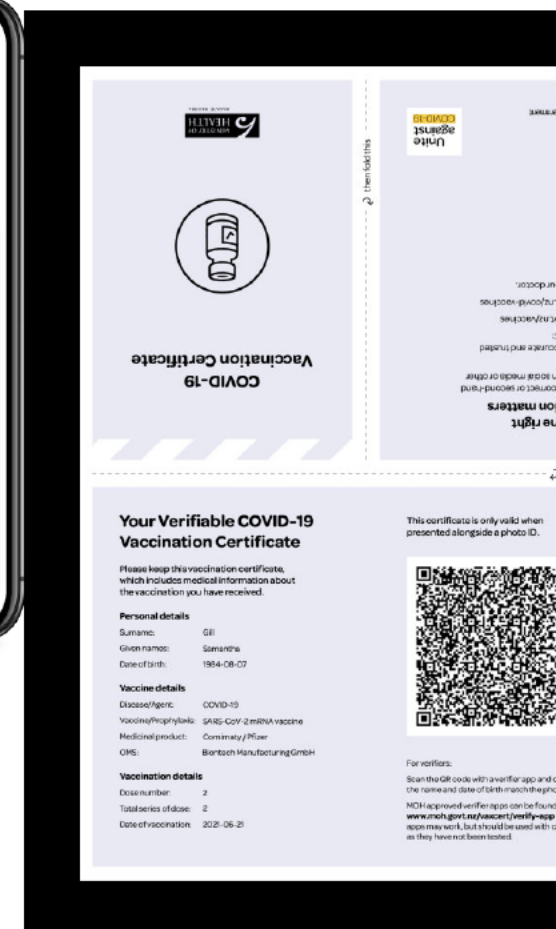
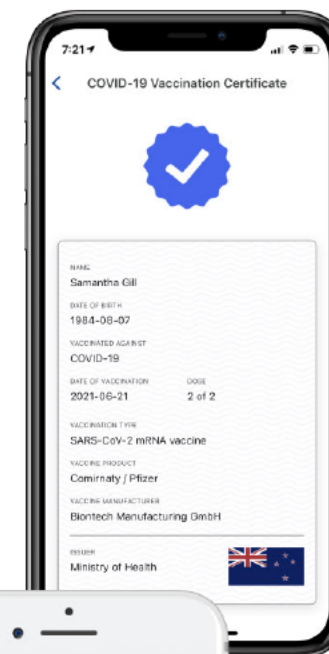
Verification Journeys

- Verifier app (EU and Standards-based White-label Verifier App)

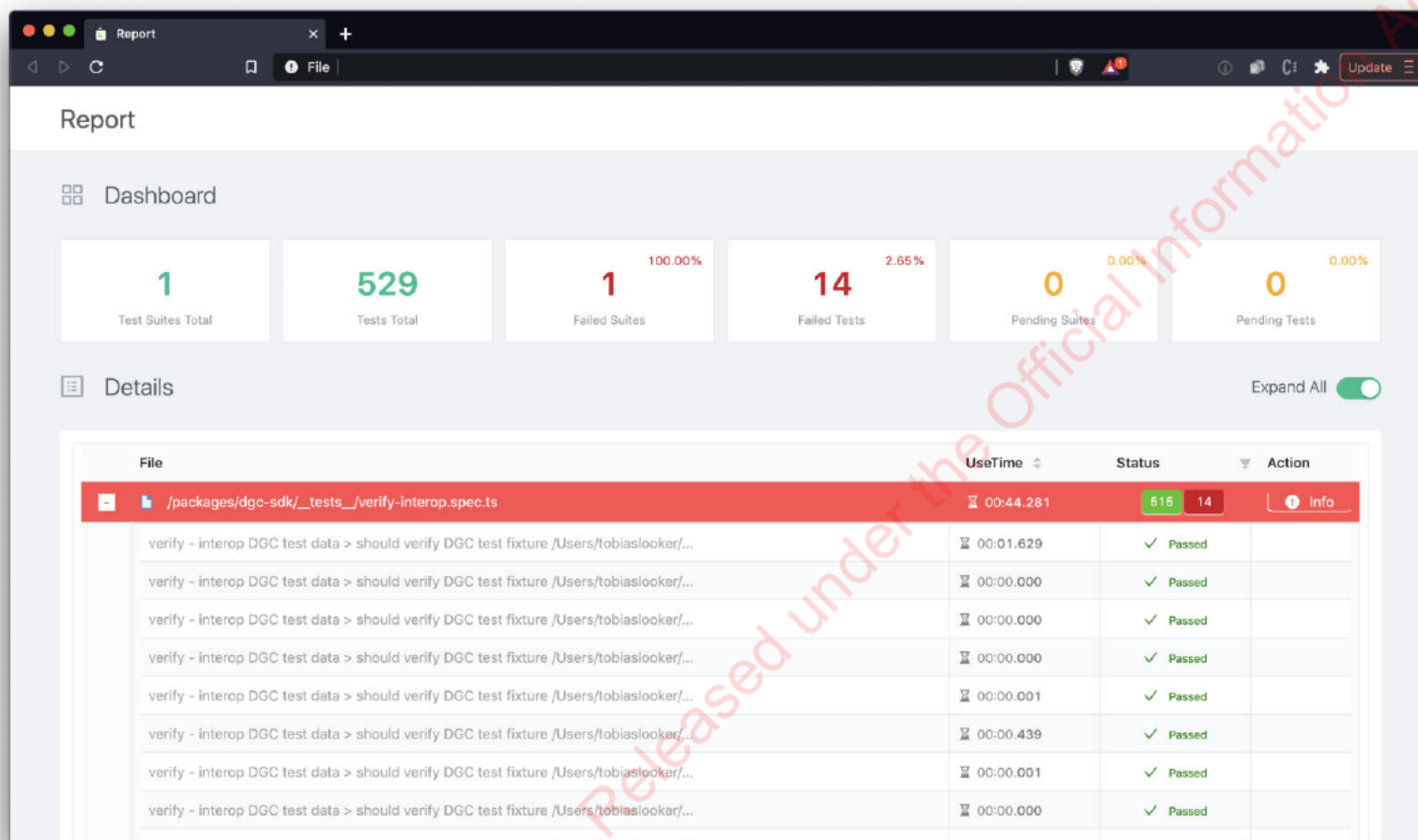
Interoperability test report

Record Vaccination Certification Please verify data entry with a photo ID Card.

Given name	Given name
Family name	Family name
Date of Birth*	Date of Birth
Disease/Agent*	COVID-19
Vaccine/Prophylaxis*	SARS-CoV-2 mRNA vaccine
Medicinal Product*	Comirnaty / Pfizer
Organisations Management System*	Bio
Dose Number*	0
Total Series of Doses*	0



Interoperability Test Report



- 529 Tests executed
- Tests from 31 Countries
- 515 Passed
- 14 Failed

Failures primarily due to known issues with member states' submitted test data

MATTR's Recommendations

Tactical

- Start with EU DCC as the first COVID Certificate format
- Re-use the existing CSCA as the root trust for DCC's
- Further classify opportunities around embedding the document signer certificate (or a resolvable reference to) inside the DCC to alleviate key distribution issues

Strategic

- Stand up an NZ DCC Gateway for co-ordinating bilateral key sharing efforts
- Pursue conversations with EU around being recognised as third country for NZ recognition and access to validate EU based DCC's
- Local context explore an Australia and Pacific Islands pilot, influence their strategic direction?

