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Irish Digital Covid Certificate Implementation



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The EU Digital COVID Certificate will facilitate safe free movement of citizens in the EU during the COVID-19 pandemic.

The certificate will be introduced in EU Member States. Countries can start issuing and using it already and it will become available in all EU Member States as of 1 July 2021.

What is the EU Digital COVID Certificate?

A Digital COVID Certificate is a digital proof that a person has either

- ✓ been vaccinated against COVID-19
- ✓ received a negative test result or
- ✓ recovered from COVID-19

Key features of the certificate

- ❖ Digital and/or paper format
- ❖ with QR code
- ❖ free of charge
- ❖ in national language and English
- ❖ safe and secure
- ❖ valid in all EU countries

Source: https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate_en

The EU Digital COVID Certificate



The EU Digital COVID Certificate contains a QR code with a digital signature to protect it against falsification.



When the certificate is checked, the QR code is scanned and the signature verified.



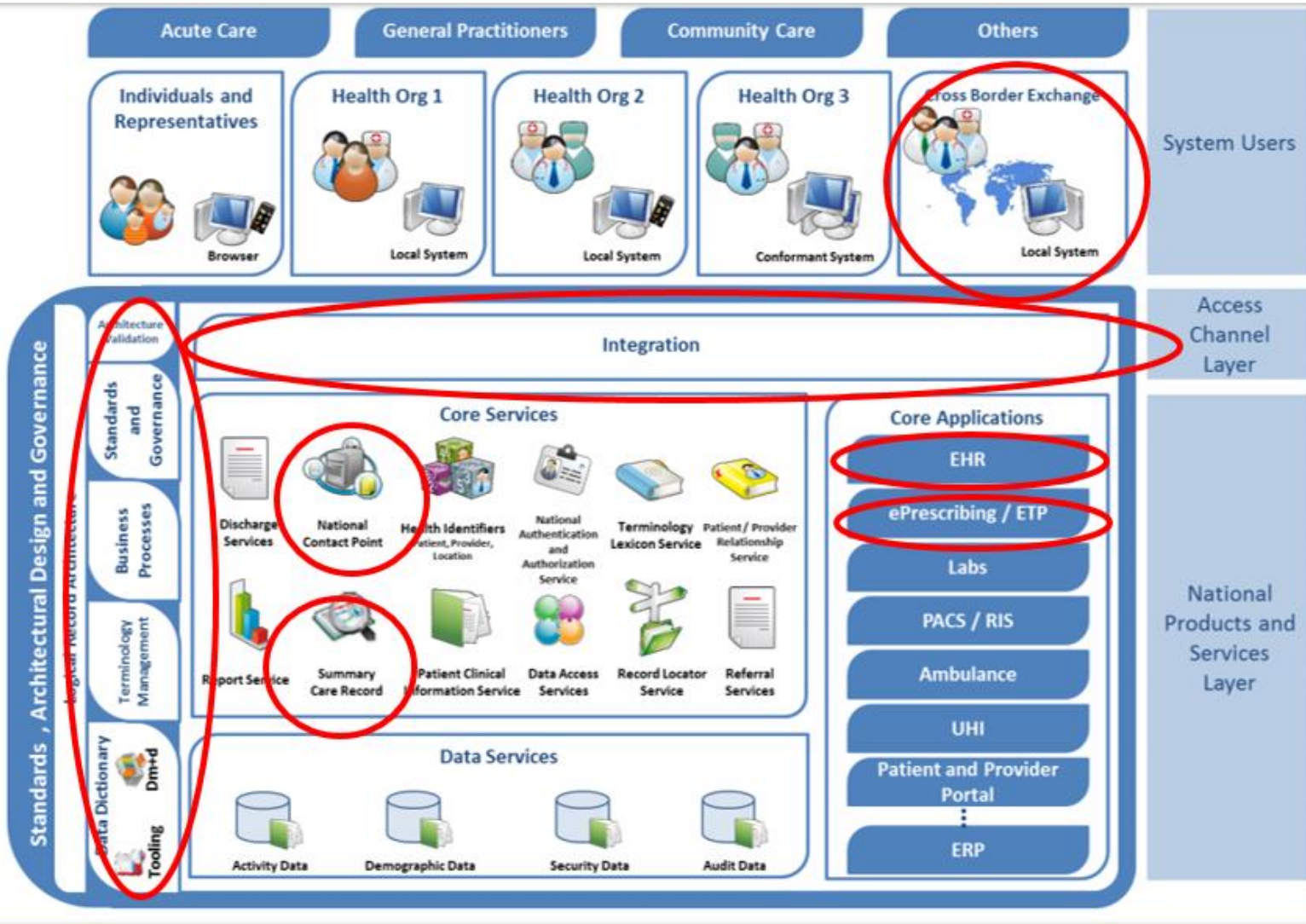
Each issuing body (e.g. a hospital, a test centre, a health authority) has its own digital signature key. All of these are stored in a secure database in each country.



The European Commission has built a gateway through which all certificate signatures can be verified across the EU. The personal data of the certificate holder does not pass through the gateway, as this is not necessary to verify the digital signature. The European Commission also helped Member States to develop national software and apps to issue, store and verify certificates and supported them in the necessary tests to on-board the gateway.

Source: https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate_en

Background: eHealth Strategy Architecture Blueprint

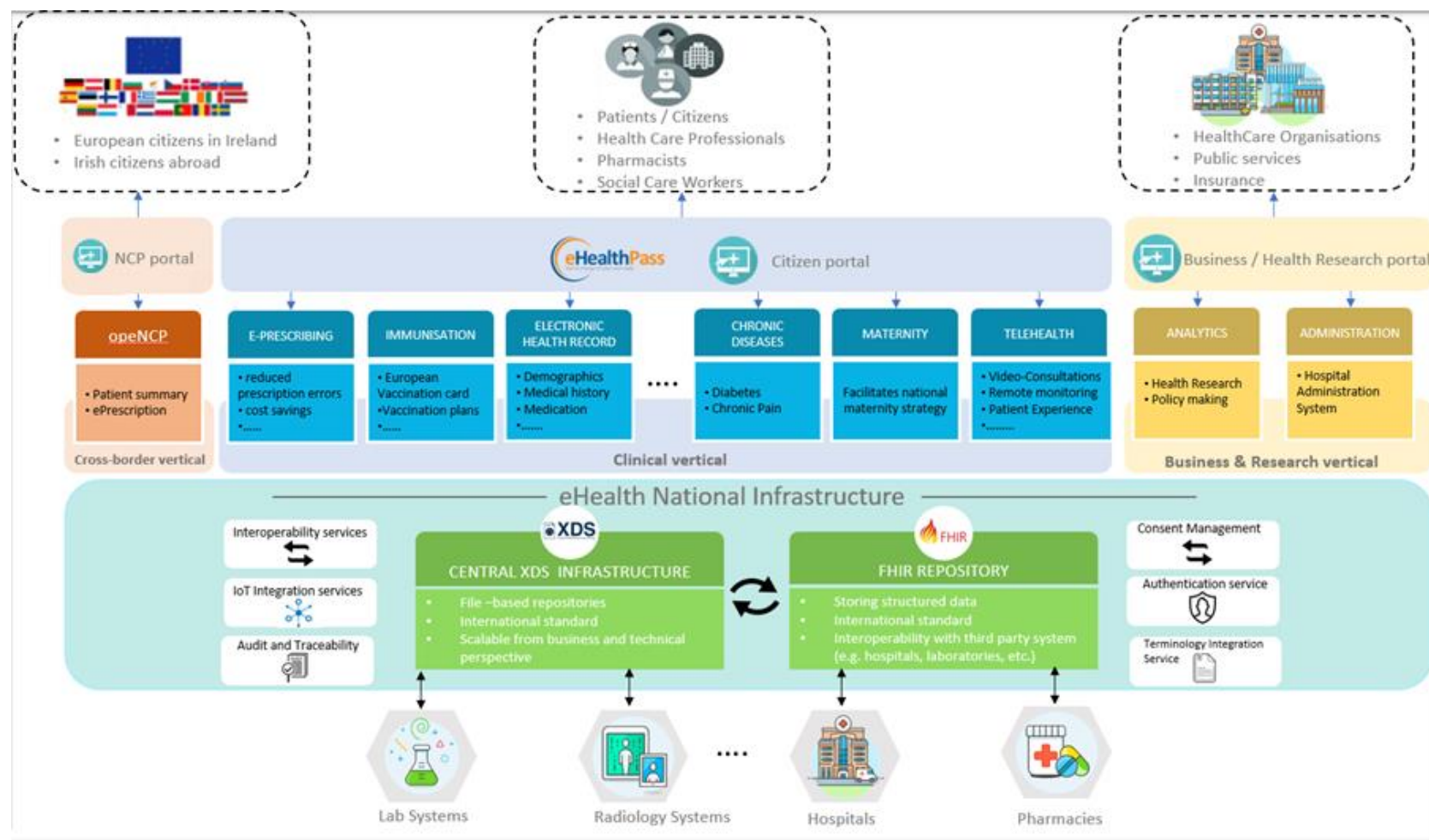


The *Knowledge and Information Plan* was one of the core artefacts developed shortly after the establishment of the Office of the CIO.

In the *Knowledge and Information Plan* a *To Be Architectural blueprint* was designed calling out the required elements in the Irish eHealth ecosystem.

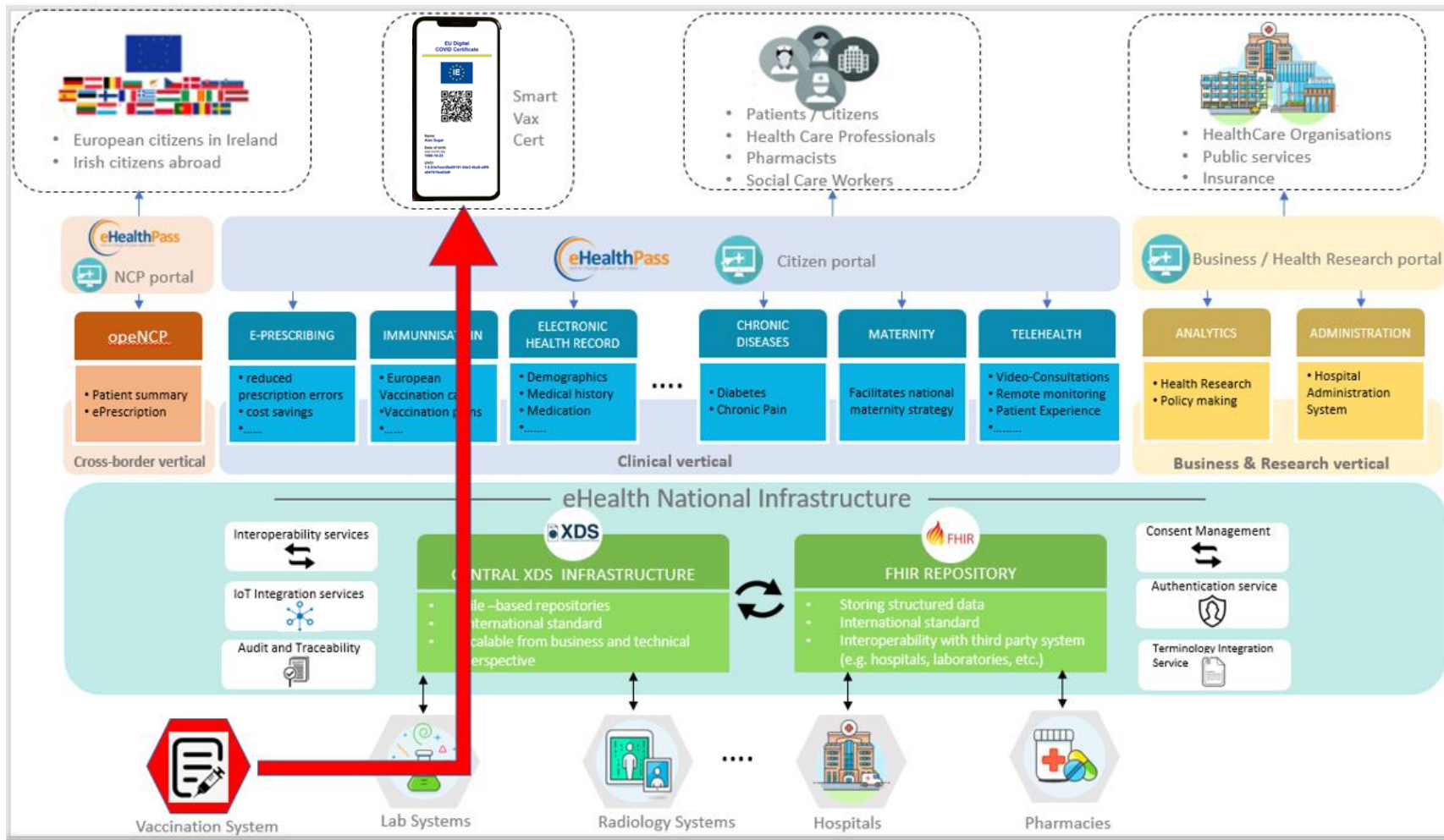
This included the Cross Border Exchange of data via the Irish National Contact Point (Open NCP).

Background: XDS Based Architecture



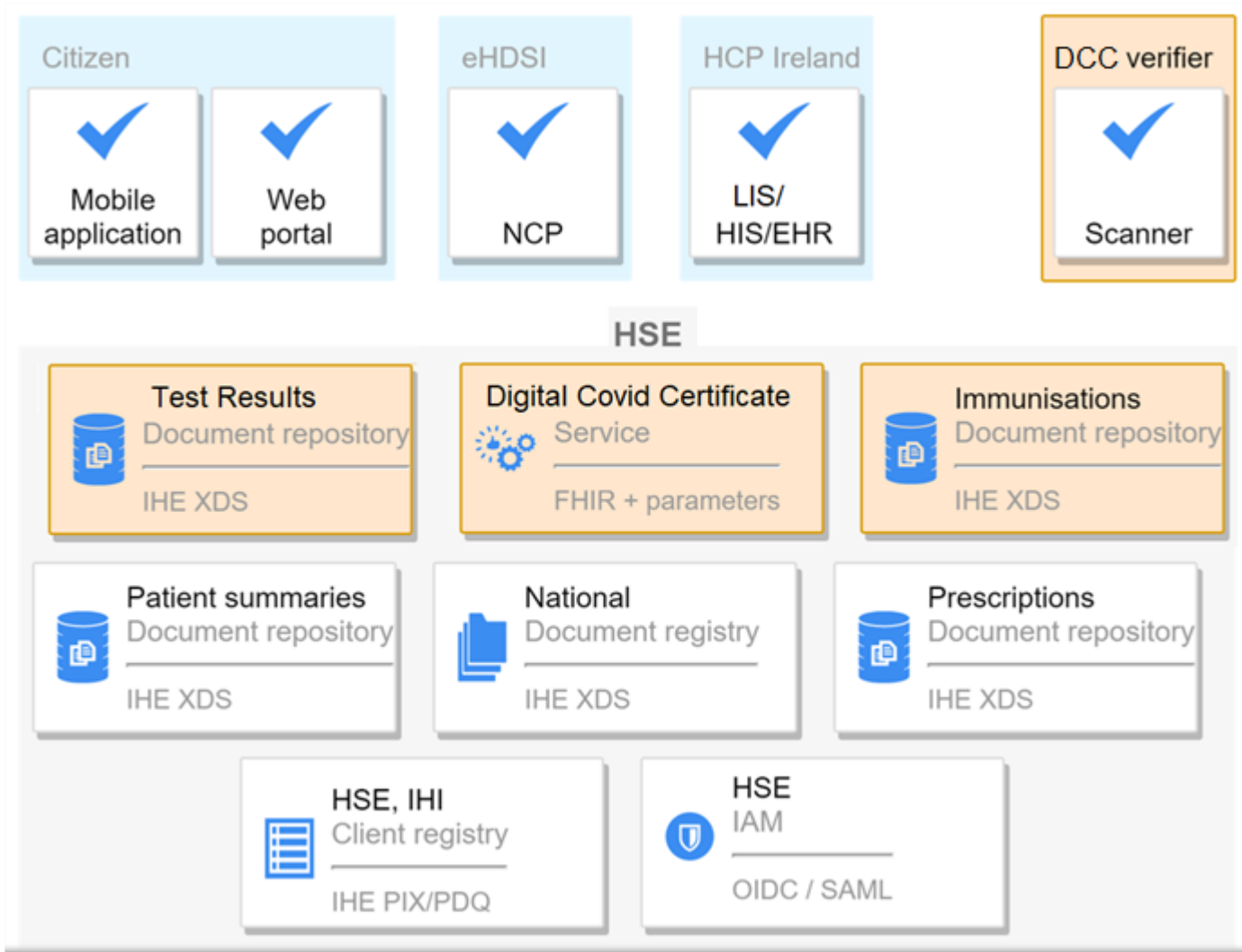
- The Irish Open NCP and supporting infrastructure acts as the lynchpin for other eHealth Initiatives called out in Sláintecare and the National Service Plan.
- This horizontal XDS based architecture and supporting infrastructure will feed the various vertical clinical systems and also the Irish National Contact Point enabling the Irish – EU EHR.

Background: XDS Based Architecture



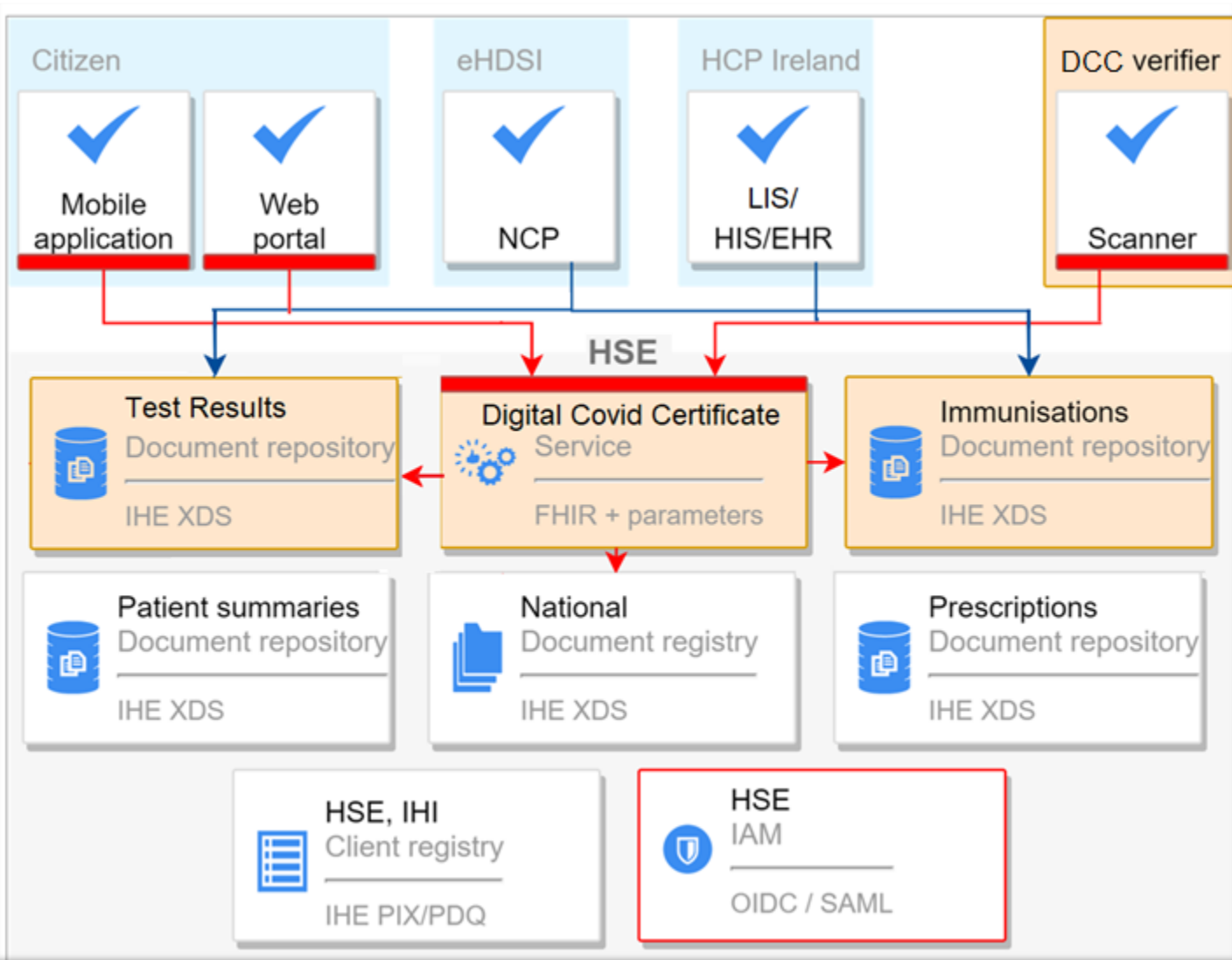
- We leveraged the existing XDS architecture and the supporting infrastructure and standards to encompass the IE Digital COVID Certificate use cases.
- As the architecture is based on open standards, thus enabling support and alignment to the EU and future WHO requirements.

Extending the XDS Based Architecture

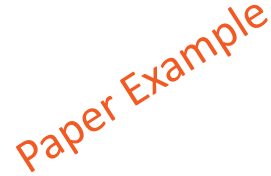


- The HSE added the Immunisation/Test result repositories, in addition to existing HSE infrastructure offering
 - IHE XDS document repositories
 - IHE XDS national document registry
 - IHE PIX/PDQ patient registry
 - IAM with SAML and OIDC providers
- Relying on the Immunisation/Test result repositories there is a new service capable of reading immunisation/test result records and producing the Digital COVID Certificate based on clinical record(s).
- Immunisation/Test Result records are in the standard format (HL7 CDA via IHE XDS/XCA) for continuity of care purposes and will be available to healthcare professionals both in Ireland and Europe.
- The proof of vaccination and test result data is available for medical and non-medical purposes for citizens, healthcare professionals and other verifiers.

Digital COVID Certificate as a service



- Digital COVID Certificate is available via a secure service capable of providing a proof of vaccination, proof of recovery and negative test results as per EU requirements.
- The service is dynamic and it relies on clinical data inside the immunisation repository.
- The service (and clinical records) will always be available to a citizen and empowers them to manage whom has (controlled) access to the Digital COVID Certificate.
- Vaccination/Test Results records for medical purposes and via standard compliance access are also available for healthcare professionals through IHE XDS/XCA integrations inside Ireland and in Europe via the Irish Open National Contact point.



- The Irish Digital COVID Certificate is modelled with standard HL7 FHIR R4 resources.
It is a self contained Bundle (Collection) of resources/embedded resources (and references between them) and it is available as structured XML (also as JSON) for various presentations via XML transformations.
- We have incorporated the JSON, CBOR, COSE, ZLIB etc. EU requirements in our Irish Digital COVID certificates.
- The Irish Digital COVID Certificate service can issue various representations via
 - ✓ Web
 - ✓ Mail
 - ✓ Mobile
 - ✓ Post
- On the 4th of June 2021 Ireland has **successfully completed the on boarding** acceptance test requirements to the EU Digital COVID Gateway.
- Production environment on boarding is set for 24th of June and **Go Live on 19th of July.**

— Thank you



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