digitalhealth
REWIRED
LONDON   14-15 MARCH 2023

Headline Sponsors:

SystemC & Graphnet Care Alliance

tpp

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Case Study:

Building a Clinical Data Repository (CDR) using open source software

Key Takeaways

1

Scale is challenging

2

Interoperability is hard

3

Space we're working in is maturing

What have we got

NDP

openEHR and ReSPECT

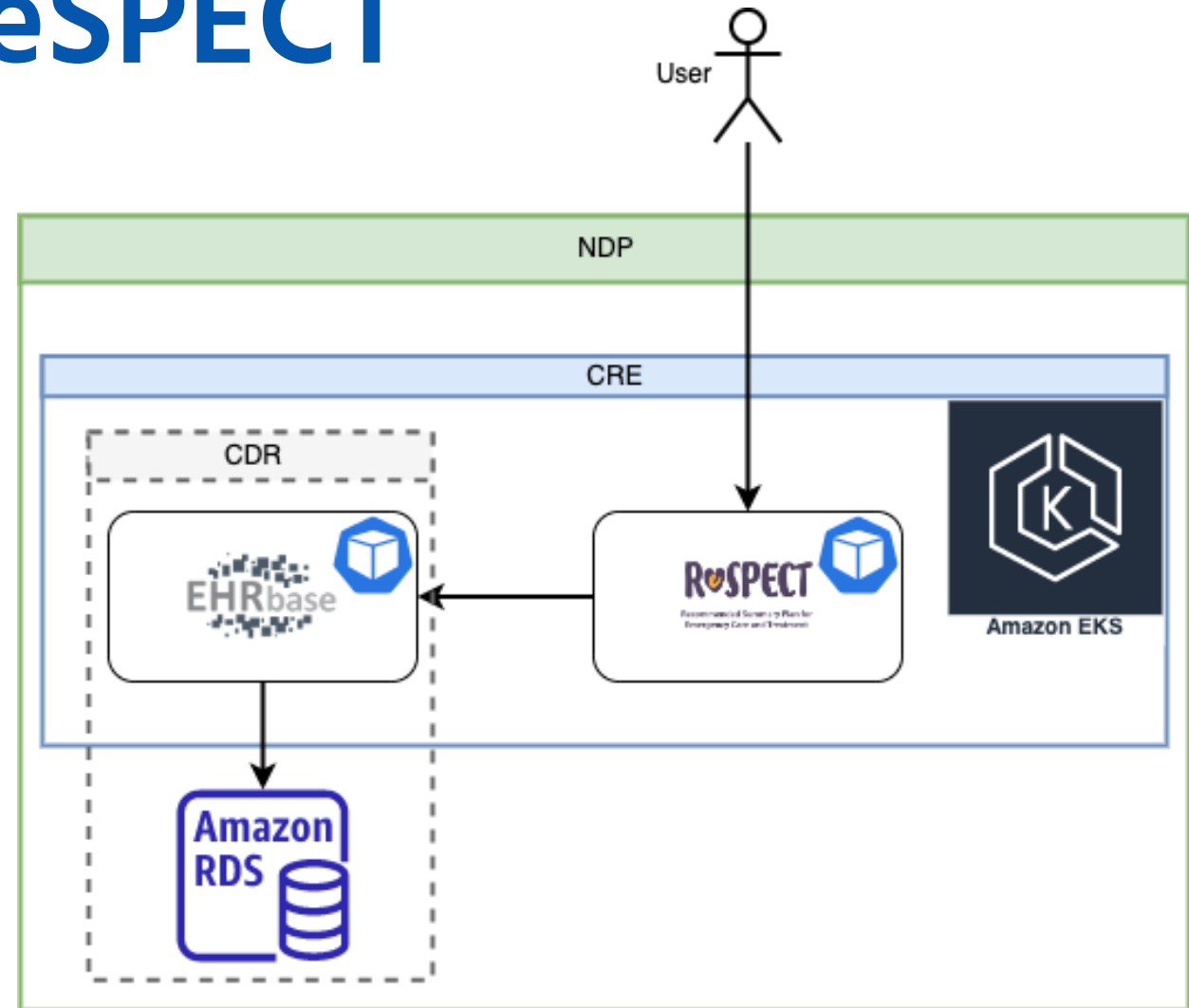EHRbase is available as a service on our platform as one of our repositories.

Our ReSPECT application is the first application on our platform that we built to use EHRbase for data storage.

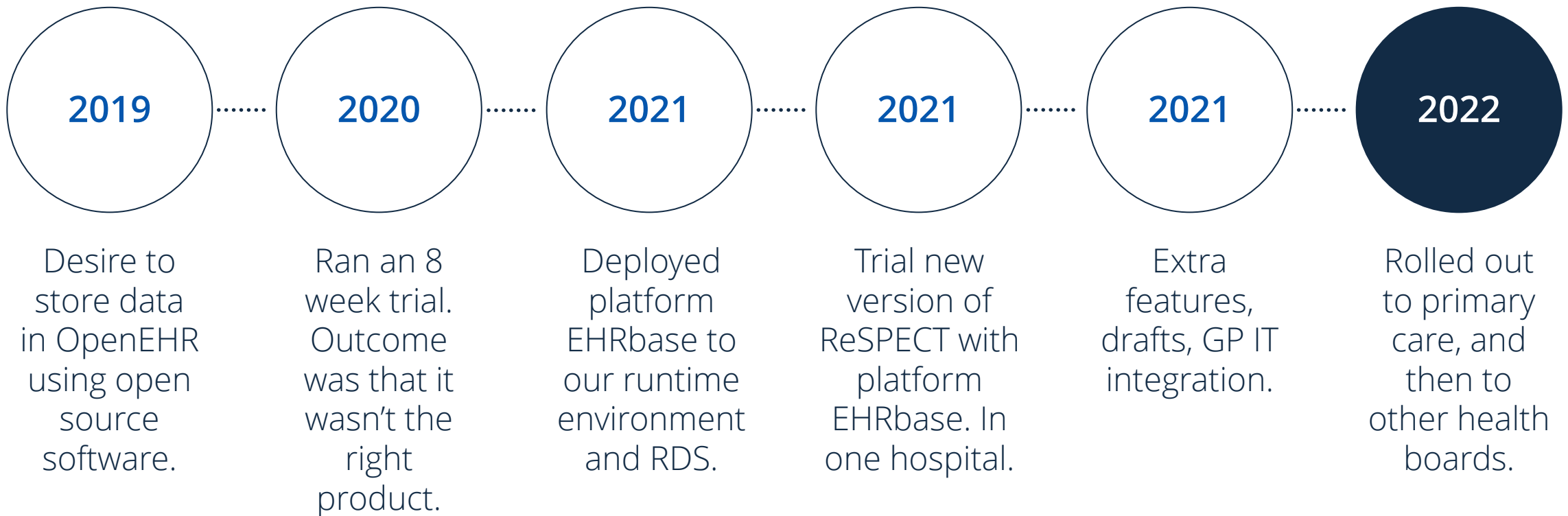Used in multiple heath boards in both primary and secondary care.

The start of a single electronic health record for each patient.

Stats
- Up to 10 requests per second
- 659 ReSPECT compositions

How did we get here?

2019 .... **2020** .... **2021** .... **2021** .... **2021** **2022**

2019	2020	2021	2021	2021	2022
Desire to store data in OpenEHR using open source software.	Ran an 8 week trial. Outcome was that it wasn't the right product.	Deployed platform EHRbase to our runtime environment and RDS.	Trial new version of ReSPECT with platform EHRbase. In one hospital.	Extra features, drafts, GP IT integration.	Rolled out to primary care, and then to other health boards.

CDR with EHRbase so far?

It's working for us

- Reading/writing individual composition.

- AQL queries for specific data in the compositions.
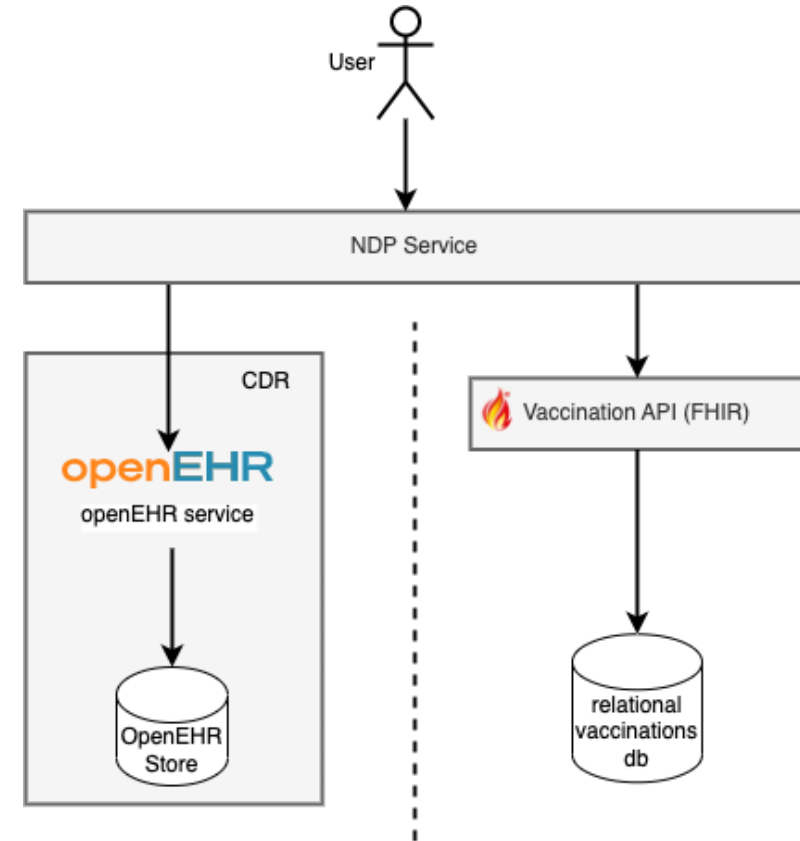
Known risks

- Risk of breaking changes before non beta release.
  - Submitted a couple PRs for small pieces of functionality.
- No mechanism to merge/linking EHRs, will require a work around.

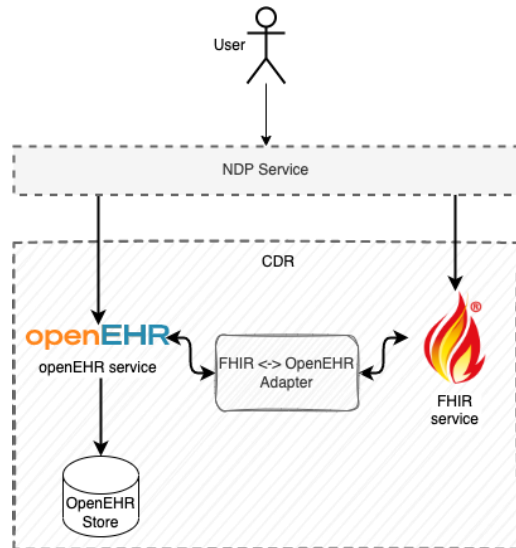# What else have we tried?

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National vaccinations data

- Stores flu, covid, and pneumococcal vaccinations for the people of Scotland.

- Built as part of our covid response.

- Larger scale than our ReSPECT application.

- Teams used tools they were familiar with and available to them at the time to meet the requirements.
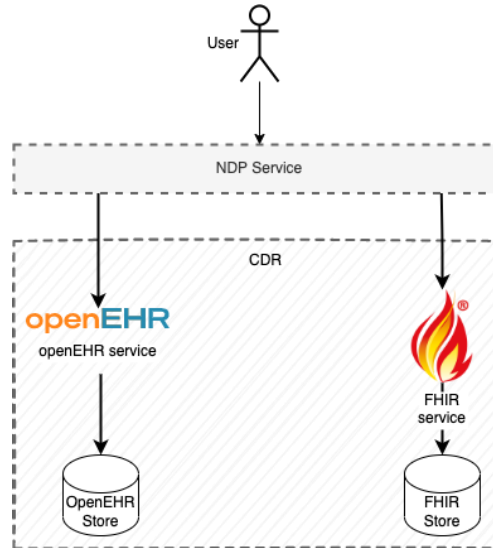
- What are our options?

Vaccinations data options
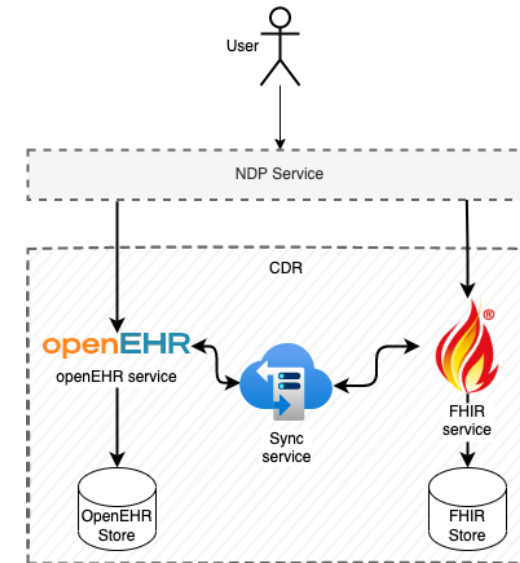
Store in openEHR

Still present the data in FHIR.

Store in FHIR

Store the data in a dedicated FHIR store.

Store on both

Store the data in FHIR and openEHR.

What will we do next?

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Still figuring it out

- Pleased with where we have got to so far.

- Want to run at large scale so we're going to have to invest time.

- Interested in having both FHIR and openEHR together, they're often talked about as complementing each other. We need to work out how?

- Keep up with what others are doing in the area as things mature.

- Trying things out to see what will work for us.

- Excited to see what the CDR will look like in one to two years time.

Website: https://www.nationaldigitalplatform.scot/   Twitter handle: @ndpscotland