7th Swiss EPR Projectathon

11–15th September 2023, Bern

Final Report

(Photograph: Raphaël Schaller)

Summary

Introduction

The EPR is entering a new phase in the project. All eight EPR-providers (communities) are certified since November 2022, and thus allowed to register patients and healthcare institutions on their EPR platform. Four communities propose to the population a partly or full online process for opening their EPR. The Federal Office of Public Health launched its national EPR campaign on 30th June 2023, with a first wave targeted at healthcare professionals. Provider of IT systems for healthcare institutions (primary systems) can declare the degree of technical integration of the EPR within their software on the [website of eHealth Suisse](#).

The 7th edition of the EPR Projectathon took place from 11th to 15th September 2023 in the Eventforum of Bern. This year, the EPR Projectathon focused on the eMedication and eVaccination exchange formats, as well as the radiographic imagery (PACS). Participants were also encouraged to test the compatibility between their systems and the EPR (EPR Integration). The underlying objective of those tests are to support the ongoing rollout of the EPR in Switzerland and improve the maturity of the corresponding eHealth services (products).

In addition, the EPR Projectathon has the usual following objectives:
- Identifying potential issues in the test tools and the test plans;
- Identifying potential issues in the basic EPR specifications;
- Strengthening the IHE implementation guidelines and HL7 standards;
- Communicating about the EPR and the technical testing done at the Projectathon with external publics
- Networking with other companies and exchanging knowledge (Lightning talks and Social Event)

Test organisation

General overview

➢ **Event organisation:** The event was organised by the Federal Office of Public Health, eHealth Suisse and IHE Suisse, with the support from the Federal Office of Information Technology, Systems and Telecommunication (FOITT) and the Central Compensation Office (CCO)
➢ **Testing venue:** Testing was organised at the Eventforum Bern.
➢ **Date:** The event started on Monday 11th September at 8AM, and finished on Friday 15th September at noon. Opening hours were from 8AM to 6PM. Testing took place from 9AM to 5PM.
➢ **Monitors:** A team of eleven EPR monitors (EPR specifications experts) assisted testers and verified the test cases. Nearly all of them had served before at one or more IHE European Connectathon or EPR Projectathon. As mandated by eHealth Suisse, Oliver Egger recruited, managed and led the team of monitors.

Monitor team and Technical support team of IHE Europe Services & EPR Staff
(Photograph: Raphaël Schaller)

- ➢ **Tools:** All legally based EPR profiles and specs were testable, including profiles for the eMedication and mHealth use cases. eVaccination and eMedication were again the focus of this year's edition. The profiles were respectively included in the EPR ordinances in December 2022 and June 2023. The tests were driven and reported in the Swiss EPR reference environment, which is an instance of the IHE Gazelle toolbox (https://ehealthsuisse.ihe-europe.net/gazelle).
- ➢ **Virtual Machine:** All the tools used during the event were gathered in the same virtual machine which is the aforementioned reference environment (https://ehealthsuisse.ihe-europe.net). The physical server was brought on site in order to secure the testing and prevent any risk of a loss of internet connectivity.
- ➢ **Network:** Swisscom Broadcast managed the network, as a subcontractor of eHealth Suisse.
- ➢ **Preparation:** Information about the event was regularly updated on the website www.epr-projectathon.ch and posted in the Projectathon Googlegroup. eHealth Suisse and IHE Europe held three webinars regarding the registration process and pre-Projectathon-tests in May and June 2023. The pre-Projectathon test phase lasted from 3rd July to the 7th September 2023.
- ➢ **Fees:** The participation fee was 350 Swiss francs per person. It included the testing, the social event, as well as food and beverages. There were no additional fees per company or system.
- ➢ **Side events:** The "Social Event" took place at the Dampfzentrale on Thursday 14th September and consisted of a standing dinner. From Monday to Friday, before and after testing hours, participants could visit the "lightning talks" and listen to short presentations concerning eHealth and EPR topics.
- ➢ **Communication:** During the event, external guests could visit the EPR Projectathon with a "Guided Tour", led by IHE Suisse. eHealth Suisse, IHE Europe and several participating vendors and monitors tweeted about the EPR Projectathon. Photographs are published on the official website.

Participating organisations

Twelve vendor organisations from 3 countries (Switzerland, Germany, and remote participation from the US) participated with altogether 39 employees. Most of the companies had already participated at least once in an EPR Projectathon. In comparison with previous EPR Projectathons in Bern, the participation was lower, which allowed for a more intensive testing and curated follow-up from the monitors and technical staff.

- • ABILIS
- • AD SWISS
- • AGORA
- • Berner Fachhochschule
- • CARA
- • CERNER

- • CISTEC
- • Dedalus
- • HCI Solutions AG
- • Open Web Technology
- • POST
- • Sopra Steria

Number of organisations and staff

	2023	2022	2021	2020	2019	2018	2017
Number of organisations	12	20	19	16	18	23	16
Number of participants	39	57	67	51	82	88	79
Monitors + Technical Support	11 + 11	11 + 8	14+8	15 + 8	17+8	17 + 9	13 + 8
Countries	3	3	3	2	3	3	3

Additionally, two federal institutions for EPR services were available for support at the EPR Projectathon for the UPI and the EPR central query services:
- • Central Compensation Office CCO (editor of the specific patient identifier number)
- • Federal Office of Information Technology, Systems and Telecommunication FOITT (responsible for various central index services such as the community portal index)

List of systems

Fourteen systems were registered at the EPR Projectathon. The systems represent a variety of Professional healthcare portals, Exchange formats modules and governmental services.

Organization	System keyword	Components concerned
ABILIS SA	HP-PORTAL_ABILIS_BERN2023	
AD Swiss	Community_AD Swiss_BACKEND HP-PORTAL_AD Swiss_PORTAL	AD Swiss EPD Gemeinschaft PORTAL
AGORA	2ND_SYSTEM_AGORA_0	Imaging System
BERNER	CCC_BFH_MAG23 2ND_SYSTEM_BFH_EPD	Mobile Access Gateway 2023 EPD_Client
Bundesamt für Informatik und Telekommunikation	GVT-SERVICES_BIT_BERN_2023	Governmental Services
CARA	Community_CARA_PMP_2023	PMP_2023
Cerner Health Services	TOOL_Cerner_COPY_0	Soarian Clinicals
CISTEC	HP-PORTAL_CISTEC_23	KISIM_23
Dedalus	2ND_SYSTEM_Dedalus	DeepUnity DICOM Services
HCI Solutions AG	HP-PORTAL_HCI	Documedis2023
Open Web Technology	HP-PORTAL_OWT	CARA Platform
Post CH Kommunikation AG / Digital Health	Community_Post_0 Community_Post_Cuore	POST_EPD_2023 POST_CUORE
Sopra Steria	2ND_SYSTEM_Impfmodul eHS_2023	Vaccination module for the EPR_2023
ZAS	GVT-SERVICES_EPR-ID provider_2023	GVT-SERVICES-EPR-ID provider_2023

Participating systems, Projectathon 2023

Tests performed

Overall view

94 tests were executed, with 72 verified

	Test instances	Partially verified	Verified	Aborted	Paused	Running	Failed
Group tests	**12**	2	**10**	0	0	0	0
Peer-to-peer-tests	**47**	2	**30**	9	0	6	0
No-peer-tests	**35**	2	**32**	0	0	1	0
Total	**94**	**6**	**72**	**9**	**0**	**7**	**0**

Executed tests at EPR Projectathon 2023

Peer-to-peer-tests

Peer-to-peer-tests involve two testing partners.

	Test Instances	Started	Partially verified	Verified	Completed	Aborted
213, 214, 215	**0**	**0**	**0**	**0**	**0**	**0**
CH-EMED	**0**	**0**	**0**	**0**	**0**	**0**
CH-VACD	**6**	**0**	**0**	**6**	**0**	**0**
CH:ATNA	**2**	**1**	**0**	**1**	**0**	**0**
CH:HPD	**3**	**0**	**0**	**3**	**0**	**0**
CH:MHD	**5**	**0**	**2**	**0**	**0**	**3**
CH:PDQV3	**1**	**0**	**0**	**1**	**0**	**0**
CH:PIXV3	**2**	**0**	**0**	**2**	**0**	**0**
CH:PPQm	**6**	**0**	**0**	**4**	**0**	**2**
CH:PIXm	**1**	**0**	**0**	**0**	**0**	**1**
CH:XDS-I	**2**	**0**	**0**	**2**	**0**	**0**
CH:XDS	**13**	**3**	**0**	**8**	**0**	**2**
CH:XUA	**1**	**0**	**0**	**1**	**0**	**0**
CH:ATC	**4**	**2**	**0**	**1**	**0**	**1**
CH:ADR	**1**	**0**	**0**	**1**	**0**	**0**
Total	**47**	**6**	**2**	**30**	**0**	**9**

Executed peer-to-peer-tests at the EPR Projectathon 2023

Group tests

10 of the verifierd tests were group tests where several test partners are involved. This allows realistic and complex scenarios to be simulated, for example the retrieval of a document by a health professional.

	Test Instances	Started	Completed	Verified	Partially verified
FHIR Medication Exchange format	3	0	0	3	0
HP_access_images_Patient_In_RC	1	0	0	1	0
HPP-upload_PAT-download-DOC	1	0	0	1	0
Patient_access_images_in_RC	1	0	0	1	0
Patient_gets_document_from_AC	1	0	0	1	0
HP_gets_document_Patient_2of3	1	0	0	0	1
CMPD-UseCaseByIPAG	1	0	0	0	1
HP Publish Document by AP	1	0	0	1	0
Patient Get Document by API	1	0	0	1	0
Pat_access_images_rem_community	1	0	0	1	0
Total	**12**	**0**	**0**	**10**	**2**

Executed group tests at EPR Projectathon 2023

Parallel events

Lightning talks

The lightning talks are short presentations on a particular subject. The six lightning talks were proposed free of charge to the vendors. This year's program included:

- *Federal Interoperability Platform I14Y*, by Fabrice Gouzi, Swiss Federal Statistical Office
- *The Electronic Patient Record – current situation,* by Alicia Grando, eHealth Suisse
- *The Swiss FHIR – Overview of the Swiss Exchange Formats*, by Michaela Ziegler, ahdis AG and Technical Manager HL7 Switzerland
- *HL7 FHIR Multi-domain HIE Architecture – Implication for the Swiss EPR,* by Oliver Egger, ahdis AG and IHE ITI Co-Chair
- *Revision Projects of the Federal Act on the EPR and the Therapeutic Products Act (TPA),* by Cyril Zgraggen, Federal Office of Public Health, Digital Transformation
- *IHE, HL7 and others: We need to work together closely*, by Adrian Schmid, Federas Beratung and President IHE Suisse

Guided Tours

As per usual, interested parties could register for a guided tour of the EPR Projectathon, in order to gain a better insight into the technical aspect of profiles development. IHE Suisse led one tour on Thursday afternoon.

Other results

Reported issues

As an outcome of the testing performed during the EPR Projectathon, 32 Jira issues were reported:

- ➢ Specs (1 tickets)
- ➢ Test cases (12 tickets)
- ➢ Tooling (19 tickets)

	PAT 2023	PAT 2022	PAT 2021	PAT 2020	PAT 2019
Spec issues	1	2	1	5	4
Test case issues	12	0	4	20	17
Tool issue	19	1	6	15	12
Total of tickets	32	3	11	40	33

Maturity levels

The maturity of the profiles, metadata and exchange formats of the Swiss EPR is classified into five levels, depending on their testability (level 1, 2, and 3) or their level of verification (level 4 and 5). During the 2023 EPR Projectathon seven profiles went up one level:

- Reached level 4:
  - o IHE Profiles: Cross-Community Access for Imaging (XCA-I), Document Metadata Update (XDS MU)
  - o mHealth: IUA, CH:PIXm, MHD, CH PPQm
- Reached level 5: eVaccination (CH VACD)

For an overview of the Maturity levels of the profiles, please refer to the published document.

Quality survey

This year, only two institutions gave feedback on their overall experience. They shared their overall satisfaction about the organisation of the event, the location, the food and beverage, the quality of the Lightning talks and more importantly the quality of the tests and work of the monitors.

One respondent suggested an introduction for newcomers at the EPR Projectathon to the Gazelle tool and the testing steps.

Conclusion

Altogether, IHE Suisse and eHealth Suisse consider the EPR Projectathon 2023 a successful event:
- The goals as described on page 3 have been reached to a great extent.
- Maturity levels have increased for eVaccination, Imaging and mHealth.
- Year after year, the concept of a shared testing venue is confirmed by the small but efficient community created by the vendors.
- The number of the reported issues significantly dropped since last year what indicates a grown maturity of the basic EPR specs, the tested EPR services and the tooling in the reference environment.
- There were less tests done than last year, due to a smaller number of vendors. However, more tests were done per company.
- According to the survey and the feedback received onsite, the participants seemed overall very satisfied with the organisation.

Hence, the responsible parties make the following conclusions regarding the further steps:
- The technical basics for the technical certification of EPR communities proved to be stable, both in terms of underlying specifications and in terms of reference environment. Some newer specifications target the technical improvement of the EPR, thus allowing vendors to stay on top of the coming developments.
- The Projectathon series will be continued to further enhance interoperability around the EPR system and attract additional vendors (e.g. primary systems).
- In 2024 the EPR Projectathon will take place from 16th to 20th September 2023 in Bern.
- An introduction for newcomers at the event will be proposed at the Projectathon 2024.
- The focus of the 2024 test week will be decided at a later point. Possible topics are ePrescription, eAllergy and mHealth specifications.
- In addition, online testing is permanently available on the reference environment in Gazelle. Vendors should make use of this opportunity. The communication via the Google group *EPR Projectathon* will be continued. For people wanting to join, please contact the group managers.