

# Sixth Swiss EPR Projectathon

## 12–16th September 2022, Montreux

### Final Report



## Introduction

This document provides an overview of the results and lessons learned at the 6<sup>th</sup> edition of the Swiss Projectathon on the Electronic Patient Record (“EPR Projectathon”) performed in September 2022. It contains the following sections:

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## Aims

Our annual EPR Projectathon took place from 12<sup>th</sup> to 16<sup>th</sup> September in Montreux alongside the Joint IHE Connectathon, the IHE Experience Day and the Swiss eHealth Summit. The Joint IHE Connectathon was an initiative by IHE Europe and IHE USA, which proposed joint online testing sessions for IHE profiles. This year's slogan for the whole event was "Building the bridge". Continued exchanges between IHE/eHealth professionals across Europe is always the primary goal for both the IHE Connectathon and the EPR Projectathon. In addition, the EPR Projectathon proposed peer to peer tests and group tests in order to test and improve eMedication, eVaccination and mHealth specifications based on the updated FHIR profiles. 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). Apart from the EPR certification **preparation support for vendors**, the EPR Projectathon had the following objectives:

- Identify potential issues in the **test tools** and the test plans;
- Identify potential issues in the **basic EPR specifications**;
- Strengthen implementation guidelines (as IHE) and **standards** (as HL7) in the health sector;
- **Communication and networking** about the EPR through on- and offline means (e.g. social media and public guided tours).

Moreover, seven EPR communities had obtained the certification by the start of the Projectathon and six had started their activities. Citizens in all of Switzerland could therefore open an EPR if they so wished.

## Test organisation

### General overview

- **Event organisation:** The event was organised by eHealth Suisse and IHE Suisse, with the support from the Federal Office of Public Health (FOPH) and IHE Europe. IHE Europe was also organising the IHE Connectathon and the IHE Experience Day. The Swiss Society for Medical Informatics organised the eHealth Summit.
- **Testing venue:** Testing was organised at the Montreux Music and Convention Center.
- **Date:** The event started on Monday 12<sup>th</sup> September at 8AM, and finished on Friday 16<sup>th</sup> September at noon. Opening hours were from 8AM to 6.15PM. Testing took place from 9AM to 6PM.
- **Monitors:** A team of twelve Swiss EPR monitors assisted testers and verified the test cases. Monitors had expertise on EPR specifications. 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



- **Tools:** All legally based EPR profiles and specs were testable, including profiles for the eMedication and mHealth use cases. eVaccination and eMedication were the focus of this year's edition. eVaccination profiles are to be included legally in the ordinances to the national EPR in November 2022, and the medication card document is to be included in April 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 (<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:** A brochure about the upcoming event was available from April 2022 in [German](#) and in [French](#). Information about the event was regularly updated on the website [www.epr-projectathon.ch](http://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 2022. The pre-Projectathon test phase lasted from 1<sup>st</sup> July 1<sup>st</sup> until 9<sup>th</sup> September 2022.
- **Fees:** The participant fee per person was 350 Swiss francs and included the participation to the testing, food and drinks, and the social event. There were no additional fees per company or system.
- **Side events:** The "Social Event" took place at the Montreux Music and Convention Center on Thursday 15<sup>th</sup> 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. In addition, the IHE Experience Day and the eHealth Summit took place in the same venue. Interested parties needed to register in advance and pay the entry fee.
- **Communication:** During the event, external guests could visit the EPR Projectathon with a "Guided Tour", led by eHealth Suisse and IHE Suisse. eHealth Suisse, IHE Suisse, IHE Europe and several participating vendors and monitors tweeted about the EPR Projectathon. [Photographs](#) were produced and made freely available.

**cara.** Association CARA  
1,3 mille abonnés  
• 3 sem. •

Semaine dynamique pour la e-médication dans le #DEP – Nos partenaires des HUG - Hôpitaux Universitaires de Genève, du CHUV / Centre hospitalier universitaire vaudois et de HCI Solutions SA ont testé la gestion intégrée entre plusieurs systèmes informatiques d'un plan de médication partagé, lors du projectathon à Montreux. Stéphane Spahni, Quentin Ligier (HUG) et Benjamin Bugnon (Association CARA) ont présenté l'architecture et l'agrégateur eMédication dans le contexte du DEP lors de la conférence internationale IHE Experience et le Swiss eHealth Summit. Un projet innovant et collaboratif vers une gestion plus sûre et coordonnée du plan de médication. Vous rejoignez le mouvement?

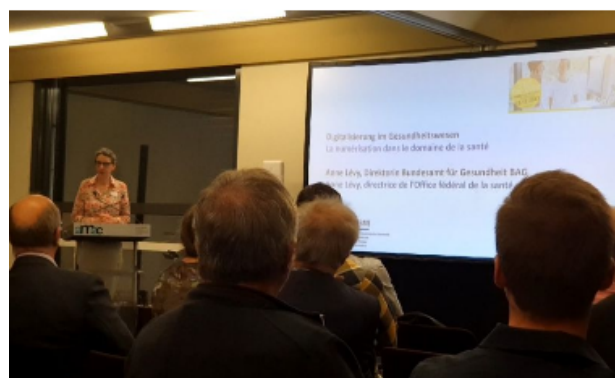
#Projectathon #ehealth #IHE #ehealthsummit #eMédication



**Frederic Ehrler** • 2e  
R&D team leader at Hôpitaux Universitaires de Genève  
3 sem. • Modifié •

Deuxième jour du #ehealthsummit 2022. Parmi les sujets présentés, présentation du soutien à la numérisation de la confédération par Anne Lévy, directrice de l'Office fédéral de la santé publique #OFSP. Focus sur le plan de médication partagé #PMP par Benjamin Bugnon et Quentin Ligier, pour offrir une vue unique et consolidée du plan de médication. Finalement, exploration des possibilités de la réalité virtuelle pour la formation en médecine par le Prof. Thomas Sauter.

On espère vous revoir nombreux l'année prochaine le 14 et 15.09.2023



**IHE Europe**  
2 765 abonnés  
3 sem. •

+ Suivre ...

2022 Joint IHE Connectathon reached fourth day with:  
<2484 tests completed,  
70% verified,  
30% running/to be checked;  
Anne-Gaëlle Bergé said her team had worked so hard & CPP TEST results proved how skilled they are!

#HealthcareInnovation #DigitalHealth #HealthData #Interoperability  
#HealthInformatics #Telehealth #HealthEquity #HealthIT #HealthcareLeaders  
#PatientExperience #PtExp #PatientEngagement #IHE\_ExpDay

Voir la traduction



avec Vous et 28 autres personnes


**IHE Europe**  
2 765 abonnés  
1 mois •

+ Suivre ...

The afternoon IHE Experience Experience keynote from Annatina Foppa talked of patient opt-in approach of Swiss EPR Project that is enjoying both Connectathon testing but also latest in a series of Swiss EPR Projectations.

#HealthcareInnovation #DigitalHealth #HealthData #Interoperability  
#HealthInformatics #Telehealth #HealthEquity #HealthIT #HealthcareLeaders  
#PatientExperience #PtExp #PatientEngagement #IHE\_ExpDay

Voir la traduction



avec Stéphane Spahn et 25 autres personnes


**Meierhofer AG**  
1.5 mille abonnés  
3 sem. •

+ Suivre ...

Heute startet der letzte Tag des #IHE #Connectathon und EPR #Projectathon. Fünf Tage lang hat #TeamMeierhofer in Montreux Interoperabilitätsstandards getestet. Besonders freut es uns, dass drei unserer jüngsten Kolleg\*innen aus dem Team Integration vor Ort dabei sind und so von Anfang an in tolle Projekte wie dieses einbezogen werden.

Kimberly Polley hat uns nach ihrem #Praktikum im Frühjahr letzten Jahres als Werkstudentin unterstützt, dabei ihren Traumjob gefunden und ist mittlerweile Junior Consultant. Auch Katrin Fuchshofer, #eHealth Studentin der FH JOANNEUM, konnten wir nach ihrem Praktikum zu Jahresbeginn als Werkstudentin für uns gewinnen. Und ganz neu dabei: Steffen Marz, der erst diesen Monat sein Praktikum im Rahmen seines Studiums in #Gesundheitsinformatik an der HTWG Hochschule Konstanz – Technik, Wirtschaft und Gestaltung bei uns begonnen hat.

Auch interessiert daran, schon während des Studiums mit uns in die Praxis einzutauchen? Hier gibt es alle wichtigen Informationen für Studierende  
<https://lnkd.in/e6Z9RVb8>



**CORO innovAZIONI**  
336 abonnés  
5 j • Modifié •

+ Suivre ...

Dal 12 al 16 Settembre 2022 a Montreux (Svizzera) si è svolto l'IHE-Europe Connectathon.

Coro ha contribuito alla sua realizzazione in molteplici aree di attività.

I dati sanitari contenuti nella cartella clinica del paziente sono di valore critico per la qualità del servizio sanitario. Proprio per questo, l'Unione Europea sta presentando l'European Health Data Space che si pone l'obiettivo di supportare gli individui nella gestione dei propri dati, garantendo parallelamente una migliore erogazione dell'assistenza e ricerca sanitaria nel rispetto della privacy.

Al seguente link è possibile leggere la proposta completa della Commissione Europea: <https://lnkd.in/dBRX8wF>

Nel contesto del Connectathon, Euronews ha realizzato un video che esplora e chiarisce queste tematiche. Coro ha contribuito alla creazione del video attraverso l'ideazione e strutturazione dello #storytelling, l'identificazione delle sorgenti di contenuto e assistendo all'organizzazione della produzione.

Potete trovare il video al seguente link: <https://lnkd.in/euG5dwzF>

Stéphane Spahn, Anne-Gaëlle Bergé, claudio rosmo, IHE-Europe, Alexander Berler, Alicia G., IHE Suisse, Swiss Digital Health, Lapo Bertini, Kereval, COCIR

#HealthcareInnovation #DigitalHealth #HealthData #Interoperability  
#HealthInformatics #Telehealth #HealthEquity #HealthIT #HealthSwiss  
#HealthcareLeaders #PatientExperience #PtExp #PatientEngagement #Health #Privacy

Voir la traduction



How is the EU healthcare sector preparing for the digital revolution?  
youtube.com

## Participating organisations

18 vendor organisations from 3 countries (Switzerland, Germany, and remote participation from the US) participated with altogether 57 employees. Most of the companies had already participated at least once in an EPR Projectathon or an IHE Connectathon. In comparison with previous EPR Projectathons in Bern, the participation was stable.

- ABILIS
- Avintis
- BFH
- CARA
- Cerner
- CGM
- ELCA
- HCI
- i-engineers
- Interact
- Meierhofer
- Openmedical
- Post
- Sopra Steria
- SwissSign AG
- Synedra
- x-tention
- Zollsoft

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

### Number of participants and staff

Additionally, two federal institutions for EPR services were remotely 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 \(responsible for various central index services such as the community portal index\)](#)



Testing venue



## List of systems

Twenty-one systems were registered at the EPR Projectathon. Most of the systems concerned Health Professional Portals, whereby it is notable that primary systems can reference the same actors as a Health Professional Portal.

Organization	System keyword	Components concerned
<b>ABILIS SA</b>	HP-PORTAL_ABILIS_2022	Health Professional Portal
<b>Association CARA</b>	Community_CARA_2022	Community Components
<b>Avintis SA</b>	2ND_SYSTEM_Avintis_ehgw	Secondary System
<b>Berner Fachhochschule - Medizininformatik</b>	CCC_BFH_MAG22	Community Components
<b>Bundesamt für Informatik und Telekommunikation</b>	GVT-SERVICES_BIT_2	Governmental Services
<b>Cerner Health Services</b>	TOOL_Cerner_COPY_0	Health Professional Portal
<b>CompuGroup Medical Schweiz AG</b>	HP- PORTAL_CGM_CLINICAL_G3	Health Professional Portal
<b>ELCA Security</b>	IdP_SwissSign_1	Identity Provider
<b>HCI Solutions AG</b>	HP- PORTAL_HCI_Documedis202 2	Health Professional Portal
<b>Impfmodul eHealth Suisse (Sopra Steria AG)</b>	2ND_SYSTEM_Impfmodul eHS_vacc EPR eHS	Secondary System
<b>Interact Digital AG</b>	HP-PORTAL_ARTS_4_2_6	Health Professional Portal
<b>Meierhofer AG</b>	HP-PORTAL_MAG_2022	Health Professional Portal
<b>openmedical AG</b>	2ND_SYSTEM_OM_1	Secondary System
<b>Post CH Kommunikation AG / Digital Health</b>	Community_Post_Post	Community Components
<b>synedra Schweiz AG</b>	2ND_SYSTEM_synedra_2022	Secondary System
<b>the i-engineers AG</b>	Community_TIE_HE	Community Components
<b>SwissSign AG</b>	IdP_ELCA_0	Identity Provider
<b>x-tention Informationstechnologie AG</b>	HP-PORTAL_EHR_2022	Health Professional Portal
<b>ZAS</b>	GVT-SERVICES_EPR-ID provider_2022_Montreux	Governmental services
<b>Zollsoft GmbH</b>	2ND_SYSTEM_Zollsoft	Secondary System

## Tests performed

### Overall view

205 tests were executed during the sixth EPR Projectathon, of which 178 were verified.

	Test instances	Partially verified	Verified	Aborted	Paused	Running	Failed
Group tests	7	0	6	1	0	0	0
Peer-to-peer-tests	141	2	126	5	1	6	1
No-peer-tests	57	1	46	3	1	5	1
<b>Total</b>	<b>205</b>	<b>3</b>	<b>178</b>	<b>9</b>	<b>2</b>	<b>11</b>	<b>2</b>

Executed tests at EPR Projectathon 2022

### Peer-to-peer-tests

The largest share of verified tests concern peer-to-peer-tests with two testing partners involved.

	Test instances	Started	Paused	Verified	Aborted	Partially Verified	Failed
213, 214, 215	5	0	0	5	0	0	0
CDA-CH-EMED	2	0	0	1	1	0	0
CH-EMED	9	0	1	8	0	0	0
CH-VACD	3	0	0	3	0	0	0
CH:ATNA	11	1	0	10	0	0	0
CH:HPD	9	0	0	9	0	0	0
CH:MHD	1	0	0	0	1	0	0
CH:PDQV3	19	0	0	19	0	0	0
CH:PIXm	1	1	0	0	0	0	0
CH:PIXV3	16	0	0	15	0	1	0
CH:XDS	22	3	0	17	1	0	1
CH:XDS-I	5	0	0	5	0	0	0
CH:XUA	35	1	0	31	2	1	0
SVS	3	0	0	3	0	0	0
<b>Total</b>	<b>141</b>	<b>6</b>	<b>1</b>	<b>126</b>	<b>5</b>	<b>2</b>	<b>1</b>

Executed peer-to-peer-tests at EPR Projectathon 2022

### Group tests

7 of the executed 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	Aborted
HP_access_images_Patient_In_RC	1	0	0	1	0
eMedication- Create_Trans_Import	1	0	0	1	0
HPP-upload_PAT-download-DOC	4	0	0	4	0
Patient_access_images_in_RC	1	0	0	0	1
<b>Total</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>

Executed group tests at EPR Projectathon 2022.



## Parallel events

The 2022 edition of the EPR Projectathon was part of a larger event around eHealth in Switzerland and in Europe.

### IHE-Europe Connectathon

Switzerland welcomed for the second time the IHE-Europe Connectathon, which also provided common testing sessions with the IHE-USA Connectathon. 55 firms participated in the IHE-Europe Connectathon, four of which also took part in the EPR Projectathon: Synedra, Meierhofer, i-engineers and CGM. Having both testing event happening in the same room allowed for a larger and more intensive networking between Swiss and European colleagues.

### IHE Experience Day

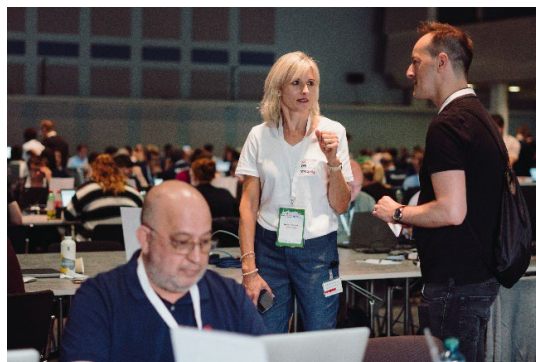
Jointly with the IHE-Europe Connectathon, IHE-Europe proposed a conference day with contributions from top-leading experts from all over Europe, including presentations from Swiss experts. The IHE Experience Day took place in the context of the [European Data Space](#) initiative.

### eHealth Summit

The Swiss Society for Medical Informatics (SGMI – SSIM - SSMI), jointly with MKR, organised their annual conference, the eHealth Summit, in the same venue in Montreux. During one day and a half, eHealth experts from Switzerland and abroad shared their insights in governmental policies, IHE profiles, technical implementation of the EPR, etc. HL7 Switzerland invited Grahame Grieve to talk about FHIR at the conference. The director of the Federal Office of Public Health, Ms. Anne Lévy, also shared her vision for eHealth in Switzerland.

### 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. Tours were proposed in French and German, and on demand in English. This year, European IHE specialists also offered explanations on the work of IHE-Europe.



## Other results

### Reported issues

As an outcome of the testing performed during the EPR Projectathon, 8 Jira issues were reported:

- Specs (2 tickets)
- Test cases (5 tickets)
- Tooling (3 tickets)

This represents a big reduction compared to the number of tickets in 2021. IHE Europe and eHealth Suisse process reported issues.

### 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 2022 EPR Projectathon, one profile, the CH-VACD, was newly tested with peer-to-peer test, and therefore went up to level 4. All documents in the CH EMED and CDA-CH-EMED profiles have reached level 5. Last year, only the Medication Card document had reached level 5. For the overview of the maturity levels of all EPR profiles, see the [published document](#) on the website of the EPR-Projectathon.

### Quality survey

9 out of 18 firms responded to the quality survey on the EPR Projectathon. The following points are a summary of the survey's results:

**Motivation:** Vendors decided to participate to the EPR-Projectathon 2022 for various reasons. The chief three reasons were to stay up to date with the implementation, the networking, and testing the exchange formats (eMedication, eVaccination and the mHealth profiles).

**Satisfaction with registration and communication:** All participants could find the necessary information for registration and during the event. Almost 90% were (very) satisfied with the overall process. Participants asked for less Google-Group emails and a more detailed website.

**Satisfaction with technical infrastructure:** Only half of the people found Gazelle intuitive enough and easy to use. It is a rather stable percentage for a few years, with no improvement. The participants complain about:

- the complexity of the validation system
- the slow speed of Gazelle
- the difficulty to find the right validator for each protocol.

Proposed ameliorations are:

- to be able to delete a post EVS links
- having option to directly paste requests and responses in the test steps and validate them directly

**Test plan:** All respondents were happy with the new tests descriptions and 70% were happy with the quality of the tooling. They however demanded that content and dates for the mandatory pre-tests were better communicated. They would also prefer if group tests were even more planned in advance. The validation process should be easier and quicker.

**Opinion on monitors and event management:** All participants were very content (78%) or content (22%) with the work with the monitors, although one person regretted that some monitors seemed to be somewhat less experienced. Similar percentage reflect the work of the management team.

Participants particularly liked the new venue in Montreux and the added networking possibility with participants to the IHE-Europe Connectathon. They think the event was overall very well organised. As proposed improvements for the 2023 edition we find:

- all communication and testing tools also available in English

- only PAT appropriate profiles (not DICOM Rad-16)
- prepared group tests
- more vendors

**Market readiness:** According to the participants, 62,5 % of the tested products are ready to enter the market, which is three times as much as in 2021. 37,5% of systems should be ready within six months. Compared to 2021, the firms are much closer to enter the market.

**Catering and side events:** Half of the participants participated to a Lightning Talk. All of them went to the social event. 90% of the respondents liked the catering service.

**General feedback:** Participants particularly appreciated the joint event with the IHE-EuropeConnectathon, as it enabled them to exchange with more people. Participants generally liked the organisation and the catering service. The main critics focus on the speed of Gazelle, a clearer communication about when pre-tests and group tests need to take place, and the complexity of the validation process.

## Conclusion

Altogether, IHE Suisse and eHealth Suisse consider the EPR Projectathon 2022 a **successful event**:

- The **goals** as described on page 3 have been **reached to a great extent**.
- Maturity levels have increased for vaccination and eMedication. All eMedication profiles have reached the highest maturity level.
- 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.
- There were **slightly less tests** than last year, due to some tests not being reported on Gazelle.
- According to the survey, the **participant's satisfaction** with the event was generally high, though some impatience was noted with the speed and complexity of Gazelle and the scheduling of the tests.

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. Unfortunately, some of these specs lacked extensive testing.
- The Projectathon series will be continued to further enhance interoperability around the EPR system and attract additional vendors (e.g. primary systems).
- **In 2023 the EPR Projectathon will take place from 11<sup>th</sup> to 15<sup>th</sup> September 2023 in Bern.**
- The focus of the 2023 test week will be decided at a later point. Possible topics are to further test mHealth and FHIR exchange formats.
- 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](#).

According to the satisfaction survey, the organisers will keep most of the event elements **as hitherto** (e.g. food, lightning talks, f2f event). **Changes to be considered** concern mostly detailed information about the event on the website, more group testing coordination before the event and the improvement of the validation process.