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Project report Cross Border eHealth Information System (CBeHIS)

Period January - June 2017

University Hospitals of Geneva (HUG)

29.08.2017

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1. Background

This report describes HUG activities performed during the first semester 2017 in relation with the participation of Switzerland to the Connecting Europe Facility and the CBeHIS.

The HUG team has been raised with the engagement of Rafael Jimenez from January 2nd, 2017. Rafael is progressively taking over all technical tasks, while Stéphane Spahni on concentrating on coordination, administrative and legal tasks. The first weeks of the year were therefore an “immersion” in the NCPeH world for Rafael, culminating at the first OpenNCP Boot Camp in January and the April NCPeH Projectathon!

On EU side, work was undertaken mainly by JASeHN (Joint Action to Support eHealth Network) Task 5.6, eHMSEG (eHealth Network Member States Expert Group) and eHN (eHealth Network) committees as well as OpenNCP community’s task forces.

2. Main activities

Apart from the regular coordination meetings between eHealth-Suisse, FOPH, HES-SO and HUG (5 teleconferences and one face to face), activities performed during the reporting period can be grouped into several topics:

- Related to the JASeHN & eHMSEG;
- Related to the OpenNCP community;
- Related to the maintenance of the National Contact Point.

2.1 Activities related to JASeHN & eHMSEG

HUG actively participated to the work of JASeHN and eHMSEG. One face to face eHMSEG was organized in Brussels and more than 10 teleconferences were dedicated to the establishment of the deployment plan and to discuss audit schema. Review work for the various deliverables occurred during the whole period.

In parallel to this work, ad-hoc face to face meetings were organized in Switzerland to discuss legal aspects with the State of Geneva and networking aspects (TESTA related) with the FSIO.

2.2 Activities related to the OpenNCP

Three major activities took place during the first half of 2017:

- The “OpenNCP Boot Camp”, for which HUG was one of the co-organizers and trainers took place in Brussels from the 24th to the 26th of January. The boot camp was very well attended and successful. Preparation of this event was a major task during the first weeks of January. This event was also the occasion for Rafael Jimenez and Reinhold Sojer for getting a deeper knowledge of the OpenNCP implementation, deployment and testing.
- The Projectathon took place in Venice from the 3rd to the 7th of April. Switzerland participated successfully to the PAT with both the NCP-A and NCP-B Patient Summary scenario.
- Online pre-projectathon and projectathon tests took place between the 12th and 23rd of June, after a two days training in Brussels beginning of June. This was the occasion to validate the latest OpenNCP release (initially release 2.5.0, planned to be used in production 2018, but patches were still required) and to prepare the formal technical qualification tests that should happen in September 2017. All tests were performed and successfully validated by the dedicated validation team.

Apart from these major events, regular teleconferences occurred during the whole period (more than 20 teleconferences) in order to discuss OpenNCP developments and to solve pending problems.

During this semester information and training for Reinhold Sojer (FOPH) was also performed in order to start the transfer of knowledge from the HUG to the FOPH.

OpenNCP Governance:

- Stéphane Spahni is now member of the OpenNCP Technical Work Group
- Rafael Jimenez is now member of the OpenNCP Development Team

2.3 Activities related to the maintenance of the National Contact Point

Swiss OpenNCP installation was updated with new releases for the Boot Camp, for the Venice projectathon and for the on-line pre-projectathon tests. Major update of the underlying system (operating system, VPN software) was however delayed to Summer 2017.

The Master Value Set catalogue was updated to version 2.2 provided by HES-SO.

The Swiss NCP is still using Swisscom SSL Certificates, which are valid until March 2018.

Maintenance work was also performed on the application producing the Patient Summary, in order to enhance it and to adapt it to newly available data from the HUG Clinical Information System.

3. Problems encountered

No major problem was encountered during this period. Swiss participation is fully accepted, and we are globally considered as a “normal” member. This is particularly visible on the technical side, where Switzerland is one of the experienced participants and this recognized as a reference one.

Several key elements requiring careful follow-on have nevertheless to be mentioned:

- Administrative and legal audit: no external auditor has been appointed for now by DG Santé. The timetable for this audit is therefore still open, while reports should be available for the December eHN meeting in order to allow the go-live for the 2018 countries. Funding of the auditors for Switzerland has also never been clarified (probably intentionally).
- Legal umbrella: a first version of the legal agreement between participating countries has been accepted during last JASeHN meeting in Malta in May 2017. Considering the current national legislation, this agreement cannot be signed by the Federal government. Such a signature will be possibly feasible only after the ordinance about the National Contact Point are accepted. An interim solution based on Geneva’s umbrella / signature has to be proposed. Very promising discussions with Geneva’s jurists are ongoing and we hope to be able to propose an interim solution to eHN early in the autumn.
→ Investigations to be continued and proposal to be made by September at latest.
- VPN between NCPs: VPN setup was always a complex task, its maintenance also. A proposal has been made to use the TESTA infrastructure which already exists and provides a VPN between EU countries. Switzerland is hopefully already part of this infrastructure and a TESTA access point is available (managed by FOITT). A pilot is being run by a few countries to validate the use of TESTA infrastructure between the NCPs. Latest news tend to the mandatory use of TESTA-ng network between the NCPs, even it implies a delay in the go-live date in order to enable all concerned countries to set up its connection. However we should be prepared for a projectathon with mandatory TESTA connection around December 2017 / January 2018.
 TESTA being not free, its (almost certain) use will for sure result in additional costs (billed by FOITT) for which a budget will have to be allocated. Technical solution regarding the location of the NCPeH and its physical connection to TESTA-ng node will also have to be investigated as soon as possible.
→ Start discussions with FOITT as soon as possible!
- SSL Certificates: Swisscom has announced last year they will not renew the SSL certificates any more, as they are too specific. We will therefore have to find another certification authority. However the problem is not Swiss specific, many other countries having the same problem. Discussions are ongoing for using DG Digit provided certificates for all NCP Nodes. Solution is currently under evaluation. The use of TESTA network will probably also deeply influence the choice of the certification authority (we may be forced to use the same CA as for connecting to TESTA-ng).
- eID related requirements are to be followed carefully especially in terms of schedule: indeed Switzerland is participating to eIDAS, but it seems that no concrete setup of an eIDAS node for Switzerland is currently planned. On the OpenNCP side, substantial resources will be allocated to eID topic in the coming 12 months. It can be expected that eID will be part of the 2019 go-live → work related to the setup of an eIDAS node should start quickly.

An initial meeting with Berner Fach Hochschule & IDV took place on the 27th of June in Olten which will be followed by another one in autumn in order to initiate the necessary actions at

technical as well as organizational and political levels.

→ **Start discussions about concrete eIDAS node implementation at federal offices level as soon as possible (FOPH, SECO, ?)!**

- Last but not least, the fact that R. Sojer is leaving end of June is a potential risk regarding the continuity of the activities within the FOPH. Indeed in order to reduce the amount of work and thus the costs of HUG and HES-GE work, it was agreed that some tasks will be performed by FOPH (58 man days for 2017, 82 for 2018 and 86 for 2019). The training time invested by HUG will have to be spend a second time for his successor, as he/she will probably be novice on the National Contact Point topic. The estimated work left for 2017 being around 30 man days, implication as soon as possible of a successor to Reinhold Sojer is of primarily importance in order not to break the dynamic started at the beginning of the year.
→ **Organize a “Kick-off” meeting with the successor of R. Sojer as soon as possible!**

4. Meetings

HUG participated to:

- 1 face to face eHMSEG in Brussels;
- 3 days OpenNCP Boot Camp in Brussels as participant and co-organized / co-trainer;
- 5 days OpenNCP Projectathon in Venice;
- 2 days OpenNCP testing session in Brussels;
- More than 20 teleconferences related to OpenNCP;
- More than 10 teleconferences related to eHMSEG (mainly deployment plan and audit checklist);
- Several national teleconferences and face to face meetings.

5. Next steps

The second half of 2017 will focus on the following main aspects:

- Resolution of all technical aspects found and not yet solved during pre-PAT tests (most were solved during on-line projectathon of June 2017);
- Integration of SMP/SML distribution of configuration information (SMP/SML was not available for pre-PAT testing);
- Adaptation of the Swiss Patient Summary to take into account updates of the specifications and MVC 2.2;
- Set up of a legal framework enabling the go-live under a cantonal responsibility;
- Preparation and contribution to the external audit;
- PAT-on-line final technical validation (September 2017);
- Preparation for the go-live (installation, helpdesk, surveillance, etc.);
- Preparatory work for the use of TESTA-ng infrastructure for communication between NCPs and central services;
- Preparatory work for a transfer of the NCP infrastructure towards a federal governance and exploitation.

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July 3rd, 2017*



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1. Background

During year 1, the main activities in the field of semantics are related to delivery of a new consensus MVC. The new MVC (v2.2.1) introduces many changes, including some significant pruning. In parallel, the translation and transcoding assets needs significant updates.

2. Main activities

The development of the clinical vocabulary is more or less continuous since the adoption of new procedures by the end of 2016/ beginning of 2017. Two successive MVC releases were delivered: 2.2.0 and 2.2.1 in respectively March and June 2017.

In parallel, the EU invested significant resources in the development of new CTS. These new services were tested by the Semantic team during the bootcamp. Drawn on our experience with the FH Dortmund tool, this new server fulfill all the project's needs for all the different roles (Translator, Curator, Administrator, etc.), without adding unnecessary features.

Out of the 18677 items of the new MVC, 769 terms were identified, which did not match the French terminologies available in Switzerland, nor the previous translations validated for epSOS/EXPAND. These 769 new terms have been translated and validated manually by an MD (Dr. Anaïs Mottaz).

Following several discussions during May-July 2017, a letter was sent to eHMSEG in order to turn the CTS into an Open Source community effort.

3. Problems encountered

There was no significant problem during this first semester of 2017, however some of the translation and transcoding tasks were labor intensive:

- The deployment of the MVC 2.2.1 and the pre-PAT deadline were too close for a validation of the terminology; therefore the MVC 2.2.0 was deployed for the tests.
- Due to some terminologies legal constraints, the changes between MVC 2.2.0 and 2.2.1 were only listed in a PDF document, which implied manual processing.
- The new EU-CTS tool allowed us to download the current terminology for an automatic process, but we had to adapt our previous EXPAND-based pipeline.
- The new code systems used to represent countries and languages had to be completely refactored in French.

4. Meetings

The HEG team participated in the following event:

- eHDSI Semantic Face to Face in Brussels (Patrick in February, Luc in June) (2 days)
- Semantic Boot Camps in Brussels (2 days. Luc)
- Teleconferences related to OpenNCP (9 Luc + 2 Patrick)
- Teleconferences related to eHDSI Semantic group (10 Luc + 2 Patrick)
- Teleconferences related to eHDSI Architecture group (5 Luc + 1 Patrick)
- Monthly Swiss teleconferences (Luc and Patrick).

5. Next steps

- Improve the transcoding with the future HUG code system
- Collaborate with French speaking countries to cross-validate the translated terminologies
- Future MVC (2.2.2 or 2.3)
- Deploy the translation/transcoding on the EU CTS

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July 10th, 2017