Referentie onderzoek, context Coneno
Datum: 31 augustus 2020

Context

Influenzanet is een meerjarig project/samenwerking gefocust op het verzamelen van infectieziekte data door midden van wekelijkse vragenlijsten aan burgers (citizen science). Deze samenwerking wordt ondersteund door privé personen, diverse nationale agentschappen en stichtingen en de Europese Unie. Sinds December 2018 is Influenzanet bezig met het ontwikkelen van nieuwe software (Influenzanet 2.0) om hun huidige systeem (Influenzanet 1.0) te vervangen. Bij deze ontwikkeling waren tot maart 2020 de volgende partijen betrokken:

Partij	Rol/Bijdrage
ISI Foundation, Turin, Italy	project lead and coordination
DFKI - German Center for Artificial Intelligence, Kaiserslautern, Germany	Research of technologies for privacy preserving, participatory data collection; master's, bachelor thesis and student projects around Influenzanet 2.0
INSERM, Sorbonne Université, Institut 5.1.2e Louis d'Epidemiologie et de Santé Publique Paris, France	Requirements engineering, development of data analytics methods
Coneno, Germany	Technical infrastructure and software development

Sinds de start van de corona-uitbraak is er financiering gekomen voor het afmaken van Influenzanet 2.0 door de participatie van het ISI-foundation aan het H2020 EpiPose project, een project waarbij ook RIVM betrokken is.

Het RIVM gaat deze applicatie in productie nemen met als doel het monitoren van Covid-19. Dit systeem is de vervanging van de oplossing in Formdesk. De applicatie is nog niet bij andere EU-lidstaten in gebruik.

Binnen het H2020 EpiPose-project is het duitse bedrijf Coneno de partner die de applicatie bouwt. Coneno is een spin-off van het DFKI. Binnen dit project wordt door Coneno ook bijgedragen aan het productie-rijp maken van de software voor RIVM en wordt invulling gegeven aan functionele eisen en niet-functionele eisen gesteld door RIVM. Voor doorontwikkeling en onderhoud gaan afspraken gemaakt worden met Coneno. Vooralsnog wordt ook een gedeelte van de doorontwikkeling en onderhoud gedekt door het H2020 EpiPose-project.

Oorsprong samenwerking

Bron: Motivation letter ISI foundation

Enhancing the Influenzanet network by deploying new platforms in the Netherlands and Belgium is among some of the goals of WP4 of the EPIPOSE project.

ISI Foundation has been coordinating the Influenzanet network since 2008, when it was created in the scope of the FP7 EC integrated project Epiwork coordinated by 5.1.2e 5.1.2e 5.1.2e 5.1.2e *of ISI at that time. The technological infrastructure was created and deployed for the first time during the H1N1 2009 flu pandemic.*

With the EPIPOSE project, we have the chance to renew and enhance the technology behind the Influenzanet platform to face the covid-19 pandemic with additional capabilities. This process was already partially initiated in the past years, through the collaboration between ISI and the German Center for Artificial Intelligence (DFKI), during the H2020 Cimplex project coordinated by 5.1.2e 5.1.2e *This work has continued over the years through coneno.*

Founded in 2016 as a Spin-Off from the DFKI, coneno offers technology consulting and full stack development services. Before 2018 people now belonging to coneno's team were also working at DFKI within the CIMPLEX project.

The startup's everyday goal is to enable everyone to leverage the opportunities and benefits offered by today's most advanced and trend-setting technologies with the highest standards in terms of current ethical and safety aspects. Their strong, growing team has years of professional project experience, a diverse skill set and tie-ins with IT experts and AI researchers. As a young technology startup, they are able to offer a cutting-edge technology stack and adapt to high variety of project structures. coneno is operating globally with offices located in Kaiserslautern, Germany. Current and recent projects range from creating mobile apps for smart wearables to development of scalable micro-service architectures for cloud-based data collection platforms.
Since 2018, coneno is working together with the Influenzanet consortium as a technology provider to modernize Influenzanet by designing and developing a new platform including dynamic, scalable data collection modules and state-of-the-art mobile-first user clients.

Thus, the choice of coneno as subcontractor for this project follows the best value for money principe, given the several years' experience they have of working in close collaboration with research scientists at ISI and from other public health institutions running the Influenzanet national platforms.

Bron: achtergrond informatie via ISI foundation:

To give you some background on why we are working with Coneno:

5.1.2e (https://www.dfki.de/web/ueber-uns/mitarbeiter/person 5.1.2e was the coordinator of the Cimplex project (https://cordis.europa.eu/project/id/641191/it) from 2014 to 2017. We were partners in Cimplex and were collaborating on the modeling activities as well as on developing new data collection schemes.

The team at DFKI was really good and, regarding Influenzanet, they had to develop a mobile app version (based on the old platform!) to collect additional data also from mobile sensors.

The interaction with them was really productive and they realized soon how old and outdated the Influenzanet platform was. So we decided to start thinking about refactoring it together, at a low burn speed, while looking for funds. My institution offered to cover some funds to start this development and the easiest way to transfer this funds to DFKI was through the developers of Coneno, which is a spin-off of DFKI and shares a large part of the staff with the Institute.

The interaction with them was and still is very pleasant. In order to cover some additional work, given that the funds from ISI were not so high (about 35K in the past two years) they have relied on students doing their master thesis with them on things that could be used for Influenzanet. With Epipose, I had the chance to have some funds for subcontracting to speed up the development. Since the conceptual work around the survey software was well advanced, I tried to put as much as I could on the subcontracting task to at least have a first prototype of the new platform. In hindsight, maybe it would have been better to directly involve them as partners in the project but there really was not too much time to think about the whole thing and I did my best to come up with a solution for the project.

So, all in all, we didn't really do specific checks but when we started working on refactoring influenzanet, they showed me some work they had done for other projects/companies and it looked really impressive.

The added value of Coneno is that they are embedded in a research environment and they understand the needs of developing software for research. We worked in the

past with other companies who wanted specific requirements fixed in time and written in stone, which is really hard for a research project, especially if it's done for public health purposes (which makes the whole thing more sensitive).

So far, they have done even more than they were supposed to and have understood the lack of funds and the need to move forward with the work. We are constantly trying to get more funds and they are more than happy even to help in writing grants and proposing venues for fundings.

I hope all these information are enough for you! I wrote a letter for the Epipose project to justify why we want to work with Coneno and we didn't look for other quotes from other companies. The coordinator accepted it and said it's fine!

Overige uitgevoerde checks:

Als overige checks op Coneno als betrouwbare partner zijn, naast de reguliere risico analyse, de volgende relevante zaken te noemen:

- In de risico analyse zijn binnen het bestaande framework de aspecten als genoemd in de CIP SSD eisen meegenomen en meegewogen;
- In de risico analyse zijn de elementen als genoemd in de NCSC checklist voor beveiliging van webapplicaties meegenomen: https://www.ncsc.nl/documenten/publicaties/2019/mei/01/ict-beveiligingsrichtlijnen-voor-webapplicaties;
- Er zijn 3 Pentests (2 end-to-end en 1 hertest) uitgevoerd op de door Coneno aangeleverde code ingebed in onze eigen omgeving waartoe Coneno geen toegang heeft;
- Er is een code review uitgevoerd op de door Coneno geleverde code met specifieke aandacht voor code die wijst op niet relevante verwijzingen naar externe partijen, backdoors etc; (resultaten nog te verwachten, loopt);
- Een uitvraag is gedaan bij Coneno zelf op welke wijze zij zelf aankijken tegen en kunnen aantonen dat zij werken volgens principes als security- en privacy by design; (wordt nog aangeleverd);
- Beheerafspraken na oplevering versie 1.0 waaronder afspraken over patching, bugfixing en onderhoud/beheer worden met Coneno gemaakt en zijn in onderhandeling.