

CEFAT4Cities Virtual Hackathon

Empower the use of Data with eTranslation and Context Broker Building Blocks

(30 July 2021- 28 February 2022)

Terms and Conditions of participation

1. About CEFAT4Cities

This virtual hackathon is an initiative promoted by the consortium of [CEFAT4Cities](#) project. This a project financed under the programme [CEF Telecom](#) - European Commission, in cooperation with the the [City of Vienna](#) and [Tegel Project](#). The main objective of CEFAT4Cities is to develop a “Smart cities natural language context”, providing multilingual interoperability of the Context Broker DSI and making public “smart city” services multilingual, with pilots in Vienna and Brussels. The language resources that will be created will be committed to the ELRC repository and will be related to the following languages: Dutch, English, French, German, Italian, Slovenian, Croatian and Norwegian. The main results from the project will be:

- a quality-assured workflow for the multilingual extraction and aggregation of ontologies, vocabularies and question-answer pairs, to transform public services websites into semantically enriched ISA2 and OSLO2 compliant services;
- a curated repository of aggregated and mapped/translated ontologies that allow algorithms to reason on smart city natural language data;
- a dynamic multilingual repository of questions and answers that can be used to develop multilingual applications such as chatbots and wizards;
- a semantic interoperability layer for Smart Cities, allowing the Context Broker DSI to integrate with natural language data services, and enabling the development of intelligent eGovernment applications on top of existing public services catalogues.

CEFAT4Cities will distribute the developed modules as open source software and demonstrate the effectiveness of its solution by developing three use cases:

- CEFAT4Cities will be integrated into the Context Broker DSI as a general natural language processing layer;
- The Vienna Business Agency will be able to make its public services discoverable in multiple languages;
- The Brussels Chamber of Commerce will create a multilingual wizard for starting a new business in Brussels and showcase how ontologies and QA-pairs contribute to bringing local public services to a European scale.

2. Hackathon Objective

The Hackathon will focus on the use of two [CEF Building Blocks](#): [Context Broker](#) and [eTranslation](#). The Context Broker¹ is a digital platform component that enables the integration of gathered data including insights for further exploitation. eTranslation is an automated translation tool available to translate text excerpts or complete documents. It is also a Building Block you can integrate into your digital systems, if you need to embed them with translation capabilities.

The CEFAT4Cities virtual hackathon will be a competition of ideas and consists of a marathon of innovation aimed at developing new smart services/solutions/applications in the sector of Smart Cities, Smart Tourism, eGov, Open Data. The aim is to create innovative solutions to support:

- the development and long-term sustainability of (but not limited to) European Cities;
- the implementation of innovative systems applied to diverse domains (e.g. Smart Tourism, Smart Cities but not limited);
- the adoption of Open Data in the context of all the vertical domains mentioned using also data available in [European Data Portal](#);
- leveraging the Building Blocks promoted by CEFAT4Cities project: Context Broker and eTranslation.

3. Challenges

The CEFAT4Cities virtual hackathon is divided into diverse Challenges promoted by:

- [Vienna Business Agency](#) in cooperation with [City of Vienna](#);
- [FIWARE Foundation](#) in cooperation with the [Tegel project](#).

By using the Context Broker and eTranslation Building Blocks, the applicants will receive the technical guideline provided by the technical staff of the CEFAT4Cities project.

Two main challenges have been identified:

1. The first Challenge is proposed by the Vienna Business Agency and the City of Vienna.

Launch date 31 July 2021 - End date 30 November 2021

a) objectives of the challenge

Improve City of Vienna's [FIWARE Model](#) (Smart City Wien, powered by FIWARE, built with LEGO(R) bricks), create new ways of visualization and enable multilingualism in the presentation of data. Use the sensor data of the model, Open Government Data and Vienna's OGD map ([basemap.at](#), [tree cadaster](#), [real time date of Vienna's public transportation services](#), POI or any other open data from [Data.gv.at](#) or the [European Data Portal](#)

b) Context

¹ Context Broker is the core of the [FIWARE](#). The aim of FIWARE is to provide an open platform standard to ease the development of smart solutions. This ambitious objective required the definition and the development of an open standard technology for Context Information Management. The FIWARE initiative was born in Europe partially funded by the European Commission under the Future Internet PPP programme; nowadays FIWARE, fully supported by the FIWARE Foundation and its members, reaches a global dimension.

The City of Vienna and the Vienna Business Agency recommend the use of FIWARE components to develop smart solutions.. The City of Vienna is using FIWARE as Urban Data Platform. The Smart City Vienna - powered by FIWARE & built from LEGO® building blocks was presented for the first time at the Digital Days 2019 in Vienna. The city hall, the Ferris wheel, a city bike station, the subway, LEGO components of Bestattung Wien (Funeral Services Vienna) and MA 48 - waste management, street cleaning and vehicle fleet – are integrated in the model. It is a physical image of the smart and digital city of Vienna and is intended to represent the connection between the digital and the physical LEGO building blocks [*sensor, interfaces, FIWARE app, etc.*].

c) Needs

The improved Smart City Vienna model - powered by FIWARE & built from LEGO® building blocks - will be used for exhibitions to showcase FIWARE technology and the Smart City Vienna. It should offer interactive control by visitors, multilingual presentation of POI and Open Data.

d)Technology to be used

Context Broker, eTranslation Building Block, feel free to integrate other CEF Building Blocks as well as owned technologies.

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2. The second challenge is proposed by the FIWARE Foundation and the Tegel Project

Launch date 30 November 2021 - End date 28 February 2022

a) Objectives of the challenges

Create a multilanguage app for visitors that supports sightseeing activities. The app should provide local information about the Technology and Innovation Park “The Urban Tech Republic” and the Schumacher district.

The local information can be any information that seems to be relevant to users that explore the area.

Examples:

- Environmental information, such as current air quality
 - Points of interest (historical buildings, history of the airport,..)
 - Proposal of sightseeing pathways depending on the topic and/or temporal duration
- The app can be multi-language, so that visitors from all over the world are able to see the local information.
 - The app can be inclusive, i. e. it has low barriers for different devices (Desktops, Smartphones, Tablets) and can even be used by people with restricted senses, such as blindness or deaf.

For this challenge the Tegel Projekt GmbH will provide a list of points of interest with a short description of each of them.

b) Context

The Tegel Projekt GmbH transforms the area of the former TXL airport to a smart city project. The area concerned comprises two districts: the Urban Tech Republic as a campus for science and industry as well as the Schumacher district neighborhood as residential area. As capital, Berlin has inhabitants from many countries all around the world. The most commonly spoken foreign languages are English and Turkish, but

also Russian, Arabic and Polish – a more fun option would be to implement the Berlin dialect (Berlinerisch). Thus, a visitor app should focus on a multilingual setting, too. Please see more details about the project Berlin TXL here <https://www.berlintxl.de/en/about-berlin-txl.html>.

c) Needs

Visitors come to the district of TXL from different language and cultural backgrounds. According to their background, the app should adapt to their specific needs, i. e. their mother tongue.

Visitors are mostly on holidays and enjoy a high usability. It should be easy to navigate through the area. Settings should be easy by default, but also allow you to control the interaction. Example idea: when a visitor passes a point of interest, a voice tells him about the PoI's details. However the user can disable this automated action as well.

d) Technology to be used

It's best to use the technology that is already up and running in the project. It's all open source and well known products that often use standards for interactions amongst them:

- API: Orion Context Broker based on the NGSIv2 standard, of which data is shown in two UI
- UIs:
 - Grafana dashboards
 - Masterportal (<https://www.masterportal.org/>). Masterportal offers specific capabilities for georeferenced data
- ETL and data transformation: Node-RED
- Database: PostgreSQL

Software Repository: <https://gitlab.com/berlintxl/futr-hub>

Security, Authentication and Authorization can be omitted for the challenge.

General description about the technology here: <https://www.berlintxl.de/en/about-berlin-txl/futr-hub.html>

The prototype should be built of 100% open source software to be compatible with the existing software of the project.

Contact: tonia.sapia@fiware.org

4. Dates and Times

The Hackathon includes the following activities²:

- 30 July 2021 CET - Launch of the CEFAT4Cities Hackathon
- 14 October 2021, 15:00 – 16:30 and 2 December 2021, 15:00 - 16:30 - Exclusive Virtual Training Sessions. Presentation of Terms and Conditions (20 minutes) and 40 hours on the technologies trainings, followed Q&A (Registration available via the FIWARE website)
- 16 November 2021 at 17:00 CET - Deadline to submit proposals for the challenge proposed by Vienna Business Agency and City of Vienna.
- 24, 25 and 26 of November - virtual Pitch in front of the members of the Jury
- 30 November winners announcement
- 15 February 2022 at 17:00 CET - Deadline to submit proposal for the challenge proposed by FIWARE Foundation and Tegel Project

² **These dates may be subject to change.** We strongly recommend you to consult the CEFAT4Cities hackathon page regularly to keep up to date.

- 22, 23, 24 February 2022 - virtual Pitch in front of the members of the Jury
- 28 February 2022 - Announcement of winners

5. Participants

Participation in the CEFAT4Cities virtual hackathon is open to all: startups, university students, researchers, professionals, operators, citizens, and associations.

6. Methods of Participation and Training of Teams

The composition of each team will be assessed taking into consideration: skills, multidisciplinary approach, personal attitude, and basic knowledge of technologies. Each team must have a minimum of 2 and a maximum of 4 members. According to the challenges chosen, the following private information shall be provided through the registration system:

- Name of the team
- First name, last name of each individual member of the team
- An email and/or phone number of a contact person
- Identification of the status profile and distinctive competencies of the individual participants in the group.

The registration to the CEFAT4Cities Hackathon entails the acceptance of the Terms and Conditions and the privacy policy. Participants are solely responsible for the information provided and undertake to respond to any requests for information from promoters.

7. The Proposals

Proposals must be submitted within the date and time indicated by the organizers. Proposals have to be submitted through the dedicated form which will be made available on CEFAT4Cities virtual Hackathon page. Applications has to be submitted to the following [Link](#) of the hackathon website

Proposals sent after the deadline will not be considered.

8. Public Presentation of Proposals

Each team will present its proposal with a pitch of 5 minutes in English in the 'Virtual Pitch' session. The virtual presentation (with the subsequent evaluation) will take place according to the tentative dates proposed (See section 4 Dates and Time), link to participate to the virtual pitch will be made available by the organizers in due time. The Jury referred to in art. 9 will evaluate the proposals according to the rules provided for in art. 11. The final product is recognised as intellectual property of the teams, subject to any licences and patents that may be used. The promoters and their partners do not obtain any property rights solely because of the presentation of the final product. Members of the same team are co-authors and have the same intellectual property rights attached to the final product, including any exclusivity on commercial exploitation, which they must exercise by mutual agreement.

9. Composition of the Jury

The complete composition of the Jury will be made public 30 September 2021 (Tentative date). In any case, it may be modified, due to the unavailability of one or more members at any time by the promoters.

Members of the Jury:

- At least a representative of FIWARE Foundation
- At least a representative of the Vienna Business Agency
- At least a representative of the Tegel Project

- At least one member of the City of Vienna

Other members of the jury may be added in order to improve the quality of the evaluation process.

10. Winners

The Jury will evaluate individually the submitted proposals. The Jury will meet at the end of each elevator pitch (according to the timeline provided in the section 4). The Jury will draw up a ranking of the projects presented for each challenge. This date can be changed depending on the number of proposals submitted. There will be 3 winning teams (1st place, 2nd place and 3rd place for each challenge). The jury reserves the right to refuse to award prizes or to award ex-aequo prizes. The jury is sovereign and its judgment is final. It follows that no complaint can be accepted following the nomination of the winners.

11. Summits and awards

The prizes are as follows:

The first Challenge is proposed by the Vienna Business Agency and the City of Vienna

- 1st place: 5000 euro
- 2nd place: 3000 euro
- 3rd place: 2000 euro

The second challenge is proposed by the FIWARE Foundation and the Tegel Project

- 1st place: 5000 euro
- 2nd place: 3000 euro
- 3rd place: 2000 euro

Teams can only win one prize per challenge. Multiple prizes for the same solution are not allowed.

12. Intellectual property

Each team member is committed to:

- respect all intellectual property rights of third-party creations used.
- indemnify the promoters and partners in the event of disputes, including legal disputes, with third parties or partners.

Each participant as a person guarantees that the final product has not been edited or sold and that it is an original work of which team members are the authors and that it does not violate intellectual property rights or other rights of any third party. Each participant as a person also declares that he/she has all the rights necessary to comply with the Regulation. Any violation of the above will ensure ex officio disqualification.

13. Personal data and Image Rights

Promoters and their members are authorised to disseminate the names of the winners, the name of the project, its purpose and description, together with extracts or images of the final product. Each team

member agrees that the promoters and their members will photograph or film him/her and disseminate to the public images that may include his/her person.

14. Right of Disqualification and Exclusion

The promoters reserve the right to disqualify anyone who does not comply with the rules, materials made available to him/her, and the premises of the Hackathon.

15. Cancellation or Change of Dates

In the event of extraordinary events or other circumstances that make it necessary, the promoters may cancel the Hackathon or move it to another date.

16. Other Provisions

The participant acknowledges that he/she has been informed that he/she will be held solely responsible for any inaccuracies contained in the registration format he/she has completed or for any failure to comply with the obligations contained in the regulations.

17. Applicable Law

The applicable law is the Belgium law. In the event of any dispute concerning the interpretation or enforcement of the Regulation, the case shall be brought before the competent court in Brussels. Promoters and partners are not responsible for damage, loss or theft of materials and equipment used by participants for the performance of their work within the Hackathon.