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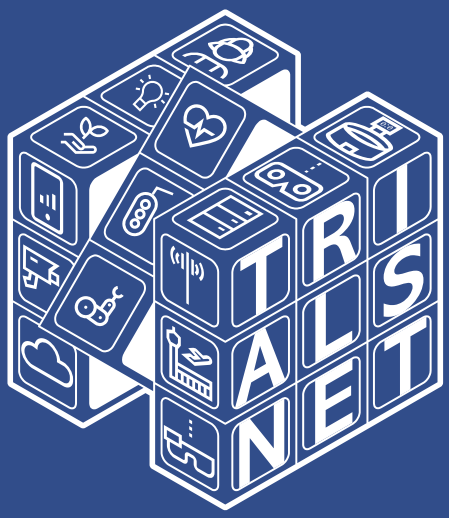


TrialsNet: TRials supported by Smart Networks beyond 5G

Six Months Digest #2
January 2024

www.trialsnet.eu

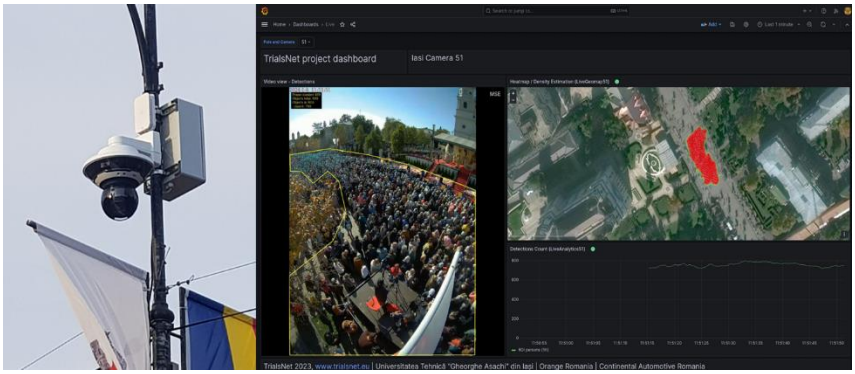
OPEN CALL APPLICATION ENDED IN JANUARY!

The main achievement of the TrialsNet project in its second semester has been the successful launch of the Open Call. The Open Call went through a successful phase of Feasibility Check, in which more than 100 potential ideas have been evaluated for feasibility, to participate in large-scale trials activities through the implementation of additional, diversified, and heterogeneous vertical use cases in our project. In this phase, our Open Call helpdesk answered more than 200 questions from applicants (the most frequent ones have been collected in a proper FAQ page). The received potential ideas covered all the three domains considered in the project (i.e., Infrastructure, Transportation, Security & Safety, eHealth & Emergency, and Culture, Tourism & Entertainment), and come also from potential applicants outside the SNS JU Community, confirming that TrialsNet project is well addressed. In the next phase, the eligible proposals will be reviewed in order to select and onboard more than 20 use cases as new trials on the project's platform and network solutions, including also extensions of the project's infrastructure domain in other geographical locations in Europe (complementing the main clusters). Two very well participated webinars have been held to help and inform potential Open Call applicants, which are available for review, together with all the details about the Open Call and its processes, on the specific website section.

TRIALSNET ACTIVITIES ARE PROGRESSING

Besides the Open Call launch, TrialsNet continued to work on the activities related to platform and network solutions development as well as use case implementation progressed in line with the project's time plan.

For example, concerning the deployment activities in the context of UC1 in Iasi, efforts were put into the development of the network and hardware setup that covers the Stefan cell Mare pedestrian alley from Iasi. With the support from the Iasi Municipality, several surveillance cameras were placed on lighting poles, each of them being connected to dedicated 5G routers that transmit the video feeds to the edge-compute servers over a private APN 5G connection. Currently, the surveillance feeds are processed by the first version of the video analytics application developed by TUIASI, which also allows for the visualization of statistics related to crowd monitoring. In the case of UC4, the Podu Ros intersection setup from Iasi was updated with a dedicated 5G router that aggregates the feeds from multiple cameras and transmits the information over the same private APN as UC1 to the Iasi 5G Lab compute servers which host the traffic monitoring application developed by TUIASI.



In relation to the use cases implementation, a massive laboratory testing phase took place in which the different use cases have been tested in a controlled environment, to verify the applications behavior, asses the related technologies and procedures, and measure the initial performances. In particular, in the case of the use cases of the Madrid cluster (i.e., namely UC1, UC6 and UC10), the tests have been executed in the 5Tonic facilities in Leganés, also involving real users and obtaining preliminary KPIs and KVIs measurements, as well as a validation of the measurement tools and methodologies and an identification of the adjustments needed for the following on-field trials phase.

In the following semester, the use cases will gradually move towards the on-field infrastructures to perform the initial tests in the context of the pre-trials phase.

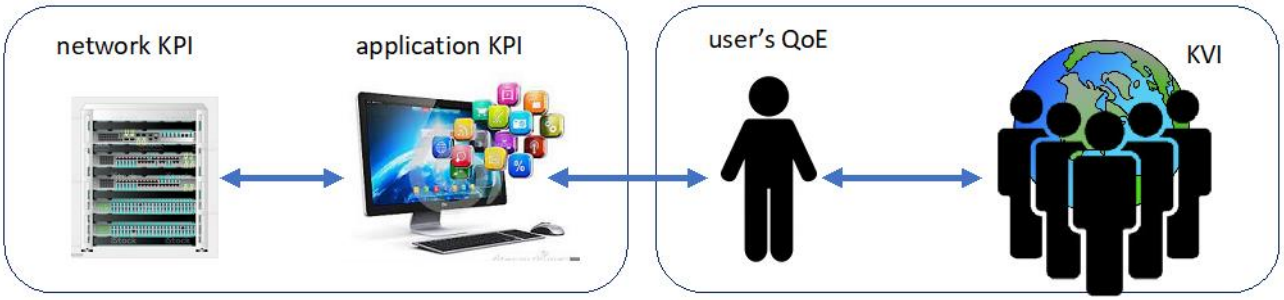
THE THIRD PLENARY IN ATHENS

In September 2023, the TrialsNet consortium met in the beautiful frame of Athens for the 3rd plenary meeting of the project. One of the main focus points has been the finalization of the Open Call preparation, in time for its launch in October. In addition, the meeting represented as usual a great moment of focus, participation, and proactiveness to progress on the activities related to the use cases implementation as well as to address and discuss on the transversal topics between the different work packages. The following plenary meeting will take place in Madrid in February 2024.

KPIs AND KVIs FRAMEWORK DEFINITION

Between the transversal topics, the use cases and trials validation activities will cover a fundamental role to achieve the project's objectives. In this context, TrialsNet elaborated an integrated framework in which both KPIs and KVIs are defined and evaluated to validate the different use cases. On one side, KPIs enable a quantitative analysis at network level and at application level, allowing to assess the achieved level of QoS and thus validate the use case. On the other side, the QoE perceived by each

user can be evaluated in a quantitative way by leveraging the user's feedback (e.g., through surveys and interviews on a statistically meaningful population). To evaluate that, as well as the actual impact of each use case on the society, the environment, and the economy, specific KVIs have been defined together with the corresponding measuring methodologies have been designed.



The resulting ecosystem is complex, and requires a harmonization among different use cases, belonging to different verticals and contexts. As such, an iterative methodology, mixing bottom-up and top-down approaches, has been defined, in which the use case initially defines the relevant indicators, based on their own specific requirements (i.e., following a bottom-up approach). Then, by collecting the list of the indicators across all the use cases, these are classified either as "generic" or "use case specific". In the case of conflicting or incoherent definitions, reference standards are adopted, and merge equivalents are generated. At the end, starting from a list of over one hundred indicators, the revision process identifies the reference list, and shares it with all the use cases managers and researchers, which will adopt it (i.e., following top-down approach). The procedure iterates multiple times, also due to the "circular" methodology of use case design and development, allowing to achieve a refined version of definition for all the indicators. Finally, for each indicator, the choice of measurement tools and the validation process is guided, favoring open-source tools. A detailed description of TrialsNet evaluation methodology can be found in Deliverable 6.1.

TRIALSNET DISSEMINATION AT INTERNATIONAL LEVEL

The project participated in different international events, in the past semester of activity, including the 5G Conference Southeastern Europe in Athens, where we discussed some use cases, together with their criticalities and specificities. It was also an opportunity to monitor the 5G development and deployment status, and the ecosystem evolution in Greece and SE Europe. TrialsNet was present at International Event in Healthcare (BeHEALTH) in Romania, where the WINGS ICT Solutions team was also awarded the Best abstract in the Healthcare Contest. The project was present at the 11th Conference on Information and Communication Technologies (TICEC), where a panel about the current state of the 6G technology was presented. Finally, the project methodology and preliminary have been presented at the IEEE Symposium on Vision and Facts on 6G and Future Networks in Europe (Baltimore, USA) and at IEEE Healthcom 23 (Chongqing, China).
Moreover, TrialsNet was present in the "From 5G to 6G: Opportunities for European Start-ups and SMEs" webinar in December 2023, and in the Sploro Cascade Funding

Webinars – Session Seven, as ways to promote the Open Call opportunity and grant it the due visibility.
The project was presented in different press-releases by the consortium partners, highlighting different aspects of its development, including its impact in the improvement of the life quality in urban environments, specificities of its processes and the benefits of the design thinking methodology, etc.

PROJECT'S INFORMATION

If you are looking for further info about the project structure, consortium, the different use cases, as well as news and contacts, the project website is the place to go. The project deliverables, publications, together with other dissemination and communication material, are available on the corresponding website section. A specific section hosts all the info concerning the Open Call.

FOLLOW US!

- Project website: https://trialsnet.eu/
- LinkedIn: https://www.linkedin.com/company/trialsnet
- Twitter: @trialsnet
- Contact: webform
- YouTube: TrialsNet channel

PREVIOUS ISSUES

Six Months Digest #1 – June 2023