

# TRIANGLE



Applications and  
Devices Benchmarking



## **5G Applications and Devices Benchmarking TRIANGLE**

Open Call for Extensions OC2: Application Instructions



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## 1 Triangle Open Calls Objective

The TRIANGLE project is using open calls to support innovative experiments from industry, [FIRE](#) and [5G-PPP](#) projects in order to promote the usage of the testing framework and its partial or total deployment in other facilities. The development of the Triangle will allow application developers and device manufacturers to test their applications and devices on a 5G network and have those devices benchmarked in terms of performance and other KPIs.

The Triangle project <http://triangle-project.eu> will have two types of open calls:

1. Experiments
2. Extensions

This document outlines the instructions for **extensions**. The main objective of the first open call is adding additional capabilities to the Triangle testbed to facilitate extensions that are co-created with companies such as application developers and device manufacturers.

The extensions will help develop the Triangle testbed as a whole to match the needs of experimenters. Extensions will evolve the existing Triangle Testbed and integrate with additional Triangle testbed components that will be deployed at the University of Malaga (Spain).

For more information about the current capabilities of the testbed and what types of experiments it can run see this link <http://triangle-project.eu/tools>

Triangle is funded by the European Commission and is subject to the regulations established in the Horizon 2020 programme<sup>1</sup>.

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<sup>1</sup> Conditions of participation and funding are those of Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020), as defined principally in Regulation (EC) No 1290/2013 of the European Parliament and the Council of 11th December 2013 laying down the rules for the participation of undertakings, research centres and universities in actions under the Horizon 2020 Programme and exploitation and dissemination results (2014 - 2020). More information can be found at the [rules for the participation and dissemination in Horizon 2020](#).

This Guide for Applicants does not supersede the rules and conditions laid out, in particular, in Council and Parliament Decisions relevant to the Horizon 2020 Research and Innovation Programme of the European Commission.



## 2 Application process

### 2.1 Who can apply?

The call is open to individuals, associations, organisations or businesses legally registered in a member state of the [European Union](#) or in an [H2020 associated country](#) or in a [developing country](#). Applications may be made as an “Extension Group” bringing together any combination of the above entities. A complete list of these countries is available in Appendix 2 of this document.

Each Extension Group will have an appointed Extension Lead, who coordinates the group and is responsible for providing the Triangle project management with reports and feedback for the relevant European Commission auditing.

Successful applicants who have been awarded funding are expected to provide proof of their registration in one of the countries mentioned (for example, by submitting each participant’s legal registration number and a Participant Identification Code (PIC) issued by the European Union; or a business registration extract for organisations). In addition, successful applicants will be required to sign the Triangle experiment agreement (which can be read at

<http://www.triangle-project.eu/experiments/AgreementExtensions.pdf>.

Triangle partners are not eligible for funding.



## 2.2 Prepare and submit a proposal

Proposals are submitted in a one-stage process that means that applicants submit a full proposal before the deadline. Potential applicants are encouraged to contact the Triangle to discuss the suitability of their application proposal by contacting us at [opencall@triangle-project.eu](mailto:opencall@triangle-project.eu). Extenders are required to submit proposals in English. Proposals submitted in any other language will not be eligible.

Main information requested in your proposal:

1. Title of your experiment
2. Your idea and extension objective, this should indicate what type of testing can offer (max. 3.000 characters)
3. A list of activities which you propose and your time plan, aligned with the extension integration period – it can be of any length between January to June 2017. Please explicitly list what you consider to be the key milestones and deliverables within this plan (max. 1500 characters). You can also provide an optional 1 page PDF planning document.
4. Which of the parts of the Triangle testbed you intend to integrate with and how you will integrate with them. Find more information about the Triangle tools at <http://triangle-project.eu/tools> (max. 6.000 characters)
5. Your Extension Group: organisation, skills and resources you have (max. 3.000 characters)
6. Your budget for cost related to your funding application. We have provided a template to assist you with this requirement available from
7. <http://www.triangle-project.eu/experiments/BudgetTemplateExtensions.xls>

Application steps:

- Step 1: Visit and review the instructions at <http://triangle-project.eu/beforeApplyingExtensions>
- Step 2: Prepare your application. Go to <http://www.f6s.com/triangleextensions/apply>, sign up for an account (if you do not already have an f6s account) and complete the application form.
- Step 3: You're done! You'll hear back from us by email by the end of November 2016.

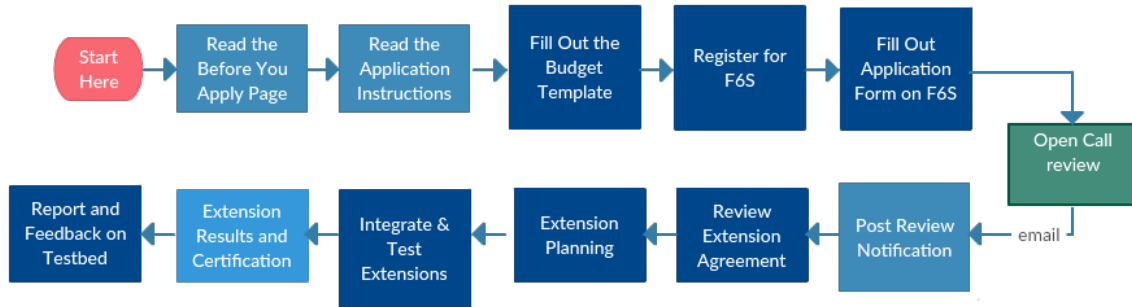
If you discover an error in your proposal, you may modify your application, provided the call deadline has not passed. Should this happen, please contact [opencall@triangle-project.eu](mailto:opencall@triangle-project.eu) in order to have your application unlocked. Only the final version received before the call deadline will be considered in the evaluation.

Triangle may provide feedback before the deadline based on an intermediate review process.

Proposals must be received by Monday, **October 31**, 2016 at **17:00h CET** (Brussels time) for the fixed open call. Proposals that are sent in after this date or which are incomplete will not be evaluated.



The Application process is outlined below.





## 2.3 Funding conditions

### 2.3.1 Budget available

The first open call will give 100,000 € in funding, with a maximum of 100,000 € for one extension. Target extensions are around 50,000 € to 100,000 €, we can accept smaller proposals if they make sense.

Applicants can get up to 40% of pre-financing, with an interim payment of 30% (upon successful integration and completion of reporting) and a final payment of 15% at the end of the project in December 2018.

The final report requires that extenders provide Triangle with feedback on their experience the platform tools they have used or being in contact with.

### 2.3.2 For which activities can I receive funding?

You are eligible for funding for all activities mentioned below, under the condition that these activities follow the guidelines below:

1. Technical integration and adaptation.
2. Extension deployment on the Triangle platform.
3. Evaluate the generation of reports and publications related to the extension including preparation of a showcase about the extension that can be used for dissemination purposes.
4. Supporting the rest of technical activities in the project, by providing feedback about the use of the testbed facilities and asking for key strategic functionalities that would be interesting to include in the testbed in future versions. Final presentation/demo may be required at Annual Triangle Audit. You will be required to do this as a condition of funding.
5. Report the necessary effort and costs according to H2020 rules and management practices requested by the Coordinator. You will be required to do this as a condition of funding.



### 2.3.3 Which costs are you allowed to include in your budget?

For a cost within your project to be eligible for funding it must:

- be incurred and paid between your project start and end dates.
- be directly related to the activities listed
- be best value for money
- be indicated in the estimated budget
- be incurred in connection with the action as described in your project application and necessary for its implementation
- be identifiable and verifiable, in particular recorded in your accounts and in accordance with the accounting standards applicable in your country and according to your organization's usual cost accounting practices
- comply with the applicable national law on taxes, labour and social security

You are allowed to include:

- Staff costs
- Subcontracting costs
- Material costs
- Travel costs
- Other costs

Regarding staff costs, the eligible labour costs will be salary amounts actually incurred and paid (monthly / hourly).

Please note that the number of working days per year for the organisation is based on full time working days per year, less standard holiday allowance. Sick days, waiting time, training days and non-productive time are not eligible as part of the salary calculation. For more information about personnel costs, please see [H2020- AGA, Article 15](#) – Financial support to third parties.

The total amount of time and cost will be reviewed before approval for funding. The reviewers can decide to fund your proposal with a reduced amount.





### **3 Evaluation process**

#### **3.1 Who will evaluate my proposal?**

Your proposal will be checked to ensure that it meets requirements before it is sent for evaluation to the Triangle Application Evaluation Committee (AEC). This committee consists of two external experts and a chairman from the consortium.

Technical representatives from Triangle will then examine the highest ranked applications assessed by the members of the Application Evaluation Committee. This will help assessing whether the technical facilities are available so the extension can be carried out successfully. The Triangle consortium reserves the right to refuse an extension on technical or feasibility grounds.

The Application Evaluation Committee will provide any feedback and give a score for each of the evaluation criteria (described in the section below). Only the external experts of the AEC will score applications. A ranking list will be assembled with all proposals that score above the threshold of 10 out 15.

The Application Evaluation Committee will meet and make a final funding decision based on the ranking list. In case of applications receiving an equal score, they will prioritise the extensions' value in providing additional capabilities to the Triangle testbed facilities.

#### **3.2 Ethics and Privacy Assessment**

An Ethics and Privacy Board will check all proposals for ethical and privacy issues. Your proposal can therefore be rejected for ethical and privacy reasons only, so please make sure that these issues are properly addressed.

Notifications on funding or rejections will together with any feedback be sent out by the end of November 2016.



### 3.3 How is my application evaluated?

The applications will be evaluated based on three aspects: the quality of your idea, the expected effect or impact of your proposed extensions, and whether your plan is feasible (i.e. is it realistic in light of the technical facilities available, as well as in regards to time, human and financial resources). Below we list points evaluators will consider under each of these aspects.

#### Idea (0-5 points)

- Have you described your idea convincingly?
- Does your proposed idea include innovative elements (for example, development of new products, processes, data or services, adapting a solution to a new context...)?
- Is your idea enabling the test bed towards 5G?

#### What is the impact of your idea (0-5 points)?

- In which ways can your extensions integrates with the features of the Triangle test bed?
- What is the expected impact in terms of enabling new use cases, experiments, and market potential of your technology in the context of the Triangle test bed
- Relevance of the proposed extension to the [NGMN 5G Use Cases](#) and application areas that have been identified in Appendix 1
- The KPIs (Key Performance Indicators) that your technology will enable to measure
- How does your idea impact the European societal development towards 2020?

#### Feasibility of your idea (0-5 points)

- Is your idea technically ready for inclusion in the test bed and experimentation?
- Are the Triangle testbed tools available suitable for fitting your technology in?
- Is the experience and skills you and your team have sufficient to include, test, verify, and support the technology?
- Is your budget and plan realistic in relation to the activities listed?



## 4 Timeline

### **Extensions call 2016/17 key dates:**

- September 1st 2016 – First fixed term call opens
- October 31st, 17:00 CET – Open call final deadline
- Late November – Funding notification
- January 2017 to June 2017 – Extensions period



## 5 Support Options

### Frequently asked questions (FAQ)

The frequently asked questions section can be read here <http://triangle-project.eu/FAQ>. It will be updated continuously.

### Open call helpdesk

The answers that you can't find in the FAQ section can be submitted by contacting [opencall@triangle-project.eu](mailto:opencall@triangle-project.eu), where you can get support regarding technical matters or the proposal.

### Open call support

To assist you with any detailed questions you may have about the open call process, the consortium will publish content on the project website and on social media channels. It may also be possible to discuss with members of the consortium on calls, webinars or potentially in person by prior arrangement.

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## Project partners:



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