Proposal Evaluation Form

EUROPEAN COMMISSION Horizon 2020 - Research and Innovation Framework Programme	**Evaluation Summary Report**

Call:	H2020-MSCA-ITN-2019
Type of action:	MSCA-ITN-ETN
Proposal number:	861492
Proposal acronym:	5G4real
Duration (months):	48
Proposal title:	5G4real
Activity:	MSCA-ITN-ETN: ENG

N.	Proposer name	Country	Total Cost	%	Grant Requested	%
1	UNIVERSITAT POLITECNICA DE CATALUNYA	ES	501,809.76	13.29%	501,809.76	13.29%
2	CHALMERS TEKNISKA HOEGSKOLA AB	SE	563,965.92	14.94%	563,965.92	14.94%
3	TELEFONICA INVESTIGACION Y DESARROLLO SA	ES	250,904.88	6.65%	250,904.88	6.65%
4	THE CHANCELLOR MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE	UK	606,345.12	16.06%	606,345.12	16.06%
5	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	DE	252,788.4	6.70%	252,788.4	6.70%
6	UNIVERSIDAD REY JUAN CARLOS	ES	501,809.76	13.29%	501,809.76	13.29%
7	AMMBR RESEARCH LABS LIMITED	UK	303,172.56	8.03%	303,172.56	8.03%
8	ERICSSON AB	SE	281,982.96	7.47%	281,982.96	7.47%
9	INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM	BE	512,640	13.58%	512,640	13.58%
	Total:		3,775,419.36		3,775,419.36	

Abstract:

Recent years have witnessed a massive penetration of wireless communications in developing countries. However, while communication is crucial in human development, rural and suburban areas have generally been underserved or disregarded because classical network designs do not assure a quick (if any at all) return on investment. To date, it is clear that broadband connectivity solutions will only be widely accepted if technologies, deployment strategies and business models are designed under new paradigms. This also applies to the upcoming 5G systems: its tremendous potential performance and versatility require rethinking the conventional network concepts so that it can be adapted to specific rural scenarios and a new digital breach is avoided. In this sense, 5G4real seeks to coordinate international efforts with the goal of integrating novel technological solutions and emerging business models.

Through a networked program of research and training activities, 5G4real seeks to prepare a generation of researchers that will develop techniques for sustainable and economically viable wireless broadband connectivity. Results are expected to endow operators and communities with tools to make 5G a reality in low-return remote areas. From the technical point of view, 5G4real is committed to a drastic reduction of CAPEX through the development of viable solutions for decentralized network architectures, virtualization across domains, and mobile base stations under multi-tenancy exploitation regime; and a reduction of CAPEX/OPEX using heterogeneous transport networks, and virtual cores able to save on transport bandwidth and to provide off-line services. From a business perspective, new models will invoke a sharing-resources strategy among different stakeholders (operators, public administrations, community networks, etc.), and will be evaluated from techno-economic data

Evaluation Summary Report

Evaluation Result

Total score: 77.60% (Threshold: 70/100.00)

Form information

SCORING

Scores must be in the range 0-5.

Interpretation of the score:

0– The **proposal fails to address the criterion** or cannot be assessed due to missing or incomplete information.

1– **Poor.** The criterion is inadequately addressed, or there are serious inherent weaknesses.

2– **Fair.** The proposal broadly addresses the criterion, but there are significant weaknesses.

3– **Good.** The proposal addresses the criterion well, but a number of shortcomings are present.

4– **Very good.** The proposal addresses the criterion very well, but a small number of shortcomings are present.

5– **Excellent.** The proposal successfully addresses all relevant aspects of the criterion.Any shortcomings are minor.

Criterion 1 - Excellence

Score: **3.40** (Threshold: 0/5.00 , Weight: 50.00%)

Quality, innovative aspects and credibility of the research programme (including inter/multidisciplinary, intersectoral and, where appropriate, gender aspects)
Quality and innovative aspects of the training programme (including transferable skills, inter/multidisciplinary, intersectoral and,

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Quality of the supervision (including mandatory joint supervision for EID and EJD projects)
Quality of the proposed interaction between the participating organisations

Strengths:
- The proposal convincingly outlines and justifies the objectives of the proposed research programme. The research programme is credible. The individual research projects are defined in satisfactory detail and well integrated.
- The proposed training programme is well structured and clearly presents multiple training actions covering the technical and complementary aspects of researchers' careers.
- The network-wide events are well planned allowing the integration of all ESRs across different multi-disciplinary sectors.
- The qualifications, background and supervision experience of supervisors are clearly highlighted and are satisfactory.
- The contribution of all participants to the research and training programme as well as the proposed interaction between them are adequately presented and covers most aspects of the value chain to widen the research vision of the Early Stage Researchers (ESRs). Each ESR is exposed to both academic and non-academic sectors offering good exposure of recruited researchers to diverse research environments and cultures.

Weaknesses:
- The originality of the proposed research and its innovative quality are not convincingly demonstrated. The progress beyond the state-of-the-art is not clearly addressed.
- Innovative aspects of the training programme are not clearly evidenced. The challenge related to innovative business models is not sufficiently well elaborated.
- The proposed ideas about an open approach to infrastructure deployment are not well described with regards to practical details.

Criterion 2 - Impact

Score: **4.40** (Threshold: 0/5.00 , Weight: 30.00%)

Enhancing the career perspectives and employability of researchers and contribution to their skills development
Contribution to structuring doctoral / early-stage research training at the European level and to strengthening European innovation capacity, including the potential for:
a) meaningful contribution of the non-academic sector to the doctoral/research training, as appropriate to the implementation mode and research field
b) developing sustainable joint doctoral degree structures (for EJD projects only)
Quality of the proposed measures to exploit and disseminate the project results
Quality of the proposed measures to communicate the project activities to different target audiences

Strengths:
- The proposal well presents training and collaboration activities and their positive impact on ESRs career perspectives. The business context, offered by the industrial partners through secondments, is well planned and of utmost importance for the ESRs to enhance their entrepreneurship skills.
- The international, cross-institutional and multi-disciplinary aspects of the programme are well presented and their positive impact on the ESRs' career perspective is sound.
- The proposal provides very good information on the pertinent involvement of the different partners in the implementation of the research and training programmes. There is a meaningful contribution of the non-academic sector covering the value chain in the targeted domain.
- The proposed measures for dissemination are very good with a sufficient number of publications per ESR.
- Various measures to communicate the activities to different target audiences are well elaborated and quantified.

Weaknesses:
- The contribution to strengthening European innovation capacity is not well demonstrated.
- The exploitation plan is not well presented, in particular regarding non-academic participants. IPR aspects are not adequately addressed. The ownership issues of the innovation from ESR is not sufficiently clarified.

Criterion 3 - Quality and Efficiency of the Implementation

Score: **4.30** (Threshold: 0/5.00 , Weight: 20.00%)

Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources (including awarding of the doctoral degrees for EID and EJD projects)
Appropriateness of the management structures and procedures, including quality management and risk management (with a mandatory joint governing structure for EID and EJD projects)
Appropriateness of the infrastructure of the participating organisations
Competences, experience and complementarity of the participating organisations and their commitment to the programme

Strengths:
- An appropriate number of deliverables and milestones is planned to facilitate effective progress monitoring, and there is a good level of detail regarding evaluation of individual projects, the data management plan, and recruitment strategies. Each individual Early Stage Researcher project has a clear description in terms of objectives and targets.
- The management structure and procedures are comprehensive and well elaborated. Roles and responsibilities are clearly defined.
- The proposal clearly presents the infrastructure capacities of all hosting organisations.
- The organisations' technology competencies are well underlined and pertinent for the project's objectives. The commitment of the beneficiaries and the participants are convincingly presented. The participants' complementarity in terms of technology knowledge and training is clearly outlined.

Weaknesses:
- The resource allocation plan is not adequately well presented. The timing of activities is not clearly described. Task descriptions lack technical detail. There are several inconsistencies, WP tables are duplicated, some milestones are wrongly named, WP4 is supposed to include "Training, networking and supervision", but is limited to training (in description and deliverables).
- The impact of some identified risks on the project, as a whole are not adequately addressed.

Operational Capacity

If No, please list the concerned partner(s), the reasons for the rejection, and the requested amount.

Not provided

Exceptional funding of third country participants/international organisations

A third country participant/international organisation not listed in [General Annex A to the Main Work Programme](#) may exceptionally receive funding if their participation is essential for carrying out the project (for instance due to outstanding expertise, access to unique know-how, access to research infrastructure, access to particular geographical environments, possibility to involve key partners in emerging markets, access to data, etc.). (For more information, see the [Online Manual](#))

Based on the information provided in the proposal, we consider that the following participant(s)/international organisation(s) that requested funding should exceptionally be funded:
(Please list the Name and acronym of the applicant, Reasons for exceptional funding and the Requested grant amount.)

Not provided

Based on the information provided in the proposal, we consider that the following participant(s)/international organisation(s) that requested funding should NOT be funded:
(Please list the Name and acronym of the applicant, Reasons for exceptional funding and the Requested grant amount.)
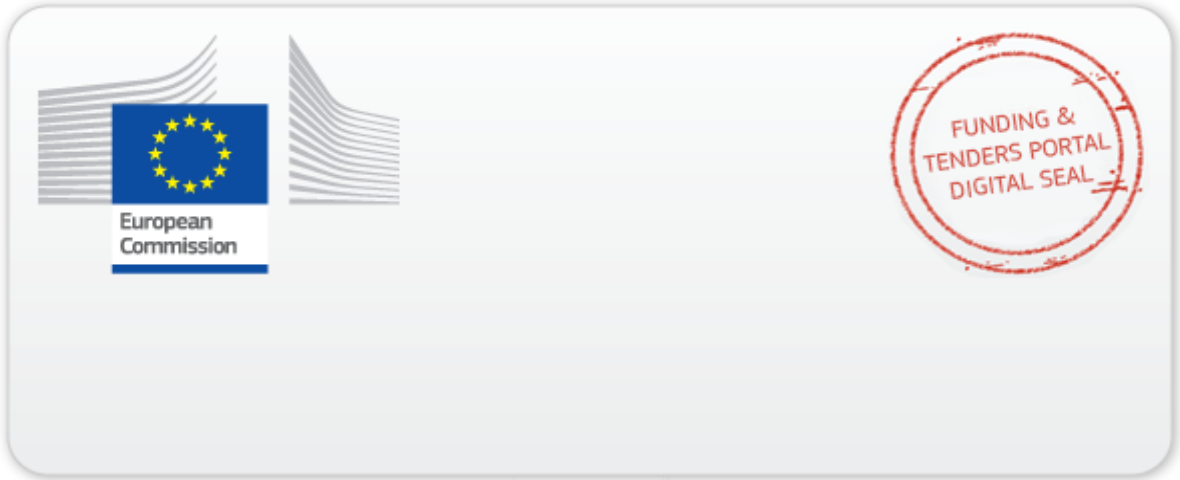
Not provided

Use of human embryonic stem cells (hESC)

Does this proposal involve the use of hESC?

No

If yes, please state whether the use of hESC is, or is not, in your opinion, necessary to achieve the scientific objectives of the proposal and the reasons why. Alternatively, please also state if it cannot be assessed whether the use of hESC is necessary or not because of a lack of information.

Not provided

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