


Proposal Evaluation Form

	EUROPEAN COMMISSION Horizon Europe Framework Programme (HORIZON)	Evaluation Summary Report - Doctoral Networks
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Call: HORIZON-MSCA-2022-DN-01
Type of action: HORIZON-TMA-MSCA-DN
Proposal number: 101119959
Proposal acronym: SpecX
Duration (months): 48
Proposal title: Doctoral Network on Spectrum Analytics as a Service
Activity: ENG

N.	Proposer name	Country	Total eligible costs	%	Grant Requested	%
1	FUNDACION IMDEA NETWORKS	ES	0	-	503,942.4	19.31%
2	KATHOLIEKE UNIVERSITEIT LEUVEN	BE	0	-	525,240	20.13%
3	TELEFONICA INVESTIGACION Y DESARROLLO SA	ES	0	-	251,971.2	9.66%
4	RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN	DE	0	-	260,539.2	9.98%
5	CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE TELECOMUNICAZIONI	IT	0	-	518,875.2	19.89%
6	TECHNISCHE UNIVERSITEIT DELFT	NL	0	-	548,740.8	21.03%
7	NEC LABORATORIES EUROPE GMBH	DE	0	-	0	0.00%
8	Electrosense	CH	0	-	0	0.00%
9	ACCELLERAN	BE	0	-	0	0.00%
10	UNIVERSIDAD CARLOS III DE MADRID	ES	0	-	0	0.00%
11	THE RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK	US	0	-	0	0.00%
12	Saint Louis University	US	0	-	0	0.00%
13	ERICSSON GMBH	DE	0	-	0	0.00%
14	UNIVERSITA DEGLI STUDI DI TRENTO	IT	0	-	0	0.00%
15	UNIVERSITA DEGLI STUDI DI ROMA TOR VERGATA	IT	0	-	0	0.00%
Total:			0		2,609,308.8	

Abstract:

SpecX provides the required expertise and effort to train a workforce of 10 Doctoral Candidates (DCs) in spectrum challenges at the frontier of 6G networks, (i) measuring the EM spectrum massively, dynamically and in 3D, (ii) turning the wireless data deluge challenge in new applications and innovative use of spectrum for future networks, and (iii) tackling the talent shortage in the EU’s spectrum big data market. The overarching objective of SpecX is to provide high-level training to 10 DCs in large-scale spectrum measurement, analysis, and applications in future telecom infrastructure. The goal is to create a research and innovation workforce with transferable skills in radio hardware, cellular network infrastructure, edge computing, data collection, signal processing, deep learning and Artificial Intelligence, data tools to assess, improve and analyse big spectrum data and provide innovative services. This goal will be achieved by a unique combination of hands-on research training designed to provide to the DCs the needed fundamental elements to conduct the research programme, for collecting real spectrum data, analysing it, and developing innovative methods, and create insights and invent new valuable applications. Hands-on in depth-training will be strengthened with non-academic placements, as well as multidisciplinary, intersectoral, and international cooperation to maximize the employability of DCs and the impact of the project.

Evaluation Summary Report

Evaluation Result

Total score: 93.20% (Threshold: 70/100.00)

Score: **4.40** (Threshold: 3/5.00 , Weight: 50.00%)

- **Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art).**
- **Soundness of the proposed methodology (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality and appropriateness of open science practices).**
- **Quality and credibility of the training programme (including transferable skills, inter/multidisciplinary, inter-sectoral and gender as well as other diversity aspects).**
- **Quality of the supervision (including mandatory joint supervision for industrial and joint doctorate projects).**

Strengths:

- *The objectives are very well elaborated, measurable and clearly verifiable, and it is credible that they can be achieved on time.*
- *The individual research projects contribute in an entirely credible and meaningful way to the objectives and research-related work packages.*
- *The state-of-the-art is comprehensively analysed, and the targeted progress beyond is adequately detailed.*
- *The proposed interdisciplinary aspects are very well integrated into the methodology and credibly support the envisaged achievement of the objectives.*
- *The proposed open science practices are very well elaborated and comply with the expected EU standards.*
- *The research data management is very well elaborated and clearly considers the FAIR principles.*
- *The technical robustness of the proposed artificial intelligence methods is clearly justified.*
- *The overview and structure of the training programme are sufficiently aligned with the objectives.*
- *The non-academic sector is very well integrated into the training programme with clearly justified added value.*
- *The supervisors' qualifications and experience are very well described and relevant to the proposed supervision and research tasks.*

Weaknesses:

- *The proposed methodology is not fully developed for aspects such as the applied tools, mechanisms, assumptions, and proof-of-concept.*
- *Local training activities to further develop scientific and transferable skills that complement the network-wide training are not fully detailed.*

Criterion 2 - Impact

Score: **5.00** (Threshold: 3/5.00 , Weight: 30.00%)

● **Contribution to structuring doctoral 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 training, as appropriate to the implementation mode and research field**

b) **developing sustainable elements of doctoral programmes.**

● **Credibility of the measures to enhance the career perspectives and employability of researchers and contribution to their skills**

● **Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.development.**

● **The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts.**

Strengths:

- *The exposure of the doctoral candidates to the non-academic sector is very well organised, for example, through secondments.*
- *The contribution of the non-academic sector to the research and the transferable skills training is meaningful and relevant.*
- *The development of sustainable elements of the doctoral programme that continue after the end of the project are very well presented and credible.*
- *The proposed measures credibly support the skills development of the doctoral candidates to prepare them very well for a high-profile career in industry or academia. The enhancement of career perspectives and employability in both sectors is clearly justified and credible.*
- *The quality of the dissemination, exploitation, and communication measures is very good. The proposed activities are targeted and fully in line with the needs and expectations of relevant stakeholders.*
- *The tools and channels for dissemination, exploitation and communication are relevant and very well elaborated.*
- *The direct engagement with the general public is very well addressed and contains relevant objectives and appropriate measures.*
- *The creation and utilisation of intellectual property rights and IP management, in general, are convincingly presented.*
- *The project results are expected to make a noticeable difference in the proposed field, which is very well explained and credible.*
- *It is very well elaborated on how the outcomes will translate into longer-term scientific, societal, and economic impacts and which groups will benefit from them.*

Weakness:

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Criterion 3 - implementation

Score: **4.80** (Threshold: 3/5.00 , Weight: 20.00%)

- **Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages.**
- **Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise.**

Strengths:

- *The work plan consists of adequately defined work packages organised logically and with clearly defined tasks. The work plan is coherent with the objectives.*
- *The work plan contains very well elaborated deliverables to monitor scientific progress, management tasks, training, recruitment and dissemination activities. The deliverables are coherent with the work package content.*
- *The defined milestones are effective as control points for major achievements or decision-making and coherent with the research and training programme or action.*
- *The individual research projects, including the secondment plan, reflect the research objectives coherently.*
- *The assessment of the technical risks is convincingly presented, and the judgment of the likelihood and severity of each risk is appropriate. The proposed risk mitigation measures are adequately elaborated and will credibly reduce the likelihood or impact of the identified risks.*
- *All participating organisations possess the appropriate infrastructure and operational capacity to carry out the allocated tasks.*
- *The partners bring together the required skills and experiences and complement each other regarding expertise and capabilities.*
- *The beneficiaries and associated partners are compatible, and the tasks attributed to each are coherent and meaningful.*
- *All participating organisations demonstrate the required commitment to supervision and training activities. In particular, the role of the associated partners and their active contribution to research and training activities is very well described and justified by appropriate letters of commitment.*

Weakness:

- *The implementation risks are insufficiently considered for the highly interdependent individual research projects.*

Scope of the proposal

Status: **Yes**

Comments (in case the proposal is out of scope)

Not provided

Exceptional funding

A third country participant/international organisation not listed in [the General Annex 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 [HE programme guide](#))

Please list the concerned applicants and requested grant amount and explain the reasons why.

Based on the information provided, the following participants should receive exceptional funding:

not provided

Based on the information provided, the following participants should NOT receive exceptional funding:

not provided

Use of human embryonic stem cells (hESC)

Status: **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 state if it cannot be assessed whether the use of hESC is necessary or not because of a lack of information.

Not provided

Use of human embryos

Status: No

If YES, please state how the human embryos will be used in the project.

Not provided

Activities excluded from funding

Status: No

If YES, please explain.

Not provided

Do no significant harm principle

Status: Yes

If Partially/No/Cannot be assessed please explain

Not provided

Exclusive focus on civil applications

Status: Yes

If NO, please explain.

Not provided

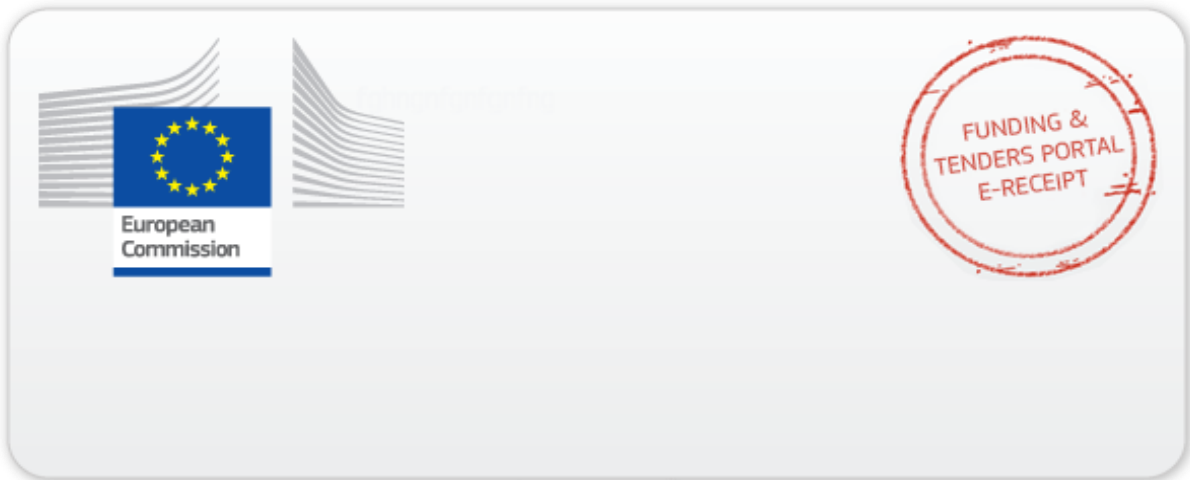
Artificial Intelligence

Status: Yes

If YES, the technical robustness of the proposed system must be evaluated under the appropriate (excellence?) criterion.

Overall comments

Not provided



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