CALL FOR GRANT APPLICATIONS

(AE2026-0194)

INESC TEC is now accepting grant applications to award 1 Research Grant (BI) within the scope of the within the scope of the project PowerUP, with reference 25499 (COMPETE2030-FEDER-03034800) Co-funded by ERDF - European Regional Development Fund through the Innovation and Digital Transition Thematic Programme (COMPETE 2030) within the scope of Portugal 2030.

1. GRANT DESCRIPTION

Type of grant: Research Grant (BI)

General scientific area: ENGINEERING

Scientific subarea: Industrial engineering

Area of Work: Data-driven asset management

Grant duration: 12 months, starting on 2026-08-01, with the possibility of being renewed until the end of the project.

Scientific advisor: Flávia Barbosa

Workplace: INESC TEC, Porto, Portugal

Maintenance stipend: € 1359.64, **according to the table of monthly maintenance stipend for FCT grants**, paid via bank transfer. Grant holders may be awarded potential supplements, according to a quarterly evaluation process (Articles 19, 21 and 22 of the **Regulations for Grants of INESC TEC** and Annex II), up to a maximum limit of 50% of the monthly maintenance stipend.

INESC TEC supports costs with registration, enrolment or tuition fees, during the grant duration, under the terms established in the internal document: **Payment of Tuition fees to grant holders**.

The grant holder will benefit from health insurance, supported by INESC TEC.

2. OBJECTIVES:

* Characterize the asset system under study, including the identification of the main critical components, the modelling of nominal operational behavior and admissible system variability, as well as the available sources of operational and condition data, leveraging physical AI techniques to model the behavior of the system components.

* Define alarmist strategies that enable the prioritization of decision-making based on risk levels, in a clear manner for the user, using natural language and supported by model explainability mechanisms.

* Develop data-driven and/or causal model-based approaches for the identification of root causes leading to atypical asset degradation, considering charging systems as complex and multidisciplinary systems, and using this information to support continuous product improvement.

* Define a set of performance indicators to support asset management, including reliability, maintenance, and cost metrics, ensuring their consistent use in the evaluation of alternatives.

3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:

The work is part of the PowerUP Project and focuses on asset management associated with ultra-fast charging infrastructures for heavy-duty vehicles (MCS), which are characterized by high power levels, operational demands, and critical requirements in terms of availability and safety.

The main objective is to develop data-driven approaches to support decision-making in asset management, leveraging operational and equipment condition data to improve reliability, availability, and economic efficiency throughout the asset lifecycle.

The work includes the analysis of failure modes, the use of monitoring data, and the development of degradation and forecasting models, including the identification of root causes of atypical degradation phenomena. Additionally, it encompasses the development of user-oriented alarm strategies based on natural language, with the aim of facilitating the interpretation of information by operators and decision-makers.

In particular, the goal is to assess the impact of these policies in terms of overall asset performance, including availability, operation and maintenance costs, and risk, contributing to the development of advanced asset management capabilities in the context of emerging energy systems.

4. REQUIRED PROFILE:

Admission requirements:

Bachelor Degree in Industrial Engineering and Management or similar area.
The awarding of the fellowship is dependent on the applicants' enrolment in study cycle or non-award courses of Higher Education Institutions.

Preference factors:
Experience in developing data-driven models for decision support, including the analysis of real-world data, modelling, and solution evaluation.

Experience with quantitative methods applied to engineering problems (e.g., optimisation, simulation, statistical analysis, or applied machine learning).

Minimum requirements:
Average grade of 18 in the Master Degree in Industrial Engineering and Management.
Proficiency in Portuguese and English.

5. EVALUATION OF APPLICATIONS AND SELECTION PROCESS:

Selection criteria and corresponding valuation: the first phase comprises the Academic Evaluation (AC), based on the criteria referred to in Article 12 of the **Regulations for Grants of INESC TEC**, while the second phase comprehends the Individual Interview (EI). All factors are evaluated on a scale of 0 to 100, taking into account the applicants' merit, suitability and conformity with the preference factors.
The weight of the AC factors are as follows: Academic Qualifications (FA, 50%), Scientific Publications (PC, 0%), Experience (EX, 20%) and Motivation Letter (CM, 30%).
Candidates who score less than 50 points in the AC average will be considered excluded on absolute merit. The top five candidates approved on absolute merit will be qualified for the individual interview. The Final Grade (CF) is obtained by the weighted average of AC (60%) and EI (40%).

DISABILITY INCENTIVE

Candidates who present a degree of disability equal to or greater than 90% will benefit from an incentive (20) in the score of the CV Assessment.
Candidates who present a degree of disability equal to or greater than 60% and less than 90% will also benefit from an incentive (10) in the score of the CV Assessment.
Said score may, in these cases, exceed 100 points.

Candidates must demonstrate the degree of disability during the application, namely through the submission of the Multi-Purpose Medical Certificate of Disability, issued in accordance with Decree-Law no. 202/96, of October 23 currently in effect.
Candidates must declare, in the application form, the type of disability used throughout the selection process, in order to proceed with the required adaptations.

The Selection Jury is composed of the following members:

President of the Jury: Flávia Barbosa
Full member: António Henrique Almeida
Full member: Luís Guimarães
Substitute member: Armando Leitão

Release of results and prior hearing: the results of the selection process, as well as the terms and procedures for prior hearing, will be released to the applicants by email, under the terms referred to in Article 13 of the Regulations for Studentships and Fellowships of INESC TEC.

6. FORMALISATION OF APPLICATIONS:

Application Documents:

1. Motivation letter;
2. Curriculum Vitae (must include the list of previous fellowships, their type, beginning and end dates, funding entities and host institutions);
3. Certificate or diploma degree;
4. Proof of enrollment in a degree awarding study cycle or in a non degree awarding Higher Education program.
    - The proof of enrollment may be presented just during the grant hiring stage.
5. Signed declaration stating the infringement of the grant holder's duties (article 14, no. 4)
6. Documental evidence to support the country of residence, residence permit or other legally equivalent document, in cases where the applicant is a foreigner or non-resident in Portugal - valid until the beginning of the grant.
7. Other supporting documents relevant to the final assessment.

Failure to deliver the required documents within the 90-day period after the date of the notice of the conditional awarding of the grant implies its cancellation.

Application period: From 2026-07-02 to 2026-07-15

Submission of applications: the application will be formalised by submitting the form available in the *Work With Us* section of INESC TEC website.

7. BINDING LEGISLATION AND REGULATION

The hiring process shall comply with the current legislation regarding the Research Grant Holder Statute, approved by Law no. 40/2004 of August 18, in its current wording, as well as by the **Regulations for Grants of INESC TEC** and for **FCT Grants Regulation in force**.

For more information, please check the **Regulations for Grants of INESC TEC** and relevant annexes at www.inesctec.pt/bolsas