

This constitutes an unofficial and courtesy translation into English of “PROTO CHALLENGE: AVVISO PUBBLICO DI SELEZIONE STUDENTI- Prot. hitf-23/11/2023-0000912 - I” for the sole purpose of making it easier for interested parties to read. The HIT Foundation neither assumes nor accepts any responsibility for the accuracy of the translation. The Italian text shall prevail in the event of any discrepancy or omission with respect to the English text.

PROTO CHALLENGE: PUBLIC STUDENT SELECTION NOTICE

INTRODUCTION

PROTO Challenge (hereinafter, "Challenge" or "Initiative") is an initiative of Fondazione Hub Innovazione Trentino (hereinafter, "HIT"), created in collaboration with the University of Trento, Trentino Sviluppo, Confindustria Trento, NOI Techpark, in the context of Digital Innovation Hub Trentino–Alto Adige/Südtirol.

The Initiative has dissemination, knowledge and training purposes. The main objective is to encourage the development of technology transfer activities and research-enterprise collaborations in an open innovation context:

- allowing companies to learn about the benefits of using structural geometric analysis and optimization methodologies for prototyping industrial products and components with additive manufacturing technologies;
- enabling university students to master these methodologies by applying them to industrial problems and challenges, thus improving their own preparation (Challenge-Based Learning);
- offering teachers and researchers an opportunity to disseminate and transfer their knowledge and technological know-how.

The activities of the Initiative are mainly carried out by students and young competent researchers in the methodologies described (hereinafter, "Solver"): they will work in a group to analyze and redesign the products and components or elements of products (hereinafter, "Products") presented by participating companies. Solver groups will be supported by professional mentors.

ART. 1 – SUBJECT OF NOTICE

This Notice is aimed at selecting Bachelor, Master, or Ph.D. students, or former students (with a degree obtained within 18 months from the kick-off of the initiative) who will have access to the PROTO Challenge as Solvers. The Solvers, assisted by mentors, will be called to carry out analysis, structural geometric optimization, and industrial redesign activities, including additive design (hereinafter, "Activities") on Products submitted by companies and selected by HIT.

Specifically, by way of example, we mean:

- *Products*: products or components of industrial products, in plastic or metal, with characteristics (exemplary, non-mandatory) such as the following:
 1. already on the market or under development, in any case available in the form of 3D CAD drawing;
 2. having characteristics such as mass, geometry, and mechanical properties (e.g., lightness or stiffness) that can potentially contribute to improving the quality and performance of the product and/or its manufacturing process if additive manufacturing.
 3. having an overall dimension between 500 x 500 x 500 millimeters, possibly made up of several components or elements.
- *Activities*: Finite Element Analysis (FEA); 3D modeling; structural geometric optimization techniques; use of specialized software for CAE - Computer-Aided Engineering mathematical modeling; kinematic modeling; CAD design.

ART. 2 – CONDUCT OF THE CHALLENGE

The PROTO Challenge involves groups of Solvers (hereafter, "Teams"), working in parallel over the course of eleven weeks or so to carry out the above Activities on Products nominated by companies and selected to participate in the Challenge. For each Product, there will then be a dedicated Team, working independently, albeit assisted by a mentor who will support them in carrying out the Activities and producing a short final report containing suggestions for optimizing the assigned Product (hereafter, "Results"). Mentorship may also be carried out by PhD students competent on the Challenge Activities. The selection of the Solvers, the creation of the teams and their training will be carried out by HIT, in coordination with the partners of the initiative.

The Challenge will be organized according to the following schedule:

- late February – beginning of March 2024: training appointments on the Challenge and the use of the software (total of about 12 hours);
- Tuesday 12 March 2024 (morning): kickoff meeting aiming at presenting the Products and optimization objectives to the Solver groups by the selected companies;
- From 12 March to 29 May 2024: approximately 11 weeks during which the groups will carry out the Activities independently, in collaboration with the selected companies, assisted by expert mentors;
- 29 May 2024 (afternoon): final event with the presentation of the Results in a private session to the participating companies and, subsequently, in an abbreviated version without confidentiality content to an invited audience of insiders. The final event will possibly be held at SOI – School of Innovation of the University of Trento. In the event that current health regulations do not allow the event to be held in secure conditions, it will be held online.

At the end of the public presentation, an expert commission appointed by HIT will evaluate the Results - its judgement is unquestionable - presented by each group of Solver and will formulate a ranking based on the following criteria:

- Criterion 1: completeness and maturity of the results produced (from 1 to 5 points).
- Criterion 2: innovativeness of the results produced (from 1 to 5 points).
- Criterion 3: potential business impact of product results (from 1 to 5 points).
- Criterion 4: effectiveness of the presentation of the results (from 1 to 5 points).

The final evaluation score for each Result will equal the sum of the scores on the previous criteria multiplied by the difficulty coefficient of the Challenge, defined by the committee that will evaluate the Results.

Each member of Solver's group that will have scored highest in the ranking will receive a 3D mouse (by way of example: <https://3dconnexion.com/it/product/spacemouse-compact/>). The Foundation reserves-at its sole discretion-the right to change the type of award should it see fit. In the case of a tie score, the Solver group that will have scored the highest score in the first criterion starting from criterion 1 will prevail.

All students who complete the Challenge HIT will receive a certificate of participation in the initiative.

ART. 3 – APPLICATION FORM AND PRESENTATION METHOD

Students interested in participating in the PROTO Challenge must complete the application form available at the link <https://www.trentinoinnovation.eu/en/innovate/innovation-tools/proto-challenge/proto-challenge-for-students/> and send their curriculum vitae to the email address provided in the application form by **Wednesday 20 December 2023 at 23:59** – server time. Applications received after the deadline indicated above or whose form is not complete in its entirety will be considered inadmissible, even if the non-submission or delay in submitting the application for participation in this procedure is due to cases of force majeure, unforeseeable events or the actions of third parties.

HIT reserves the right in any case to modify, suspend, extend, revoke at any time this procedure or not to follow it, should it, at its sole discretion, deem it necessary or appropriate.

ART. 4 – METHOD OF EVALUATION AND SELECTION OF PARTICIPATION APPLICATIONS

A Commission appointed by HIT will evaluate the applications eligible for participation in the Challenge.

The eligibility criteria for applications (A) to be used by the Commission are as follows:

1. complete the Application Form available at the indicated web address, following the instructions therein.

2. be enrolled at the University of Trento as a student or doctoral candidate, or to have obtained a degree from the same institutions not more than 18 months

The eligibility criteria (B) are as follows:

1. Have already attended or be attending courses in which they have been treated methodologies and techniques necessary to carry out the activities (from 1 to 5 points).
2. Have already carried out the Activities applying them to Products or projects in the course of curricular initiatives (project work, stage, thesis), extracurricular (hackathon, challenge, contest, etc.), or work experience (from 1 to 5 points).
3. Have done other group work experiences (apart from those reported at this point previously) or volunteering (from 1 to 5 points).
4. Have convincing reasons to support your candidacy (from 1 to 5 points).

To be considered suitable, candidates must achieve a minimum score of 13. Once the ranking will be available, the commission will select the suitable candidates featuring the highest score. In case of equal scores, the earlier application will be selected.

By **Friday 19 January 2024**, candidates will receive an email notification regarding the results of the selection process. Within 5 days of receipt of such communication, the selected candidates will have to confirm their own participation in the Initiative through mail electronics at proto-challenge@trentinoinnovation.eu. In the absence of such confirmation, HIT will propose participation in the Initiative to the candidate in a subsequent position in the ranking. At the end of the process, the names of selected candidates will be published on the initiative's website.

ART. 5 – CONFIDENTIALITY

Solver undertakes to keep confidential data and information regarding companies and products selected, except for the following company data and information: company name, website URL, sector of reference, brief description of the entrepreneurial activity, name of the Product. Furthermore, the Solver also undertakes to keep the results confidential and not to disclose them in any way, subject to the different written consent, even partial, of the company concerned.

This confidentiality restriction remains for two (2) years from the date of commencement of the Challenge.

ART. 6 – INTELLECTUAL PROPERTY

Intellectual property rights in the Results will belong to the companies, without prejudice to the right of the Solvers to be recognized as authors or inventors.

By participating in The Challenge, companies authorize Solvers in each case to:

- to use part of the Results (not containing confidential material, and in any case to be agreed with the company) for the presentation at the final event open to the

public of The Challenge, as well as to make other presentations during events, courses and initiatives related to The Challenge, for educational purposes at the end of the initiative;

- mention their participation in The Challenge in their CV and portfolio, making express reference to the name of the Product and the company for which they carried out the Activities.

ART. 7 – ABSENCE OF GUARANTEES. EXEMPTION OF LIABILITY

The results are presented by the Solvers and accepted by the company "as is". Neither HIT nor Solver provide no representation or guarantee that the Results (i) are of a certain quality technique; (ii) are suitable for a particular purpose; (iii) do not violate third party rights or subjective positions legally protected.

Neither HIT nor the Solver take any responsibility for the correctness, validity, originality and quality of the results, which will be considered in complete autonomy by the company.

The participating companies expressly exempt HIT and the Solvers from any direct damage, indirect, incidental, consequential, punitive or moral deriving from participation in the Challenge or from the use of the results.

ART. 8 – PROCESSING OF PERSONAL DATA

Pursuant to art. 13 of the GDPR 2016/679, we inform you that all the data that will be held by HIT in carrying out the procedure provided for in this Notice, they will be used exclusively for the purposes specified therein and will be processed with the aid of information systems in full compliance with the aforementioned legislation. The data will not be communicated or disclosed to third parties. The owner of the treatment is HIT, in the person of the legal representative pro tempore, which you can contact for the exercise of the envisaged rights, including the right of access to data, of integration, rectification and cancellation. For the vision of the complete information, see our privacy policy: <https://www.trentinoinnovation.eu/en/innovate/innovation-tools/proto-challenge/proto-challenge-for-students/>.

ART. 9 – AUTHORIZATION TO PUBLISH YOUR OWN IMAGE

Solvers agree that HIT can publish their image on any form of support (press, websites, and the like) for the sole purpose of promoting and publicizing the Challenge. HIT agrees to do not use any image in such a way that may harm or impair personal dignity or in any case for purposes other than those indicated therein and / or contrary to the law.

ART. 10 – TREATMENT OF PRIZES

The initiative is to be considered part of the category "projects or studies in the commercial or industrial field, in which the awarding of the prize to the author of the chosen work is in the nature of a consideration for the performance of the work or

represents recognition of personal merit or a title of encouragement in the interest of the community" pursuant to art. 6 D.P.R. 26 October 2001, no. 430.

ART. 11 – RESPONSIBLE FOR THE PROCEDURE

The person in charge of the procedure pursuant to the LP n. 23/1992 and s. m. and i.: Dr. Luca Mion.

Trento, 23/11/23

Andrea Sartori

Direttore Operativo

Fondazione Hub Innovazione Trentino