

FAQ – EuroTeQ COLLIDER

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General Info

What is Collider?

Collider is a new type of **student project** realized in the EuroTeQ cooperation where students solve a **real-world challenge**. The real-world challenge is provided by a **firm or research institute**. The students work in **multi-disciplinary teams** – students come from multiple faculties. Additionally, the Collider is open to all students from the partner schools, so the teams can also have foreign students. The result of a Collider project is a **design or prototype** of a solution to a real-world challenge.

When Collider takes place?

The Collider has three parts -- Launch Event, Collider and EuroTeQathon. The Challenges will be revealed, and teams will be formed during the **Launch Event** which is scheduled for 10 February 2022. The main event, **Collider**, takes 6 days in May 2022: Thursday 5-Sunday 8 May + Saturday 14-Sunday 15 May. At the end of the Collider, you will get your marks. The best three projects (the best project for each topic) will continue to compete in **EuroTeQathon** in 10-12 June 2022. There, they will compete against the best projects from EuroTeQ partner schools, where winners of each topic will win a trip to Brussels.

Where Collider takes place?

The first Collider takes place in the so-called “Rysovna” at the Faculty of Mechanical Engineering (room A2-534).

How do I get into Collider?

All students enrolled in a master program at any faculty of CTU can register for Collider in KOS. The code for the first Collider (May 2022) is: CTUQCOL1.

What can I win?

Three best projects will compete in EuroTeQathon, where you can win a trip to Brussels.

For successful completion of a Collider project, you will **get 5 ECTS**. You learn how to work together within a multi-disciplinary team, how to successfully solve a complex problem, and communicate your work and results with practice and on an international level.

What will I learn in Collider?

You should do a Collider if you want to learn how to work in multi-disciplinary teams; learn how to deal with open-ended challenges from practice; how to collaborate with industry partners; and develop the communication skill to present your work successfully.

You will compare your skills and innovative with your international peers from other EuroTeQ partner universities. A selection of the best three Collider projects will continue to compete in a competition called EuroTeQathon.

What is the goal of Collider?

The EuroTeQ cooperation (6 universities of technology - CTU, TUM, TU/e, L’X, Taltech, and DTU - and 2 associated partner schools Technion and EPFL) has the goal to train the European engineer of the future. For a future engineer, it is no longer sufficient to be knowledgeable of his/her domain and

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have expertise in a technological area. Future engineers must be **able to collaborate in multi-disciplinary teams**, not only national but also **international**. They must be able to understand and take advantage of **multicultural settings**. The future engineer is able to grasp the **technological and societal challenges** and provide **innovative, efficient, sustainable, and inclusive** solutions. He/she can put his/her knowledge and skills to use in collaboration with companies and societal partners. The Collider project has the aim to train students on these skills: *collaboration, communication, innovation, and entrepreneurship*.

What language is the Collider in?

The official language of Collider is English, including written and verbal presentations of results. What you use for your internal communications, is of course, completely up to you.

What materials do we get, is there a syllabus?

CTU will provide the space where to work with basic technological support (power plugs for your laptops, internet connection, furniture, presentation desk, and so on). Depending on the Challenges and what they require, CTU will aim to provide additional tools (for example 3D printers, printers, and other tools). Materials for working on the prototypes must arrange the team itself.

There is no syllabus or study material for a Collider. One of the tasks you have during a Collider is to set up your own “knowledge base” of material that is useful for you and your team. The knowledge base consists of all materials, links, references, etc., that helps you come up with a solution to the Challenge.

Will there be future Colliders?

There are three Collider projects planned. The first takes place in May 2022, the second in May 2023, and the third is scheduled between June-November 2023 (date to be confirmed). You can join a Collider project 1, 2, or 3 times. As you do a Collider multiple times, your level will increase from *junior* to *medium* to *expert* level. At each level, the requirements for the end result will be higher. Since the first Collider in May 2022 will be new for everyone, all students are on junior level.

Teams for Collider

Who works in a Collider team?

A Collider team is formed by 5 students. Students from multiple faculties work in a single Collider team; ideally students from at least three faculties. People from companies can join as well, through their Life-Long Learning program. In the future, Collider also will be open for vocational learners.

How are Collider teams formed?

Students who are registered in KOS will be contacted by the Collider guaranteee (Prof. Henri Achten, Faculty of architecture – email: henri.hubertus.achten@cvut.cz). Together you will form the teams for the Collider.

How many students can take part in Collider?

The first Collider (May 2022) is a pilot project. The aim is to have 5-6 teams with each team up to 5 students; thus, the first Collider is open to 25-30 students. The enrolment is on the first-come-first-serve basis.

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Does the team have a coach?

Teams will be coached by people from the companies or by EuroTeQ representatives who will guide the general process of the Collider. Additionally, there are contact people from each faculty who can assist with more specific questions regarding the faculty where you are studying. For a list of coaches and contact persons, see the end of this FAQ.

Challenges for the Collider

What Challenges are in Collider?

The main theme for the first and second Colliders was selected by the EuroTeQ team as “**Leave no waste behind**”. Three topics following the main theme were selected for this Collider – Cities, Energy and Consumption. Specific challenges within these topics come from practice, e.g., from industrial partners or government bodies and will be presented during the Launch event (first Launch Event, 10 February 2022).

Can I make my own Challenge?

No. You will have to select one of the provided challenges following main theme “**Leave no waste behind**”.

Evaluation

What is the role of the company?

The company is the Challenge owner – they provide the problem on which you will be working. Depending on the type of problem and what is possible from the company’s side, they may also provide a tutor during the Collider. At the end of the Collider, you will present your result to the company, who will then give feedback on how they see the potential, originality, applicability, innovativeness, and readiness of the concept.

What is the end product?

The end product of the Collider is a design, concept, or prototype that shows a concrete solution to the challenge provided by the Challenge owner. What it exactly looks like depends highly on the challenge. It can be a piece of software code, a scale model of a device, an animation of a complex system, etc. However, what is essential is that the product shows how it works and how it solves the challenge to the best possible degree.

Who judges our work?

The Collider results are judged by the coaches of the Collider, the Challenge owner, and a member of the EuroTeQ Collider team. The coaches evaluate mostly the process (what did you learn, how did you work together, your overall attendance and activity throughout the Collider); the Challenge owner will judge mostly potential, originality, applicability, innovativeness, and readiness of the product; the member of the EuroTeQ Collider team will judge all aspects together because he/she has an overview of all Collider projects.

There will be two final evaluations of your concept. The first one is in the framework of Collider and reflects how successful you were in the Collider project. Based on this evaluation, you will get your mark and grading in KOS (following the standard A-F grading). It has an individual component (your own mark, depending on your contribution) and a group component (the overall evaluation of the final product). The second evaluation is for the selection of the best three projects that continue in

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the EuroTeQaThon (one project for each topic). So, you can successfully complete the Collider but not be selected into the EuroTeQaThon.

What if the team works hard, but there are some freeloaders?

First of all, you have the responsibility as a team to monitor your own performance. However, the coaches of the Collider also observe team participation and how each member contributes to the project and assign a final grade to each member based on his/her performance. Hence, people who did not contribute may fail the course (F), and yet the group can pass the Collider.

Miscellaneous

Will there be publicity? How is it with privacy?

The Collider is the flagship event of the EuroTeQ project. During the Collider, people from the EuroTeQ outreach group will document the process (photos, videos, interviews) and from each partner school a PR video and reports will be produced. Of course, before anything is published, you will be asked for consent concerning specific material.

Coaches and contact people for Collider

Coaches in the Collider project:

- Prof.dr.ir. Henri Achten, Faculty of architecture (henri.hubertus.achten@cvut.cz)
- Prof. Ing. arch. Zuzana Pešková, Ph.D., Faculty of civil engineering (zuzana.peskova@fsv.cvut.cz)
- Doc. Ing. Lukáš Horný, Ph.D., Faculty of machine engineering (Lukas.Horny@fs.cvut.cz)
- Doc. Mgr. Jana Nábělková, Ph.D., Faculty of civil engineering (nabelkova@fsv.cvut.cz)

Contact people from the faculties (architecture and civil engineering are already mentioned above):

- Ing. Eva Rázková, Faculty of machine engineering (Eva.Razkova@fs.cvut.cz)
- Ing. Hana Matunová, Faculty of electrical engineering (matunhan@fel.cvut.cz)
- prof. Dr. Ing. Michal Beneš, Faculty of nuclear sciences and physical engineering (michal.benes@fjfi.cvut.cz)
- Ing. Martin Langr, Ph.D., Faculty of transportation science (langrmar@fd.cvut.cz)
- doc. Mgr. Zdeněk Hon, Ph.D., Faculty of biomedical engineering (zdenek.hon@fbmi.cvut.cz)
- doc. Ing. Pavel Kordík, Ph.D., Faculty of information technology (pavel.kordik@fit.cvut.cz)
- Ondřej Kolínský, MSc., Masaryk institute of advanced studies (Ondrej.Kolinsky@cvut.cz)

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More information about EuroTeQ

<https://international.cvut.cz/euroteq/>

People active in a Collider will work in a dedicated **Microsoft Teams group**. The Microsoft Team for the first collider is: B212-CTUQCOL1. This is only accessible for people registered through KOS on CTUQCOL1.

For people who want to know more, but are not yet sure to be registered in KOS, there is **Discord server**: <https://discord.gg/xAs2Y6NrWY>

Contact people for EuroTeQ

CTU Leader of EuroTeQ

prof. Ing. Zbyněk Škvor, CSc., Vice-rector for science, creative activities and PhD studies
(skvor@fel.cvut.cz)

Secretariat

Ing. Lucie Lerch, secretariat of EuroTeQ (Lucie.Lerch@fit.cvut.cz)