

Designing sustainable cup rinsing system

Client	StaRob Innovation via ENTRANCE, Centre of Expertise Energy
Related project	
Start date	Semester 2, 2023-2024
Suitable for training course(s)	Electrical Engineering, AD Mechatronics, HBO-ICT
Learning Community	Electrical Engineering, AD Mechatronics/ICT.

Assignment description

An automated cup washer is a device that can automatically clean a (coffee) cup in a short time and in a sustainable manner. This means that the cups are placed in the device, after which the system automatically goes through the cleaning process. After this process, the cups are placed in a stack and can be reused. The device is equipped with an internal magazine, so the cups are available both before and after the cleaning process. As a result, the user never has to wait on the device for a clean cup or to place a dirty cup.

As it seems now, from 1 January, the use of cardboard cups will be banned inside companies. This device offers a sustainable alternative that complies with this legislation.

The technical feasibility of this idea has already been studied and the research has shown that it is possible to clean a plastic reusable cup in a sustainable way in a short time. In semester 1, the business aspects of this device will be investigated, incl. a market study. The business plan also includes the set of requirements such a device should meet.

Now that the cleaning process has been identified and the business aspect has been substantiated with a thorough market study, it is time to design the device so that the cups are

are automatically cleaned and dried according to legal standards. The device should be able to be placed within an office environment and in semi-public buildings.

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General information

Final Product	Cleaning and drying system, automated cleaning and drying process and software to make it all work.
Location	To be determined
Parties involved	Project 'Gewoon Doen' (SIEN), ENTRANCE and StaRob Innovation
Contact person	Cor Scholte and Keimpe de Vries
Guidance	Cor Scholte (technical) and Keimpe de Vries (business)
Details	

What are we and where can you find us?

ENTRANCE is a learning knowledge community, in which students and teacher researchers from various programmes work together with researchers, companies, governments and civil society organisations to accelerate the energy transition.

ENTRANCE is the place where, as a student, you work together with lecturers, researchers, businesses, governments and/or civil society organisations on complex issues. We do this at the following locations:

- Location Proeftuin, Zernikelaan 17
- Location Energy Academy Europe, Nijenborgh 6.

What do we offer?

ENTRANCE offers you a multidisciplinary, inspiring learning, working and research environment in which you can develop the competencies needed to shape and accelerate the energy transition. There is room for collaboration with professors, researchers, lecturers and the professional field. In addition, you will be supervised by professionals who are part of the EnTranCe Learning Communities (ELC).

Contact us

Are you interested in the vacancy? Do you have questions or would you like to apply directly?

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- E: entrancelc@org.hanze.nl