Project TwoPager | EuroTeQaThon III

Our third EuroTeQathon will be hosted in Prague (CTU) from Saturday June 10th until Monday June12th 2023. In preparation of thise event every (selected) Collider project is asked to submit a TwoPager on their project according to the locally communicated deadline and procedure. This document will be used by the jury to complement the final presentation on Monday and have a good overview of all the different projects.

PROJEC DETAILS

Challenge Collaborator: Susanne Grohs-von Reichenbach (Think.Digital.Green), Eslam Shoaala (Workday)
Team name: SoftAware
Team slogan: Green code, green conscious
Team members (full name | study program | university)

Marie-Louise Heß	Management & Technology B.Sc.	TUM
Maitreyee Gupte	Environmental Engineering M.Sc.	TUM
Krunal Lashkari	Environmental Engineering M.Sc.	TUM
Anu Sree Krishna	Environmental Engineering M.Sc.	TUM
Laura Vanessa Prieto Galindo	Sustainable Management & Technology M.Sc.	TUM

What is the target problem for your project (in one sentence)?

Software developers need to become aware of the waste (energy) generated by their codes in order to use bestpractices to reduce the environmental footprint of their final product (Desktop and web applications, mobile apps, games, robots, operating systems, network systems, etc).

How do you solve it (in max. three sentences)?

We created an all-in-one online course, which is informing software developers on the principles of sustainability, and the contribution of the software industry in the world's carbon footprint by measuring it with the help of various footprint calculators. Moreover, we add sustainable practices for their professional life and show them solutions, which can be implemented relatively quick.

Potential for impact

How does it contribute to a more sustainable future from an environmental, social and/or economic

perspective? On what scale and what range of the population could your project have an impact? (regional,

national, European, only a small group of people, a wide range of the population etc.)

By 2040, the information and communications technology sector is expected to account for 14% of the world's carbon footprint (Harvard Business Review, 2020). Thus, we focused our solution to especially have an environmental and economic impact. We can provide this solution by increasing the awareness of the software developers. Sustainable software engineering will then become more efficient, consume less energy, and therefore become cheaper. Moreover, our online course can be used internationally, as the format is completely online and in English (in future the course could of course

also be translated in different languages). Still our primary target group are active software developers all around the world.

Innovation

How is the solution innovative comparing to existing ones (if exist) from an application area, business model, technological and/or customer experience perspective? Who are the main competitors?

We are breaking down sustainability jargons to and for software developers in an understandable manner and combining information in various fields in our online course. Our main competitors would be carbon footprint consultants and already existing organizations, creating sustainable webtools in the same field.

Feasibility

To what extent can your project be self-sustainable? Are the means available to realize your innovations? What would be your ambition/the next steps with the project?

Our web course only needs a monthly maintenance. We already created a prototype in less than one month and the effort to take it to the next level only need test runs and further feedback. Afterwards it could be used by future collaborating companies, which use it as enforcement training packages for their developers.

Inclusivity

Are the stakeholders (industry partners, govermental bodies, societal stakeholders, potential users, etc.) involved in the process of the solution development? How did you take them and their feedback into account? What disciplines (engineering perspective, sociological perspective, etc.) are taken into consideration in the development of the solution?

This idea was further developed during our meeting with Eslam Shoaala (one of our mentors) at Workday (software company).We created a survey with 74 participants (software developers from Workday and other companies + informatics students) which influenced our first prototype. After a future implementation at a software company as test run, we can improve the course with the feedback concerning the software engineering and educational perspective.