

Participate!



FOR SUSTAINABLE INNOVATORS

Eco-design for motion control systems

Explore alternative materials and design circular motors & inverters

SIEMENS

FOR A SUSTAINABLE WORLD

Tech for Sustainability Campaign 2023

Tech for Sustainability is a global initiative for students, researchers, startups, and innovative individuals to leverage technology to solve real-world sustainability challenges and shape our future alongside Siemens.

Leverage technology to shape a sustainable future

Siemens AG is a technology powerhouse that brings together the digital and real worlds to benefit customers and society and thus people around the globe. The company - having shaped each of the four industrial revolutions - focuses on intelligent infrastructure for buildings and decentralized energy systems, on automation and digitalization in the process and manufacturing industries, on water solutions, and on smart mobility solutions for rail transport, but also in financial services and software development.

As a global ideation campaign, Tech for Sustainability is designed to engage innovators outside of Siemens in order to come up with unique solutions for problems with a focus on sustainability. In a hackathon, the innovators who have been particularly successful in the early stages of the Campaign will have the opportunity to create a proof-of-concept and proof-of-feasibility for their ideas. The different phases of the campaign and their timeline are shown in figure 1.

“Sustainability is in our very DNA. It is not an option. It is a business imperative.”

Judith Wiese, Chief People and Sustainability Officer, Member of the Managing Board of Siemens AG

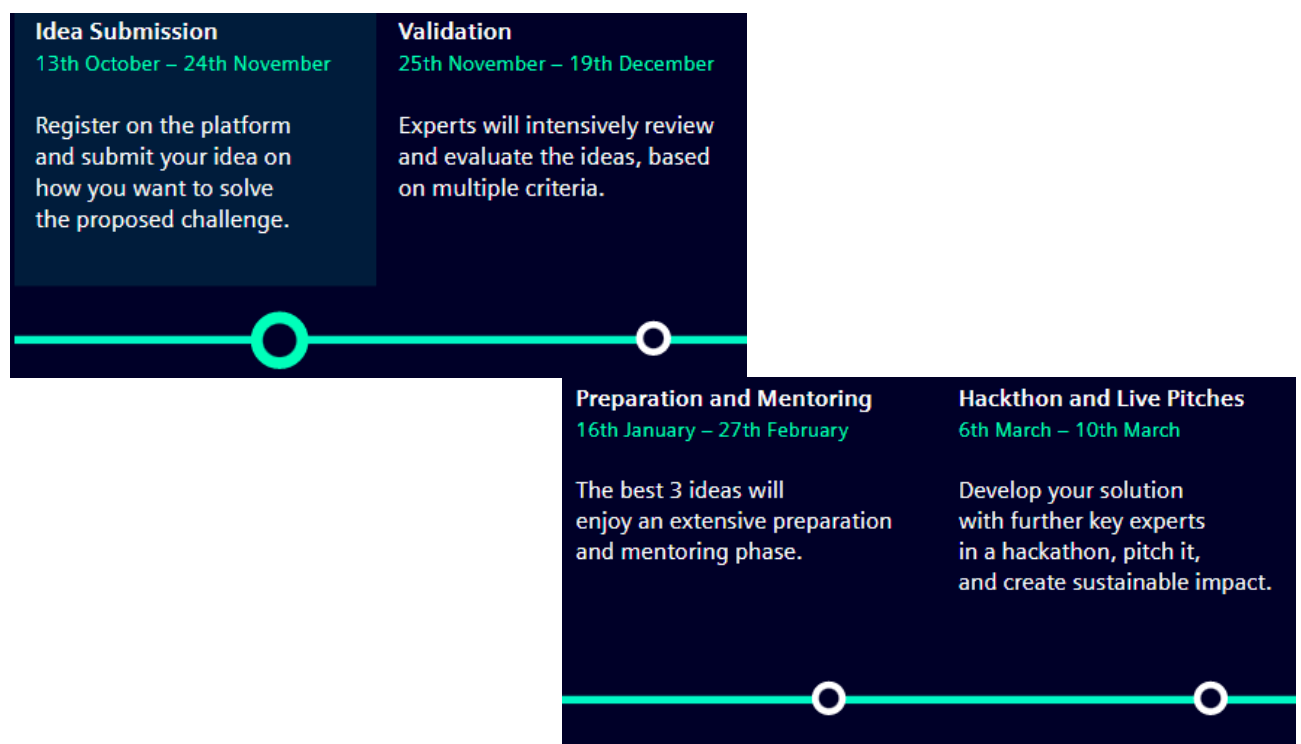


Figure 1 - Timeline and phases of the campaign



What's in for you?

1. Work with us - Let's solve real problems together to move towards sustainability.
2. Work on-site - The teams with the best ideas will develop their applications further during a hackathon. They will get to work on-site or remotely for the development of their proof-of-concepts.
3. Win Prizes - Three winning teams per challenge – 1st 5,000€, 2nd 3,000€ and 3rd 2,000€

How do you get to the next phase?

All ideas will be evaluated by Siemens experts based on the following criteria. So, keep them in mind:

- a) Innovativeness: Incremental or disruptive innovation
- b) Sustainability: DEGREE and impact on the UN Sustainability Development Goals
- c) Feasibility: Degree of technical and/or economic feasibility
- d) Potential: Fit to Siemens processes, products and markets
- e) Implementation: General implementation efforts (Time to market, R&D costs, etc.).

Join the campaign and create impact on real problems together with go-getters and solution seekers of the world by submitting your ideas.

<https://siemens.com/techforsustainability>

SIEMENS DIGITAL INDUSTRIES MOTION CONTROL CHALLENGE

Eco-design for motion control systems

Explore alternative materials and design circular motors & inverters

Siemens Motion Control products are the 'beating heart' of industry and cities all over the world, providing market-leading motion control capabilities. With our products we ensure that the world keeps in motion with a broad range of applications such as machines, robotics and logistics.

As with most of today's products, our motors and inverters have been designed based on materials from finite resources, processing them into products, and disposing them at the end of their life cycle. This is often referred to as a "take-make-waste" model.

We wish to improve the environmental impacts of our existing and future products and services, by improving resource efficiency, energy efficiency and carbon footprint.

Did you also know that just considering the European Union alone, there are around 8 billion electric motors in use, which consume around half of all the electrical energy the Union produces?!

This highlights the importance of efficient drivetrain systems for making a substantial difference in reducing energy waste. Siemens motion control as a market leader is well placed and eager to address this challenge.

In order to find the best solutions we need you - innovators, scientists and technologists - to help us to identify new eco-innovations which will shape our environment and industries in a positive way, balancing economic, societal, and environmental factors.

Our challenge is to design and develop alternative materials/components, portfolio design features for easy re-use, repair and/or sustainability-driven business models (circular economy). To achieve this, we are facing some key challenges:

- Exploration of alternative materials & components considering costs and environmental impact
- New features, HW or SW products to drive productivity, efficiency and more importantly sustainability for these applications

How can you create impact?

To help you with this challenge, we're going to provide you with relevant data on two of our motion control products, an inverter and a motor, so that you can demonstrate your eco-innovation ideas on actual products. To give you a hint, we believe that the best solutions will balance economic, societal, and environmental factors.

Your ideas will help us implement new materials, product features, manufacturing techniques, design processes and product applications which achieve a balance between cost, societal, and environmental factors fit for our changing world. The data provided represents older products, so some of the ideas you may generate, especially around energy efficiency, may have already been realized. By using older products, we hope to be able to commercialize the successful ideas more quickly in order to responsibly handle aging products already deployed.

We are also open to innovations outside of the two products mentioned above if they fit into our portfolio, but by providing this data we aim to make the challenge more accessible and tangible.

Example solutions may include:

- Demonstration of innovations for specific component clusters e.g. metals, plastics, electronics, wiring, bearings etc. with the highest improvement potential, in terms of both greener material or significantly enhanced lifetime.
- An MVP non-functional prototype/concept for an eco-friendly enhanced design of the products with opportunities for re-use, recycling etc. This can also be for a specific functional block of an inverter or motor
- New applications for motion control/automation which can help transform process, manufacturing & infrastructure industries towards more sustainable operations
- New areas of investment such as automation of recycling plants, non-destructive disassembly, new energy generation plants etc.

Let us transform the everyday TOGETHER!

A successful challenge solution may lead to commercialization in existing products and in newly eco-designed products. This will help manufacturing, process & infrastructure industries all over the world. The deployment of these greener motion control products will enable reduction in CO2 emissions, increase efficiency, enhance productivity, and enable circular material flows facilitated by more recycling, upcycling, and re-use in these critical industries. In turn, creating a global sustainable industrial sector for the world we live in today and tomorrow.

Do you want to be part of a sustainability eco-system with Siemens? What are you waiting for? Tune in on the kick-off event on the 13th of October at 4:30 p.m. (CET) and submit your solution!

Tech for Sustainability Campaign - For a sustainable world

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