

EFFICIENCY FOR ACCESS DESIGN CHALLENGE: CONNECTING ACADEMIA AND INDUSTRY

KEY TAKEAWAYS FROM THE
EVENT HOSTED ON 9 MARCH 2022



One of the aims of the Efficiency for Access Design Challenge is to create opportunities for academics with an interest in off-grid appliances and companies in the sector to meet and explore collaborations. This year, our event aimed to help academics forge connections with industry representatives whose perspective can inform course content, and enable industry

partners to connect with academics whose perspective and access to research can help inform innovations. This event highlighted three successful partnerships and explored some of the challenges and opportunities in this area. We held a speed-networking session for academic and business representatives involved in the Efficiency for Access Design Challenge.

SPOTLIGHT: COLLABORATIVE OPPORTUNITIES BETWEEN ACADEMIA AND INDUSTRY

Our speakers, Ping Yin, Associate Professor at Swansea University, Kinya Kimathi, Project Director at Kijani Testing, and Alan Bigelow, Science Director at Solar Cookers International (SCI), gave PechaKucha-style presentations exploring fruitful collaborations between academia and industry.

Key lessons highlighted in the presentations:

Kinya highlighted the multiple synergies between Kijani Testing and its academic partners at Brunel University. Both Kijani Testing and Brunel University carried out iterative lab testing of appliances and compared the results. This helped to inform final product design of solar water pumps and solar-powered egg incubators. Other synergies included data collection and analysis, tailored testing plans, and developing Internet of Things technologies.

Ping gave participants an insight into the Sustainable Engineering Management with International Development Master's programme at Swansea University. She explored how industry experts in Nepal and Uganda had helped inform the programme's e-bike project, through a collaborative design development hub. She also highlighted the inter-university collaboration between current Challenge participants from Swansea University and Makerere University, Uganda. This inter-university collaboration allowed industry partners to work with more than one university and bring together different areas of expertise, research, and ideas.



Alan looked at the partnership between Solar Cookers International (SCI) and Université Notre Dame d'Haiti in Hinche, Haiti. SCI and the university have developed the first course on solar and biogas cooking. The course aims to further education about and build the capacity of people who work in solar cooking, as well as further research opportunities in the sector.

Key recommendations:

- Make the most of the opportunities to connect. You never know what great collaboration is around the corner!
- Always be open to new ideas. Especially with responsible engineering and appliances enhancing energy access, there may be completely new innovations waiting for you!
- Understand that each party has different areas of experience and expertise. Play to each other's strengths and support each other where there are knowledge or resource gaps.

FACILITATED DISCUSSION – KEY TAKEAWAYS

Following the presentations and Q&A, representatives from companies and universities were split into smaller groups to discuss how to build successful relationships between academia and industry, and potential benefits.

What interesting points did the presentations raise?

- The range of technologies created via partnerships shows that there is a higher chance to get the products to the right people in need and markets, as they cater to a wide variety of geographies and levels of energy access.
- There needs to be an emphasis on the economic viability of each project, which both parties will have unique and varied perspectives on. Integrating business models and ideas for scale-up from the beginning can really help.
- There are several instruments that can be used to achieve economic viability and there is space to make profit in the off-grid appliance industry. Funding is needed to take the relationship beyond sharing ideas and will continue to support the project through setbacks or potential failure.

What are the most important ingredients in a successful partnership between academia and industry in the off-grid appliance sector?

- Clear and mutual communication and understanding of each other's aims and values. It is important for universities to understand that the work industry is doing is for profit-making purposes. It is also important that industry understand the wider context of why universities are carrying out this particular piece of research.
- It is extremely important to set expectations straight away. Timelines, goals and KPIs keep the projects in line and improves clarity and transparency in both sides of the collaboration.
- Consistent communication and engagement between academia and industry. Often, industry have other business priorities and academics have other engagements and expectations.
- Identifying possible opportunities for innovation makes for a great partnership between academia and industry as they can both pool resources and expertise.
- Recognising that most students move beyond academia and programmes that link academia with industry. If there are any research projects between the university and industry, the academic may want to involve students as part of their learning journey. Also, make the skills learnt in the project applicable to real-world problems.

What are some of the challenges when collaborating, and how can we overcome them?

- The ownership of new ideas as in practice, there needs to be a party holding the intellectual property rights to the innovation. This should be discussed at the beginning of the collaboration.
- Relationships take time to develop and there can be different working styles. To combat this, there needs to be frequent and open communication.
- Ensuring that industry and academia are completely aligned on the impacts of the project. Sustainable Development Goals (SDGs) can be a clear way of summarising the desired goals and achieved impacts of the project they collaborate on.

NEXT STEPS

Find out more about the Efficiency for Access Design Challenge and it support greater collaboration between academia and industry in the solar appliance sector [here](#).

If there is an Efficiency for Access Design Challenge industry partner or academic that you would like to collaborate with, or if you want to participate in the Efficiency for Access Design Challenge, please get in touch with us:

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