



Alumni Case Study Inès Tunga

CATAPULT

Energy Systems

Early Career Challenges

Inès's journey to IDCORE was driven by her determination to break through the barriers she faced in her career.

Despite her extensive education, including two master's degrees from Heriot-Watt University (Energy) and Aberdeen University (Subsea Engineering), as well as a degree in Chemical Engineering from Bangalore University, Inès struggled to find a role that fully utilised her technical skills. Her career path included various positions in India, Rwanda, Belgium, and Scotland, but none provided the fulfilment she sought.

From a young age, Inès was interested in energy, particularly the impact of energy extraction, generation, and environmental use. She wanted to do something industrially focussed that still allowed her to conduct research driven by industry needs. An EngD seemed a good fit for this, and she liked how the IDCORE course was structured. She thought it would significantly widen her skill set and knowledge within the industry, drawing on her past experience and academic background.

Joining IDCORE marked a turning point. As a mature student and new mother, Inès found an environment that valued her experience and skills. The first year of training allowed her to consolidate her knowledge, and three years of research in an industrial setting helped her build confidence and demonstrate her capabilities.

Advancing Offshore Wind Technology

Inès's project at IDCORE, sponsored by the Energy Technologies Institute (ETI), a public-private partnership set up to deliver low carbon energy innovation, focused on reducing the costs of offshore wind and increasing its commercial deployment. She was attracted by the breadth of knowledge within the ETI and the nature of the project.

At the project's inception, the strike price for offshore wind was around £200/MWh, with the goal of reducing it below £100/MWh. Through her work, Inès contributed to identifying significant potential cost reductions, but these were already being delivered by an industry that was going through a phase of rapid development, and they were achieved much sooner than anyone expected.

Consequently, the project's focus moved to be an exploration of the system and supply chain improvements needed to deliver greater maturity in the sector. This became a study of global markets, not just the UK, and the changes needed in policy and regulation, along with identifying key skills gaps in the industry. The project demonstrated one of the benefits offered by the multi-institution supervision model adopted by IDCORE, bringing together a range of relevant skills to support the project from across IDCORE's academic partners.

Achieving Professional Fulfilment

Upon completing her EngD, Inès transitioned to a full-time role at the ETI and later moved to the Energy Systems (ES) Catapult with her team. As the Catapult's Renewables Practice Manager, she ensures the organisation stays informed about renewable energy technologies within the wider energy system. Her team collaborates with innovators, regulators, government departments, and commercial organisations to understand the techno-economic realities of utility scale deployment for these technologies and the infrastructure needed for the energy system's transition to net zero.

Inès and her team are also seeking to understand the role that hydrogen might have in a future energy system, particularly in the context of long-duration energy storage. To this end, they are currently engaged in several projects demonstrating how hydrogen could be used to unlock offshore wind generation opportunities, particularly in Scotland and Wales.

Driving the Net Zero Transition

In addition to collaborating on a range of net zero transition projects, Inès proactively engaged in external initiatives, such as Engineers without Borders, awards judging panels, and an Innovate UK Programme. These demonstrate her commitment to driving global collaboration among SMEs and advancing the deployment of renewable energy projects.

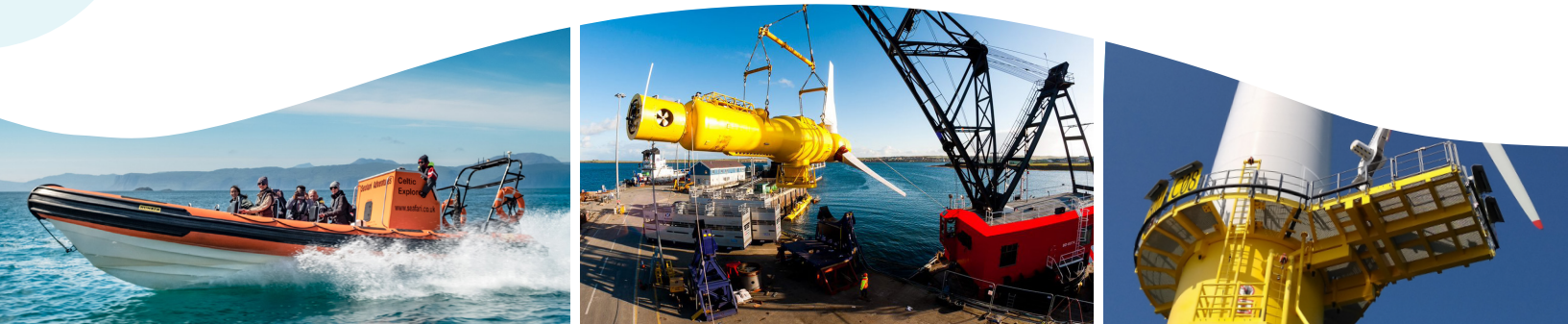
Inès has also successfully led initiatives to engage stakeholders and secure funding for various projects. Her experience in fundraising is invaluable when assisting small and medium enterprises with their efforts to secure necessary resources and achieve their strategic goals.

Reflecting on IDCORE's Impact

Inès attributes her success in her current role, at least in part, to the opportunities and support provided by IDCORE. The training this gave her has been invaluable, allowing her to grow in confidence, build her credibility and function effectively in a wide-ranging and demanding post. The network she developed during her time with IDCORE has also proved very useful professionally, and the long-lasting friendships continue to be important to her personally.

Reflecting on the impact of CDTs and my experience within IDCORE, I am very clear on the value delivered by this training model. The whole sector needs well trained systems engineers, and postgraduates who have been through the sort of training offered by IDCORE are excellent candidates for such roles. Many of the Catapult's staff are Chartered Engineers with PhD level qualifications, and throughout the sector, there are skills gaps that CDTs are plugging.

Inès Tunga, Renewables Practice Manager, Energy Systems Catapult



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