

Plastic-i, solving plastic pollution from orbit

As part of our quick founder questions series – or QFQs – we spoke to James Doherty, cofounder of Plastic-i about protecting the health of the ocean, creating a global map of plastic pollution and unlocking the true potential of available solutions.

I spent four years researching the most extreme planets in the Universe, planets that are so hot their atmospheres literally boil off. This gave me an acute appreciation of the beautiful balance struck by Earth's environment. Key to this balance is the ocean, which absorbs 98% of the heat from the Sun, generates 50% of the oxygen we breathe, and captures 25% of CO2 emissions. The ocean has been long neglected, and that is why we have designed our business to promote its health.

Tell me about the business – what it is, what it aims to achieve, who you work with, how you reach customers and so on?

Our first mission is to tackle marine plastic pollution. Up to 14M tonnes of plastic pour into the ocean each year, destroying ecosystems, damaging natural capital, and inflicting suffering on coastal communities. Plastic-i is

pioneering an AI-powered solution for mapping and combating marine plastic pollution. We use satellite imagery and deep learning to generate maps of floating plastic debris on a global scale. Our goal is to inform decisions and interventions through actionable data insights. We collaborate with NGOs, clean-up operators, and environmental agencies, offering accurate debris detection and monitoring tools. Through a cloud-based platform, we reach customers globally, offering insights for effective pollution mitigation.

How has the business evolved since its launch?

Plastic-i has its origins in Hack the Planet 2021. This international business competition, run by the Commonwealth Secretariat and Satellite Applications Catapult, focused on how remote sensing can be used to promote ocean sustainability. Plastic-i won the competition, which provided a platform to launch the company. Since then, Plastic-i has evolved from an ambitious idea (to generate a global map of plastic pollution) to a cutting-edge solution. We've grown the team, refined our technology, incorporated advanced AI models, and expanded our partnerships. Our efforts align with our mission: to provide vital insights for safeguarding marine ecosystems.

Tell us about the working culture at Plastic-i

At Plastic-i, innovation and excellence are at our core. We have created a dynamic and inclusive environment where diverse expertise comes together to tackle a pressing global issue. We foster a 'circle of safety' culture, where everyone feels empowered to take risks, be honest, and share problems. With a Northern Irish founding team, humility and humour are central to our culture. We value creative thinking, teamwork, and dedication to our mission.

How are you funded?

Plastic-i is funded by grants from Innovate UK grant, the European Space Agency Business Incubation Centre (ESA BIC) UK, and the Science and Technology Facilities Council. In addition, we have been awarded several cash prizes and received pre-seed funding from an impact investor.

What has been your biggest challenge so far and how have you overcome this?

The marketplace around marine plastic litter is in its nascent stages. Understanding the value chain and identifying the key players has been a challenge. Conversations with experts and commissioning market research by a leading consultancy has been extremely helpful. The UN Treaty on Plastic Pollution, which comes into effect next year, will create a regulation-driven market. Plastic-i will play a key role in facilitating the evolution of this market.

How does Plastic-i answer an unmet need?

To solve a problem, you need to be able to measure it. Plastic-i addresses the urgent need for accurate monitoring of marine plastic pollution. Our technology fills a crucial gap in tracking debris accumulations, enabling proactive interventions, and contributing to a cleaner ocean ecosystem. Insights may be used to inform policy decisions, boost clean-up efficiency, and measure the impact of interventions. Plastic-i unlocks the true potential of the solutions to ocean plastic pollution.

What's in store for the future?

In the future, Plastic-i aims to scale our impact globally, partnering with more organisations to combat plastic pollution. Plastic-i will raise a seed round in 2024 and, in the meantime, our focus is on the successful delivery of a series of pilot projects, collecting user feedback, and evolving our tech. We're continually expanding our solutions and advancing our mission to create a healthier planet. Ultimately, Plastic-i aspires to be the go-to organisation for monitoring ocean health.

What one piece of advice would you give other founders or future founders?

Just do it. You learn so much more from doing than contemplating. What are you waiting for?

And finally, a more personal question! What's your daily routine and the rules you're living by at the moment?

I rise early, exercise, and start the working day with a team call. I aim to do 'deep focus' tasks in the morning. Lunch is followed by a decent walk while listening to seminars, lectures, articles etc. I schedule external meetings and calls in the afternoon. In the evenings, I get funky at band practice or sweaty at Capoeira. I often do a late work shift, though I am trying to kick this habit. Rules I am living by: smile at people and make an effort to remember their name; don't let email dictate your schedule; protect your sleep; stay curious; keep striving for impact; and don't forget to have a bit of craic.

James Doherty is cofounder and Director of *Plastic-i*.

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