

VolcanoTech

Andrew McGonigle

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Project profile

What is your idea

We have developed low cost volcano sensing technology which delivers improved monitoring and forecasting capacity at a fraction of the cost of previously applied approaches.

What problem are you solving

Volcanic eruptions are a threat to around a tenth of the world's population, and most dangerous volcanoes are situated in the global south, where budgets for monitoring are highly limited. Gas sensing is very important here as changes in gas emission are a very accurate way of forecasting. However, to date the capacity to deliver against this has been highly limited by the prohibitive cost, and poor performance, of previously applied technology.

What is your progress to date

We have secured and delivered on contracts, collectively valued at £150k, for governments in Chile and Peru to instrument their volcanoes. This work won a Rolex Award for Enterprise in 2008 and has appeared widely in the media e.g., National Geographic and Discovery channel documentaries. NASA have also contracted us in to adapt this technology for their lunar programme.

What resources can help you grow

We are viable commercially on the basis of our volcano instrumentation alone, and are increasingly being approached to deliver tech in other market domains, e.g., for the space sector, for crop health monitoring and environmental monitoring, and we have developed prototype units to service each of these applications, demonstrating proof of concept in each case.

We now need to perform further R&D to make this tech market ready, as well as performing further market research to pathfind routes to market here in order to further scale our monetisation potential within these wider, more lucrative markets.

How will you spend the £50k money

We need salary to support human resource to deliver the above market research and R&D tasks.

About your team

- Andrew McGonigle – team lead, volcanologist and serial instrument innovator
- Jon Willmott – Senior Lecturer in sensor technology, Department of Engineering
- Tom Pering – Volcanology Lecturer, Department of Geography
- Tom Wilkes – Post Doctoral researcher, Department of Geography
- Mary Stuart – PhD student, Department of Engineering
- See our website for more detail: www.volcanotech.org

