Getting post-quake data more quickly with Return On Science

GNS Science is creating a robust system that provides vital multi-storey building structure information immediately following a quake.

The challenge

How much damage was done? Is the structure still intact? Is it safe for people to enter? How soon can we be back in business? How to prioritise building inspection?

These are some of the first questions asked after an earthquake, but getting the answers can be slow because we start with time-consuming manual inspections which can be fraught with delays. For post-event service providers, such as hospitals, local government prisons, getting the answer quickly is critical.

A team at GNS Science is developing a system that can measure and inform on post-event structural damage and communicate with occupants, building owners, structural engineers and emergency services. Importantly, it can be added to new builds or retrofitted.

GNS Science opted for external assessment to test their thinking and asked Return On Science for advice on marketing.

Working with Return On Science

Recent earthquakes in Wellington have shown that rapid and accurate assessments of multi-storey building integrity after an earthquake would be of substantial value to both occupants and asset owners.

GNS Science knew this approach would offer huge benefits over visual inspections alone, but wanted advice on positioning in the market.

“We began with their Wellington partner, powerHouse, who have given us excellent support. We then met with the committee to talk about key questions, such as where to aim, what’s already out there, do we have any competitors, can we patent this?” says Dr Jérôme Leveneur of GNS Science.

GNS Science believes their system could well have global potential.

The committee also advised GNS Science about liability, something they had underestimated.

What happens next?

GNS will evaluate its Australian trial. The team says they have a clear signal from manufacturers that their data engine must be failsafe and simple as there won’t always be an expert user on site and many sites are remote and difficult to access.

The team knows that their data engine has the potential to be bundled into seismic equipment, removing a major bottleneck in this multi-billion dollar industry, opening up new licensing opportunities. They are also looking at co-funding.

Return On Science is continuing to support the seismic work, but is also thinking globally. They have identified much bigger potential markets for the big data concept, areas GNS Science says it hadn’t even considered.

“If our overall goal is a bigger market, Return On Science can help us identify and develop those markets and license the technology,” says Guy Maslen of GNS Science.

Return On Science

Return On Science is based on UniServices’ 25 years of tried and tested commercialisation successes, delivering substantive outcomes on the government’s commercialisation strategies for biotechnology and life sciences.

The translation of scientific and engineering discoveries into commercial applications is a key aspect of the New Zealand innovation strategy. Return On Science partners with organisations to turn raw research into commercial outcomes, and increases opportunities for commercialisation by bringing the necessary strategic impetus early in the research lifecycle.

We created a specialist Physical Sciences Investment Committee to transfer applied sciences and engineering, high-tech manufacturing and energy discoveries into commercial applications that meet the government’s strategy of optimising the science and innovation eco-system.

Our pipeline includes big data, smart and responsive animation and robotic assistance in eldercare and healthcare.

The Physical Sciences Committee

The committee includes industry experts, venture capitalists and commercial R&D specialists from around the world. Their expertise parallels the innovation lifecycle – principal investigator, product development, collaboration, executive and management skills, new ventures and spin-offs, early-stage companies, corporate strategy, venture investment, IP, patents and global marketing.

Sector knowledge includes advanced and alternative technologies, energy, virology and molecular cell biology, industry, pharmaceuticals, aerospace, electrochemistry and chemical sensors, telco, video and robotics.

Meet the committee at www.returnonscience.co.nz
About Return On Science

We commercialise discoveries in biotech and life sciences through:

- professional commercialisation services to researchers, tech start-ups, industry and investors with a strong focus on removing barriers and matching researchers with the right organisations to get them to market
- services ranging from proof of concept/pre-seed investment and IP protection through to market validation and fostering international relationships, along with commercialisation managers, executive education and business incubators
- independent research and business experts and a global network of partners
- critical knowledge resourcing, support and involvement for researchers
- funding options, particularly at pre-seed level
- a simple four-stage approach with a straightforward fee-for-service structure.

Returns to New Zealand

- 260+ IP commercialisation projects
- 228 Deals done
- 235 Jobs created
- $9M of government investment, $27M matched, with $115M of realised returns and $1.4B potential revenue.

Foster and grow your ideas into potential world leading products and services by getting in touch at: www.returnonscience.co.nz/contact