

// Case Study



Global Geo-Intelligence Solutions

GGIS is a geospatial data analytics company. We utilise data from earth observation satellites, global navigation satellite systems and other data sources.

We work with
Innovate UK

CATAPULT
Satellite Applications

ABOUT THE COMPANY

Global Geo-Intelligence Solutions Ltd (GGIS) is a geospatial data analytics company providing geospatial intelligence and engineering solutions for resource and infrastructure monitoring and management. This includes risk prediction for insect infestation and soil quality. GGIS uses statistical and deep learning algorithms, combining multispectral Earth Observation (EO) data with satellite-based weather and soil moisture data, as well as crowd-sourced information. Through data analysis and correlation with relevant events or history, the company provides information and intelligence to support decision making.



RATIONALE FOR INTERVENTION

In October 2015, Dr Ogundipe's Foresight Crops won the Copernicus Masters University Challenge, which was about transforming bright ideas from researchers into successful commercial ventures. The concept behind what would become GGIS is to utilise multi-temporal satellite EO data, combined with crowd-sourced information, historical records and weather data to model the forming conditions for insect swarms which are detrimental to crops. This would provide a platform to enable risk prediction mapping.

Soon after the award, Dr Ogundipe formed GGIS to build, develop and exploit this application. The company was then incubated into the new Space Tech Incubator based at the University of Nottingham (Innovation Park), which is supported by the UK Space Agency and other partners.

GGIS is an early stage business strongly driven by the aim of making an impact on the agriculture landscape in Africa. The goal is ambitious and the target market is complex.

Incorporating machine learning, the company has been developing an algorithm to analyse and extract information on large historical datasets cross-validated with in-situ recordings on locust infestation in West Africa. The nature of the algorithm opens up a variety of market opportunities that may simplify GGIS's access to the market – selling indirectly to end-users (farmers) by licensing the algorithm to insurers and financial institutions.

To move to this significant stage in the business's evolution, GGIS therefore engaged the Satellite Applications Catapult to help:

- Fully understand their market potential
- Define strategic market positioning and competition
- Design an effective and considered plan of attack.

SPRINT FOCUS

Product & Business Development:

GGIS collaborated with a remote sensing specialist to develop the following:

- A focus on market sizing and segmentation, enabling GGIS to;
 - Better quantify available market opportunity in key countries
 - Identify biggest players and suitable initial customers
- Business Model
- Plan of Attack

Agreed Deliverables:

- Brief to outline key advice on product development
- Technical support on how to integrate the Sentinel data into their model
- Advice on product development issues and 'best practices'
- Creation of a slide-deck

Further to the Sprint, the Satellite Applications Catapult has followed-up with specific actions, introducing GGIS to key potential partners. This has included the Algerian Space Agency, which is working on an Earth Observation programme focused on locust infestation prevention, and relevant stakeholders in Kenya's agriculture sector, such as NGOs and commercial agritech services providers.

IMPACT

- GGIS has participated in the Space Placement in Industry (SPIN) programme run by the Satellite Applications Catapult and UK Space Agency, offering a summer placement to an undergraduate student. GGIS presented at Satuccino: Extra shot in Nottingham on 1 November 2017 and gained space industry exposure.
- GGIS was awarded a grant funding project with CARDI - The Caribbean Agricultural Research & Development Institute in November 2017.
- GGIS is currently working on a grant funding bid in collaboration with commercial partners, with an announcement expected for Q4 2018.



Having the advice and support provided through the Sprint process has been a positive and beneficial one. It was good to get the practice of explaining to others what my company was about and the services we plan to offer. Having others look into and provide other perspectives was of value.

The day with the Sprint team was a good brainstorming session which helped to provide a better view of the sector, competitors and other issues. It was clear that effort had been put into researching both the business and technical aspects relevant to GGIS provided in the Sprint deliverables. Having the follow-up interaction has also been helpful as GGIS defines the next steps moving forward and some action points have been taken by the Sprint team. The contacts with relevant people/companies provide some potential opportunities for access into the market.

Assistance has also been provided on issues such as IP by putting me in contact with their IP and Commercialisation Manager.

We now need to press forward with our technical and business developments, taking on board the information and support provided through the Sprint process which has been much appreciated.

*~ Dr. R Ogundipe,
Global Geo-Intelligence Solutions Ltd*

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