**COMPANY DETAILS**

- **Company Name**: Village Infrastructure Angels Ltd (VIA)
- **Country**: United Kingdom
- **Company Number**: 8100658
- **Year Established**: June 2012
- **Legal Structure/Ownership**: Private Company Limited by Shares
- **Postal Address**: 483 Green Lane, London, N13 4BS, UK
- **Registered Address**: Suite 339 Regus House, Victory Way, Dartford, Kent, DA2 6QD, UK
- **Phone Number**: +61 424793485
- **Email**: info@villageinfrastructure.org
- **Website**: www.villageinfrastructure.org
- **Primary Contact**
  - **Name**: Mr Stewart Craine
  - **Position title**: Managing Director
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  - **Phone Number**: +61 424793485

**COMPANY PROFILE**

**Mission Statement**

The Company aims to connect angel and impact investors to micro-infrastructure projects that reduce poverty in rural villages of developing countries. A particular near term focus is mobilizing 3-10 year loans to improve electricity for the 1.2 billion people that currently lack access to modern energy services. Other infrastructure needs will include water, housing, transport, communications, health and education.

**Brief History**

VIA was established by an experienced team of founders that had already delivered solar energy solutions to over 2 million people, innovative IT solutions and business linkages between cleantech entrepreneurs and like-minded investors. VIA is a network of concerned individuals and organizations that use their diverse range of skills to solve infrastructure problems for communities that need them the most, believing that significant reductions in poverty are impossible with considerable investments in affordable, appropriate and sustainable infrastructure. VIA was established at a time when no investment organization was solely focused on the sector of micro-scale infrastructure, and continues to be a leader in this sector, helping the sector to grow to a multi-billion dollar investment opportunity that also improves living standards for the poor.

**Core Competencies**

The core competencies of the company include the following skills and services:

- High level market and industry analysis
- Renewable energy resource estimation
- Local level project planning and design
- Engineering and project management
- Procurement and supply chain optimization
- System engineering and product development
- GIS mapping and data analysis / modeling
- Long-term asset management and monitoring
- Policy design and advice
- Business planning for SMEs
- Capital raising and structuring
- Grant mobilization and partnering
- Microfinance services for infrastructure
- Innovative software development

Complementing these technical services, VIA also develops and manages its own infrastructure projects.
**CAPABILITIES AND CAPACITY**

**Business Units**

VIA has two major streams of business - its Consulting division and its Project Development division. While the project assets under management are of small scale and insufficient to cover the costs of the business, VIA generates additional revenue by assisting others with mission-aligned consulting on similar projects that increase access to village-scale infrastructure. Over time, it is expected that Project Development and ongoing management of these assets will become a more dominant source of revenue, reducing reliance on Consulting for income, but it is unlikely VIA will cease to offer these services if demand exists.

**Project Development**

VIA’s projects currently benefit approximately 5,000 people across five countries, aiming to scale up to 50,000 people by 2018. Consulting services have been given in at least eight additional countries.

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**Honduras**

Rotary Arlington and Texan angel investors have invested in Gracias a Dios, the poorest region of Honduras, to help indigenous villages gain access to solar lights, phone charging and agro-processing services via centralized charging stations.

**Ghana**

VIA and angel investors have invested in solar charging stations and several solar mini-grids in villages of southern and eastern Ghana, testing our model of low cost DC mini-grids and rapid project manager training.

**Indonesia**

VIA is project managing the offgrid component of Hivos’ Iconic Island Project which aims to make Sumba Island 100% renewable by 2025. Solar lights and solar mills are increasing access to energy in Central Sumba for 600 households.

**Vanuatu**

An angel investor from USA and Rotary Melbourne have seed-funded solar lights and mills to several villages on Tanna Island. The project was hit by a massive cycle in March 2015, so GSMA and USAID’s Powering Agriculture are helping to fund rebuilding and expansion.

**Papua New Guinea**

With manufacturing and field partner Project Support Services and funding support from Rotary Melbourne and IRENA, various types of solar mills have been tested in the PNG market, receiving positive local support and more orders.
Consulting Services

VIA's range of consulting services are provided over seven main areas, helping micro infrastructure projects to develop from initial conception and planning through to financing and construction and finally to ongoing asset management.

1) Desktop Industry and Market Analysis

As the access-to-energy and micro-infrastructure markets grow from $100 million to $1 billion during 2015-2020, VIA’s experienced staff have written some guides on how the global market may evolve over this time, covering both technological and financial needs, trends and innovations. More locally, data has been gathered for national and subnational markets, including the accumulation of 2 million points of data into a free online Developers’ Atlas for the UN Foundation. To complement this high-level market analysis and planning, VIA has also developed last-mile analysis tools, such as mapping the location of villages and households in previously unmapped offgrid rural regions of developing countries. This helps reduce the waste of valuable field time visiting village areas that lack the population density to be commercially developed, and allow local staff to spend less time at their computers and more time in the field.

Household locations can also be connected with the least-length network to quickly and cheaply design least-cost minigrid designs, and determine which households should be optimally connected to the main grid or isolated minigrids, and which of the more scattered households should optimally use solar home systems. This rational planning to rural electrification, and the use of online mapping, can help all stakeholders to coordinate their efforts, and most importantly can be done for 0.1-1.0% of the cost of installing the infrastructure itself, so is aimed to be an entirely cost-effective feasibility tool and service.
2) **Field Investigations and Feasibility Studies**

After desktop analysis, it is important to check if the satellite imagery data matches that which is on the ground, and to discuss technology options with the villagers, as well as gauge their capacity to pay compared to investors’ willingness to lend. Such feasibility studies have been shown to increase investor confidence that an optimum and practical project design has been created, resulting in a higher likelihood of securing finance for the proposed project.

3) **Project Design, Procurement and Management**

The staff of VIA has many years of experience in China and maintains a team there who can assist with product sourcing, quality testing, procurement, consolidation and international shipments. Understanding the cost of various design options could alter the detailed project design, aiming to deliver the most service to the villagers from the infrastructure at least risk to the project investor. VIA can also take full responsibility for this part of the project as an engineer-procure-construct (EPC) project manager.

4) **SME and Entrepreneur Training**

Infrastructure projects are not only about hardware, but also about the people who run them. VIA staff have trained hundreds of entrepreneurs who run micro, small and medium sized businesses, and regularly also conduct train-the-trainer programs so that the skills transfer can continue long after VIA staff have left. A typical training program will include:

i. a pre-installation visit to for the local structure of how the infrastructure is to be managed, select preferred products from a range of supply options, and educate on the capabilities and limitations of the project as well as long-term aspirations towards higher levels of infrastructure

ii. A training during installation, which includes technical operation of the hardware as well as business development skills of customer acquisition, default management and book-keeping.

iii. Post-installation trainings on default management, after-sales operation and maintenance responsibilities and planning for project / system expansion. These are often at 3, 6 and 12 months after initial installation.

5) **Asset Management**

After installation of the infrastructure, it is critical to provide ongoing visits to check on technical performance and follow up any issues associated with customers not paying for the services delivered. VIA and its field partners can offer our experience or direct management services for this part of the project, often through a long-term contract of 3-5 years.

6) **Product Design and Development**

The staff of VIA have been recognized for innovative engineering design at the international level many times, and continue to deliver innovative products that the market is not delivering to the specification and price that VIA requires for its own projects, and hence likely for the projects of others. A key recent focus has been the development of DC solar mills to help add value to staple crops and minimize manual labour and the use of diesel generators. Other team members have helped pay-as-you-go solar companies to source supplier factories and specific components required for their system, at competitive prices and good quality.

7) **Business Development Services**

VIA is an advisor for at least two access to energy organizations, and regularly shares its experiences in business development with others in the industry. Common topics include company valuation, innovative financing models, grant writing and capital raising for debt and equity.
CLIENT LIST

VIA and its staff have delivered technical consulting services or jointly developed village infrastructure projects with a range of partners and customers since 2012, with many becoming repeat clients.

PROJECT SHOWCASE

VIA and its staff have undertaken more than 40 separate jobs and projects since incorporation. Some of the smallest jobs for the smallest clients have been performed for free, including small house-mapping projects, business development services and product development or supply chain advice, particularly for China. Larger projects and contracts have ranged from $1,000 to $1.75 million, and sometimes require the formation of a consortium of partners.
**CAPABILITY STATEMENT**

**Village Infrastructure**

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC Rural Electrification Feasibility Study for Nepal</td>
<td>Mapping 200,000 households, 2,000 microhydro minivils and 2,000 telecom towers to determine if the ABC model of rural electrification could be applied in Nepal, and if not, alternative feasible rural electrification strategies.</td>
</tr>
<tr>
<td>Technical advice on energy investment and mapping in the Pacific</td>
<td>Modeling a feasible small-scale investment fund for energy access in the Pacific, and creating an online map and database of spatial GIS data that is useful for understanding and developing energy access markets of the Asia-Pacific region.</td>
</tr>
<tr>
<td>DC minigrid design and optimization</td>
<td>To assist the client to, at low cost, identify village locations in offgrid areas of Tanzania, undertake detailed mapping of each household location, and design the minimum cost DC minigrid network that connects all households within the customized design rules of the clients' system.</td>
</tr>
</tbody>
</table>

**Location:**
- Nepal, USA, Australia
- Australia, Philippines
- Devery, Tanzania

**Client / Organization:**
- Ms Mohua Mukherjee, World Bank
- Mr Coy Navarro, Asian Development Bank
- Devery

**Date of Project:**
- January - December 2013
- July 2012 - March 2014
- November 2014 - ongoing

**KEY PUBLICATIONS & OUTPUTS**

VIA and its staff have undertaken more than 40 separate jobs and projects since incorporation. Some of the

Clean Energy Services Report, co-authored with Sierra Club, June 2014
http://www.sierraclub.org/compass/2014/06/grid-clean-energy-access-all

Modern Design Principles for Investable Village Power Projects, Boiling Point Issue 67, September 2015
http://www.hedon.info/View+issue&itemId=13745

VIA is the Chair of the Mapping Working Group for the United Nations Foundations’ sustainable energy for all activities, and has created an online map and database of useful spatial data related to energy access that spans 500 datasets and over 2 million points of data, freely available online at the following link:

VIA has created low cost software and a service to map offgrid household locations at the following link:
www.developmentmaps.org

**KEY RESEARCH PARTNERSHIPS**

VIA is in regular contact with leading research organizations in the industry, and aims to deliver high calibre applied research that is internationally recognized and peer reviewed.

Harvard University Asia Conference, Tokyo 2015 - Presenter on social entrepreneurship on energy
AWARDS AND RECOGNITIONS

VIA and its partners have already won several awards and supporters, primarily for work in developing solar agro-processing mills, to decrease reliance on diesel generators and decrease manual labour for women. These include the French agency for international developments’ Climate Challenge (finalist), the Australian Anthill Smart 100 (top 10), USAID’s Powering Agriculture (winner) and GSMA’s Mobile for Development Utilities (winner). The following links give more information on each of these valued awards.

- https://poweringag.org/innovators/solar-agro-processing-power-stations
- http://www.gsma.com/mobilefordevelopment/programmes/utilities

CURRENT PROJECTS

Our current work is primarily supported by Powering Agriculture and GSMA, to increase the access to energy for 10,000 households across the Pacific (Vanuatu, PNG, Indonesia and Philippines) with a focus on using solar energy to power community-scale agro-processing mills as well as other productive end uses to complement the more mature consumer-level end uses of solar power such as lights and phone chargers. This project aims to mobilize US$3 million from the investment community, and be completed by 2018. VIA continues to undertake mapping jobs and various other assignments for industry stakeholders.
KEY PERSONNEL

The organizational structure for VIA is shown below, and consists of a partnership of ten key organizations, as well as others not listed for additional services and advice. Most of the team have 10-20 years of relevant business experience and have collectively helped more than 2 million people gain access to micro infrastructure such as solar energy, clean water and other technologies. Detailed CVs for each team member is available on request. Supporting this team is a network of 20-30 angel and impact investors, which is continuing to grow together with the Company, and who add additional valuable advice and skills.

For more information, please contact us at info@villageinfrastructure.org

We look forward to working with you!