



**smart**  
villages

# Smart Agri-Centres

*Sustainable Infrastructure for Community-wide Impact*



# Smart Agri-Centres



Communities in the global South are held back in their sustainable socio-economic development by a complex combination of adverse conditions. A lack of infrastructure often combines with a lack of opportunity, skills and an absence of enabling services such as energy access and ICT connectivity to make community-led independent progress a challenge.

From our extensive research and experience of project delivery, Smart Villages have developed Smart Agri-Centres as a solution designed to address these complex community needs for energy, connectivity, services, agricultural value-addition and incubation of entrepreneurial enterprises for local job creation. Smart Agri-Centres are scalable and adaptable to changing community needs. This innovative solution provides and powers both income-generating activities and vital community infrastructure such as hospitals and schools, elevating livelihood opportunities and quality of life at the heart of villages.



In its first year of operation, our pilot Centre in Mbata, Uganda, increased farmers' incomes by **283%** on average. Total community annual earnings increased by **\$210,000 in one year**.

Built by the community with **local materials**, the **environmentally conscious** structure minimises usage of cement and **maximises community ownership** and engagement



The building incorporates a **45kWp solar power plant**, generating up to **50kW of three-phase power**, and **60+kWh** of Li-ion battery storage. It can provide **>200kWh** daily.

**>50** community businesses established/improved by the Smart Agri-Centre. Revenues **increased by 44%** on average. Some entrepreneurs reported **200% revenue increase**



Capital/construction costs for a 25mx10m Smart Agri-Centre serving 5000+ people is **\$250,000**. Operating and maintenance costs are **<\$10,000 per annum**

Services provided include **agri-value addition**, irrigation, **cold/dry storage**, agri-inputs, welding/fabrication, **flour milling**, snacks and cold drinks, entertainment and internet access, laundry, **training/education**, powering community primary **school and clinic**



# Impact



Smart Agri-Centres have proven positive economic, social and environmental impact, in at least 12 of the 17 SDGs. They are transformative solutions for rural communities, designed to strengthen existing community activities, and catalyse opportunities for new ones.

Our pilot Smart Agri-Centres allowed farmers to almost quadruple their annual incomes, allowing them to buy food for their families, and invest in their farms, businesses and family health and education. Across the whole community, an additional \$210,000 was earned annually.



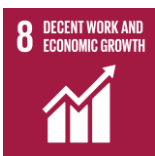
The services and knowledge provided at the Smart Agri-Centre allowed community farmers to increase their crop yields, choose more profitable crops to grow, reduced input costs and significantly cut post-harvest losses.

Local health centres are powered from the Smart Agri-Centre, allowing the provision of improved medical services to the community, including antenatal screening, diagnostic equipment, improved hygiene, cooling for medicines and for wards, and greater ability to attract health professionals to the community.



Local schools are powered by the Smart Agri-Centre, positively impacting educational outcomes. Children are able to access new skills. Teachers can run evening classes, enabling children who are unable to attend school during the day to be educated. Families no longer need to use kerosene lamps or dangerous open fires at home for studying. Parents can afford to pay school fees to keep children in education longer.

A Smart Agri-Centre can generate >200kWh of clean electricity per day almost anywhere in Africa. This can be distributed to community institutions, businesses, and households on an affordable and reliable basis. Smart Agri-Centres can supply power to small offgrid- communities more cost effectively than a traditional minigrid.



The Smart Agri-Centre creates employment/entrepreneurial opportunities throughout the community, but especially for young people in the community. This includes opportunities to learn & demonstrate new skills

The Centres act as hubs for knowledge-sharing, empowerment, and skill development. Having the facilities of the Smart Agri-Centre increases the willingness of other organisations to reach out and engage with the community. **23% of people surveyed said they had learned new skills at the Smart Agri-Centre** from access to training sessions, and **42% of people said they acquired new ideas or business skills.**



The Smart Agri-Centre sustainable energy displaces services that would otherwise be powered by fossil fuel and biomass. We have calculated an annual saving of at least **60 tonnes CO2e/year**. 96% of people surveyed said that there had been a positive impact on the environment due to the Centre.

79% of local traders reported increased security from street lighting. The community feels more connected from access to local and international news and information. Increased community cohesion and quality of life are also reported. There are more leisure opportunities (eg playing sports and spectating).



# Scaling

There are more than 10,000 communities in Uganda alone that would benefit from the installation of a Smart Agri-Centre, impacting more than 9.6million local farmers.

Across sub-Saharan Africa we calculate that 150,000 communities could use a Smart Agri-Centre, positively impacting the lives and livelihoods of more than 300 million people. Smart Agri-Centres have the scalability and versatility to provide sustainable power to, and enable long-term economic growth for, more than 300 million people throughout sub-Saharan Africa.

# Partnership

We implement our stakeholder ecosystem to assure effective installation and operation of our Centres.



# About us

Smart Villages is a UK-registered company that develops and implements integrated and sustainable solutions for rural development in the Global South. We innovate novel technologies and business models to support this sustainability, and impact for long-term equitable socio-economic development.

[www.svrg.world](http://www.svrg.world)

