

University of Notre Dame: Empowering local communities with sustainable energy



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Client profile

The Notre Dame Initiative for Global Development (NDIGD) is a program housed within in the Keough School for Global Affairs at the University of Notre Dame, located in the United States. This program addresses the challenges of building just and equitable societies by leveraging the University's signature strengths to promote development and human dignity worldwide.

Opportunity

Reliable access to electricity is a key component of raising the standard of living beyond subsistence. Electrical power can improve the quality and delivery of education and boost business productivity. In KwaZulu Natal, South Africa, the rate of non-electrification is as high as 95 percent, and the unemployment rate is not far behind, hitting 85 percent in many municipalities.

Accenture and the University of Notre Dame co-developed a transformational model—Connectivity, Electricity and Education for Entrepreneurship (CE3)—with three primary objectives:

- Provide off-grid communities with access to affordable, reliable, clean electricity.
- Support its own operating costs through the electricity generated.
- Establish an environment that fosters local entrepreneurship development and economic growth.

By providing electricity, information and communications technologies (ICT) with entrepreneurship skills, an enduring cycle of economic development can be established. This is accomplished in three phases:

- A renewable energy system is installed at an institution that co-invests in the implementation and provides a secure facility. The energy produced is sold to local businesses as a unique business advantage or accelerator.
- Once power is available, an ICT lab is set up to provide Internet connectivity, giving users access to global information and networking resources. This enables them to participate in Web-based activities such as training, webinars, and online mentoring—provided by Accenture employees through the CE3 Entrepreneurship program.
- Through the ICT lab, the project runs a skills development program focusing on ICT and entrepreneurship. The skills acquired by participants enable them to leverage the energy and ICT components of the model to build businesses, create new jobs, and grow the local economy.

Solution

Accenture Development Partnerships works with leading international development organizations to address the world's complex social, economic and environmental issues. By delivering the power of Accenture's global capabilities and experience, Accenture Development Partnerships positively impacts the lives of people in the developing world.

Following a successful pilot project implementation in Uganda, Accenture Development Partnerships was engaged by NDIGD to conduct project oversight of a full scale CE3 project in South Africa, including market assessment and business model development. It also helped with the design, development and delivery of an entrepreneurship training program for both the Ugandan and South African projects. This included the development and management of an international mentorship program connecting graduating program entrepreneurs with Accenture volunteers who support them through the business start-up process.

Accenture is also supporting the "industrialization" of the CE3 model by developing an assessment toolkit that efficiently measures local market, regulatory, and community conditions. This helps to verify the fit of the CE3 model, the required sizing of the microgrid and the financial model required to achieve operational sustainability and recover capital expenditure.

With a strong local presence in South Africa, Accenture Development Partnerships was heavily involved in the roll-out of the project. It led the sustainability efforts including training local staff, developing local management tools, assessing business models, and providing training materials.

Results

Accenture's well-established presence in South Africa enabled Accenture Development Partnerships to staff the project team with local consultants. These consultants were raised in the province of KwaZulu-Natal and brought a strong understanding of local customs, environmental challenges, and language to the project engagement.

The local team was able to bring the breadth and depth of Accenture's global business to the project. In addition to the Entrepreneurship Essentials Coursework, which Accenture designed and tailored to the local South African context, the project's business incubation centers also offered business mentoring services, channels to market, and access to microfinance resources.

After only seven-and-a-half months of the two-year project, forecasts and results indicate that the model has been able to achieve operational sustainability from day one, as well as recover some capital expenditure. Not only has it enabled the development of new businesses, but it has also contributed heavily to the growth of existing businesses and resulting creation of local jobs.

The following results are expected—across both the pilot site in Uganda and the South African sites, all of which are currently on target to be realized or exceeded:

- Installation of three mid-size solar micro grids (two 30 kilowatt and one 50 kilowatt).
- Training of 3,350 entrepreneurs in ICT and entrepreneurship.
- Creation of 2,475 jobs.
- Offset of 70,000 liters of diesel fuel (which equates to approximate cost savings of US\$98,000).
- Pumping of 100 million liters of clean water using solar systems (not possible otherwise).
- Reduction in carbon dioxide emissions of 700,000 kilograms.

The social impact that CE3 enables within the communities it serves is enormous:

- Local job opportunities reduce the number of people engaged in migratory labor outside of the community.
- Students in connected dormitories are able to study at night with reduced impact to their vision over the long-term.
- Water pumping facilities at schools improves student access to water for drinking and sanitation.

CE3's skilling programs re-engage communities in assisting students, whose educational careers were ended due to civil unrest or poverty, to continue their education and focus on skills that have demonstrated relevance in the local market.

Project CE3 has paved a path to future collaboration with the University of Notre Dame on initiatives that aim to build on the CE3 model; by tying in additional economic catalysts, pushing the boundary of the recovery model, and engaging Notre Dame faculty in research and student engagement.

United Nations Secretary-General Ban Ki-moon states that "energy is the golden thread that connects economic growth, increased social equity, and an environment that allows the world to thrive."¹ The work on project CE3 demonstrates the importance of addressing communities' broader economic ecosystems to not only provide electricity connections that are financially sustainable in the long-term, but to ensure that the sum of all interventions drives local economic growth and prosperity.

¹ <http://www.un.org/press/en/2012/sgsm14242.doc.htm>

