



The Computerworld Honors Program

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Final Copy of Case Study

Year:
2013

Status:
Laureate

Organization Name:
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Organization URL:
www.giz.de/en/

Project Name:
African Cashew Initiative (ACi)

Category
Economic Development

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

Africa has the biggest source of raw cashews in the world, giving the continent huge economic potential. The value of the worldwide raw cashew trade amounts to an estimated \$2 billion. To help farmers take advantage of this potential, the African Cashew Initiative (ACi), a multimillion-dollar program funded by the Bill & Melinda Gates Foundation and the German Federal Ministry for Economic Cooperation and Development, increases the income of small farmers in developing countries. Germany-based Gesellschaft für Internationale Zusammenarbeit (GIZ) is commissioned to manage the project and facilitate cooperation among the partners. ACi focuses on supporting cashew producers in five African countries – Benin, Burkina Faso, Côte d'Ivoire, Ghana and Mozambique – to enable them to increase yields and the quality of products; to

improve business linkages with processing industry brokers and traders; and develop advanced marketing strategies, including quality management. GIZ and SAP, in cooperation with the ACi partners, explored how mobile business could support the cashew farmers and processors within an African rural context. Through the introduction of smartphone and enterprise resource planning applications, farmer cooperatives can run their business in a structured, effective and efficient way. The main interventions include applications to support the governance of farmer cooperatives (e.g. memberships and financials); operative business process (e.g. bulk selling of raw cashews to buyers); and analytics and certification (e.g. fairtrade specialty markets). Specific functionalities within the system include farmer registration, prices broadcasted to smartphones, buying and loading via phones, notification panels, a device synchronization monitor, transactional analytics, and GIS-Backdrop (Geographical Information System). The technology supports farmers with access to profitable markets to increase income. Established players such as processors, buyers and multinationals profit from enhanced transparency and reliability when conducting business with the farmer cooperatives. They can now plan and forecast more accurately.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

ACi will directly invest \$50 million through Phase 1 (from 2009 to 2012), of which 30% is from private companies, and potentially another \$20-\$30 million in Phase 2 (2013-2015), of which more than 60% will be from private companies. Private/corporate partners will provide a larger proportion of total project funding (relative to public/non-corporate funders) in Phase 2 because they recognize the positive impact of Phase 1 and consider it a sound investment. As part of ACi's Innovation & Learning objectives it implemented and piloted prototypical software applications supporting smallholder farmer groups and their buyers. ACi plans to upscale its efforts and to expand the software applications to other crops, reaching about 30,000 farmers by 2015.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

In order to reap the benefits of the ACi's first-phase activities, the second phase proposes a significant upscaling of the rollout of mobile business applications by increasing the numbers of beneficiaries in the cashew and other sectors as well as by making available access mechanisms to the system's transactional data for participants higher up the value chain (in particular for quality management, for sustainability certification and for a closer value chain linkage in general). Furthermore, it is proposed to investigate the applicability of the technology for

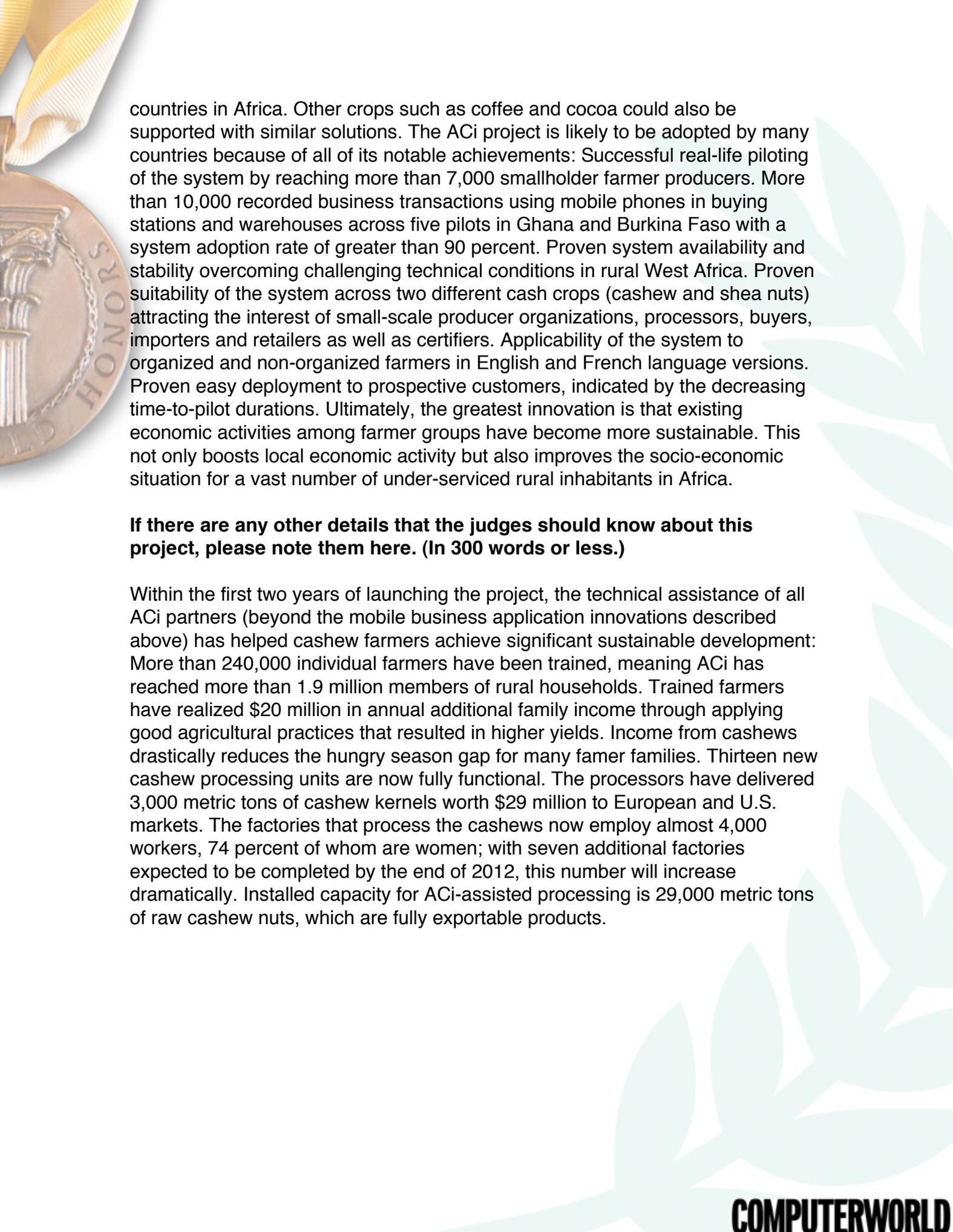
additional agricultural sectors. The adoption of the technology by a high number of diverse end users is an important step towards developing a generic and commercially successful service offering. Altogether, the aim is to deploy the technology at numerous pilot sites in different countries, both in the cashew sector and beyond, reaching an estimated 30,000 beneficiaries within the next 2 years.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

The system keeps farmers informed of their cashew sales, price levels, and changes. There's also traceability across the supply chain among the small farmers, manufacturing processing plants and wholesale traders. In addition, the GIS system helps the cooperative managing the supply chain see farmer contact data, farm size, location and tree inventory, and pricing. This makes it easy to forecast and optimize cashew collection. Farmer organizations can also trace back each cashew sack to its original producer. Alhaji Amadu Mahama of Ghana is one of the 1.5 million small farmers in Africa that depend on growing cashews as their main source of income. For many, cashew farming is their only profession and only source of income to support their families. Because of the ACi initiative, Mahama says, "I can now take care of my family more easily. Harvesting cashews is still hard work, but earning income is now easier." Ankuma Darko, secretary of the Painamis Buying Station in West Ghana, says, "With SAP technology, the smartphones bring transparency to our entire process. We now receive trust from farmers because they believe we are not mismanaging their money. Before there was an issue with trust since we sometimes had trouble with calculations. But now we have this technology and receive a small commission from the Union, so the system benefits us as well as the farmers." "SAP technology helps us know everything that occurs in the farmer zones we cover right from our office without having to go into the field," says Yaya Abu Baro, a secretary of the Wenchi Farming Association, Brong Ahafo, Ghana.

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

The solution could feasibly be adopted by other rural farming countries, and more than 20 high-profile organizations have already expressed an interest in duplicating the system. As part of the ACi project, the technology will be extended to more buying stations in Ghana, Burkina Faso as well as other

A gold medal with a ribbon is visible in the top left corner. The medal features a classical architectural design and the word "HONORS" is partially visible. The background is a light green laurel wreath.

countries in Africa. Other crops such as coffee and cocoa could also be supported with similar solutions. The ACi project is likely to be adopted by many countries because of all of its notable achievements: Successful real-life piloting of the system by reaching more than 7,000 smallholder farmer producers. More than 10,000 recorded business transactions using mobile phones in buying stations and warehouses across five pilots in Ghana and Burkina Faso with a system adoption rate of greater than 90 percent. Proven system availability and stability overcoming challenging technical conditions in rural West Africa. Proven suitability of the system across two different cash crops (cashew and shea nuts) attracting the interest of small-scale producer organizations, processors, buyers, importers and retailers as well as certifiers. Applicability of the system to organized and non-organized farmers in English and French language versions. Proven easy deployment to prospective customers, indicated by the decreasing time-to-pilot durations. Ultimately, the greatest innovation is that existing economic activities among farmer groups have become more sustainable. This not only boosts local economic activity but also improves the socio-economic situation for a vast number of under-serviced rural inhabitants in Africa.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

Within the first two years of launching the project, the technical assistance of all ACi partners (beyond the mobile business application innovations described above) has helped cashew farmers achieve significant sustainable development: More than 240,000 individual farmers have been trained, meaning ACi has reached more than 1.9 million members of rural households. Trained farmers have realized \$20 million in annual additional family income through applying good agricultural practices that resulted in higher yields. Income from cashews drastically reduces the hungry season gap for many famer families. Thirteen new cashew processing units are now fully functional. The processors have delivered 3,000 metric tons of cashew kernels worth \$29 million to European and U.S. markets. The factories that process the cashews now employ almost 4,000 workers, 74 percent of whom are women; with seven additional factories expected to be completed by the end of 2012, this number will increase dramatically. Installed capacity for ACi-assisted processing is 29,000 metric tons of raw cashew nuts, which are fully exportable products.