

## International Climate Initiative

### Climate Partnerships with the Private Sector: Digital Solar Kiosk

African Renewable Energy Distributor (ARED) is a Rwandan company founded in 2013 that developed a unique Mobile Solar Kiosk (MSK) organized as a connectivity network. Each MSK is powered by solar energy to deliver key services such as charging small devices, distributing electronic vouchers and in the near future offering data connectivity to enable access to local information like news, music, or educational content via WIFI. Tech-solute was founded in 2002 as a spin-off company from the Karlsruhe Institute of Technology (KIT). As engineering service-provider, tech-solute provides systematic support to various industries to develop technical innovations.

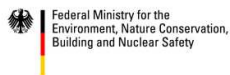
The objective of the project is to enhance the existing MSK currently promoted by ARED to enable further scaling of ARED's business model. For this purpose tech-solute will build a long-term partnership with ARED as technology experts and preferred supporter. The MSK will be optimized into a state where use under continuous loading and a cost-effective production of the kiosk are possible. Each improved MSK will have solar panels with a capacity of approx. 120 Watt which will be sufficient to power a router and an antenna for the mobile internet connection and charge about 50-100 cell phones per day. The improved technology increases the revenue potential of each MSK, and by this, benefits all stakeholders: Customers, franchisees, partner companies and the ARED/tech-solute collaboration.

Using solar energy for charging electrical devices or generating the needed electricity for providing internet access does not only support access to information or mobile banking, it also contributes to the reduction of greenhouse gas emissions. While off-grid electricity is mostly generated through diesel engines, the Mobile Solar-Kiosks represent a more climate friendly alternative. Each kiosk will produce an estimated 130kWh of electricity per year, saving about 150 kg of CO<sub>2</sub> as compared to diesel. ARED will subsequently be able to grow the total number of Kiosks in Ruanda and neighbouring countries to more than 5000 until end of 2020. Taking into account the envisaged growth pattern until 2020 this leads to an overall CO<sub>2</sub> mitigation potential of 720 tonnes annually.

This project is financed by the International Climate Initiative of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB).

<b>Country:</b>	Rwanda
<b>Implementation:</b>	DEG - Deutsche Investitions- und Entwicklungsgesellschaft mbH, Köln
<b>Private sector partner:</b>	Africa Renewable Energy Distributor Ltd. tech-solute Industriedienstleistungen für die technische Produktinnovation GmbH & Co. KG
<b>Total project costs:</b>	409.451 €
<b>BMUB-funding:</b>	198.381 €
<b>Project duration:</b>	10/2016 – 10/2018

Supported by:



INTERNATIONAL CLIMATE INITIATIVE (IKI)



**KFW** DEG

based on a decision of the German Bundestag