

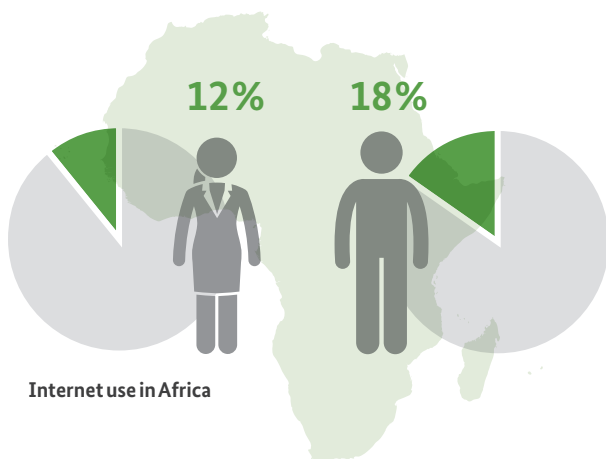


# Digitalisation in agriculture

## Risks and opportunities

### Background

Well over half of the world's population is online – and that number is increasing steadily. Africa has the largest growth rate. Mobile phones especially have enormous potential on that continent. Even today, about half of the population of Africa owns a mobile phone.



Source: GSMA, Sub-Saharan Africa, The Mobile Economy 2018

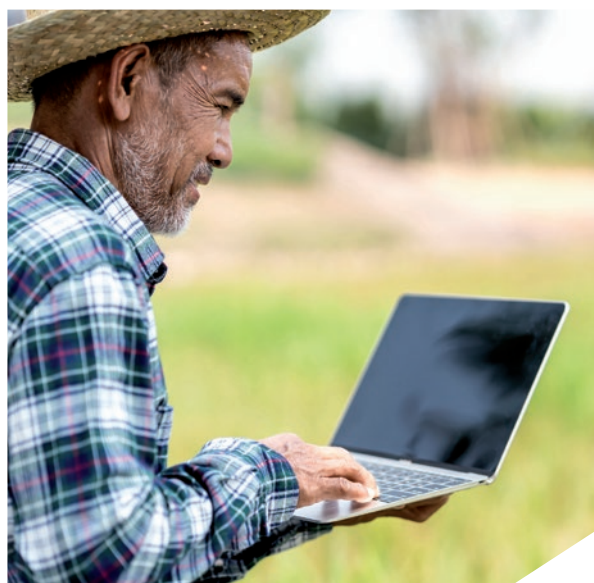
The internet is also continuing its conquest: in 2025, two thirds of mobile phone owners in African nations south of the Sahara will be able to go online with a smart phone. Not surprisingly, expectations of digital applications are great – even in the agricultural sector.

Digital technologies and applications allow the rural population to access global markets, innovations, services, knowledge and education. They can create work and opportunities and quickly reach a lot of people. A basic prerequisite is the development of infrastructure and know-how, also known as e-skills.

Without this, particularly disadvantaged groups like smallholders risk missing their chance to get on board with the digital trend.

For women, the risk of being left behind by digitalisation is especially acute. Barriers for women are, among others, **a lack of literacy, high costs of hardware** and the resulting **lack of experience** with applications.

But hardware is not just a cost factor. The required **raw materials**, particularly rare earths, often come from areas torn by civil war. In addition, digital end devices produce large quantities of harmful **electronic waste**.



## What BMZ does

The German Federal Ministry for Economic Cooperation and Development (BMZ) is extending advisory services on information and communication technology (ICT) in the agricultural community. Also, we establish the use of digital applications as a standard (“Digital by Default”) in all rural development projects and support their spread.

BMZ aims to use ICT to improve people’s living conditions:

- Through multi-media educational content, videos and animations on agricultural topics, radio and TV shows, the rural population gains access to knowledge.
- Women obtain digital skills and knowledge so they can benefit equally from the opportunities of digitalisation.
- We build capacities in the partner nations – so they can use and develop ICT.
- We use ICT solutions for creating sustainable production regions in order to protect the global climate.

## How we work

BMZ builds infrastructure and establishes a legal framework and knowledge for digitalisation in agriculture. ICT solutions are developed jointly with our target groups, e.g. the farmers (“Design with the User”).

We support the continued development of digital applications through partner institutions of the special initiative “ONE WOLRD – No Hunger”. That way, we implement technologies like block chain in sustainable and fair supply chains. In countries involved in German development collaborations, we support start-ups in the agricultural sector.

## Current status

We are already using ICT in agricultural projects:

- for managing agricultural value chains
- for advising farmers
- for greater transparency along the supply chain
- in agricultural financing and insurance
- for marketing agricultural products
- as a catalyst for innovation
- to involve people in decision-making processes
- to support particularly women and young people
- for data management in agriculture



Digitalisation in agriculture contributes to achieving the following global sustainable development goals:



Published by the German Federal Ministry for Economic Cooperation and Development (BMZ)  
Division 121 for international agricultural policy; agriculture; innovation

Contact RL121@bmz.bund.de  
www.bmz.de

As at January 2020

Edited by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Registered offices  
Bonn and Eschborn, Germany

Programme Sustainable Agricultural Supply Chains and Standards

Photo credits

© fotolia/Chaay\_tee , ©GIZ/Jörg Böhling