



SUPPORTING AGRICULTURE DEVELOPMENT IN SOUTH AFRICA

Do ICTs have a role to play?

CONCEPT NOTE

Importance of ICT4 Agriculture

South Africa's biggest economic challenge is that our economy has not grown fast enough, for long enough. The way of addressing this challenge, the government through its Cluster for Economic Sectors, Employment and Infrastructure, has developed a 9-Point Plan comprising simultaneous actions in key strategic areas, at a scale large enough to constitute a 'big push' to ignite economic growth. The plan has identified the revitalisation of agriculture and agro-processing value chains as an important component to drive growth and create jobs. Similarly, the National Development Plan (NDP) identified agriculture as the primary economic activity in rural areas and argues that it has the potential to contribute significantly to job creation, food security and economic development. The Agricultural Policy Action Plan (APAP) aims to put tangible, concrete and measurable steps in place to achieve all these objectives, with measures for success including increased income, increased yields and increased profit. The AU Agenda 2063 emphasises that sustained investment in Science, Technology and Innovation (STI) in areas such as agriculture is required for Africa's sustained growth, economic transformation and increased competitiveness. STISA-2024, which was formulated in response to this call, sets as its priority the eradication of hunger, as well as ensuring food and nutrition security as one of its priorities.

Areas in which research and innovation can contribute to the achievement of this priority include Agriculture and Agronomy, as well as upscaling and expansion of Logistics Services and Infrastructure.

The National ICT RDI Roadmap recognises that ICT can support enhanced agricultural production, principally by rendering support to emerging commercial farmers to improve their contribution towards increased food security and agricultural exports, as well as to mitigate environmental impact.



Roles for ICT4Agriculture

As demonstrated in ICT4Agriculture development projects across the African continent, various benefits can result from these interventions.

Benefits include:

- Enabling household-level food security
- Facilitating economic development through:
 - Improvement of productivity and efficiency
 - Expansion of reach along the value chain
- Improving development practice by:
 - Enabling sustained benefit from development initiatives

- Facilitating community-driven development
- Supporting the development of new business models

The benefits that South African agriculture can derive from the introduction of ICTs must be explored.

The question that must be answered is how DST, with the support of its ICT ecosystem stakeholders, can contribute towards using ICT technologies and innovation to enable the revitalisation of the agricultural and agro-processing sectors with the aim of driving growth and job creation.

ICT4 Agriculture

ICT4agriculture refers to the interaction between ICT and agriculture. It describes an emerging field focused on the enhancement of sustainable agriculture, food security, livestock production and rural development through improved information and communication processes. More specifically, ICT4Agriculture involves the conceptualisation, design, development, evaluation and application of innovative ways to use ICTs in the rural domain, with a primary focus on agriculture.

The South African agriculture domain

There are different types of farmers in South African agriculture. Each of these groups has its own needs. ICTs have different roles to play in each grouping. While it is generally accepted that ICTs have a big role to play along the emerging farmer value chain, there are practical issues that need to be resolved, such as communication and knowledge transfer. It is here where ICTs can potentially have the biggest positive impact.

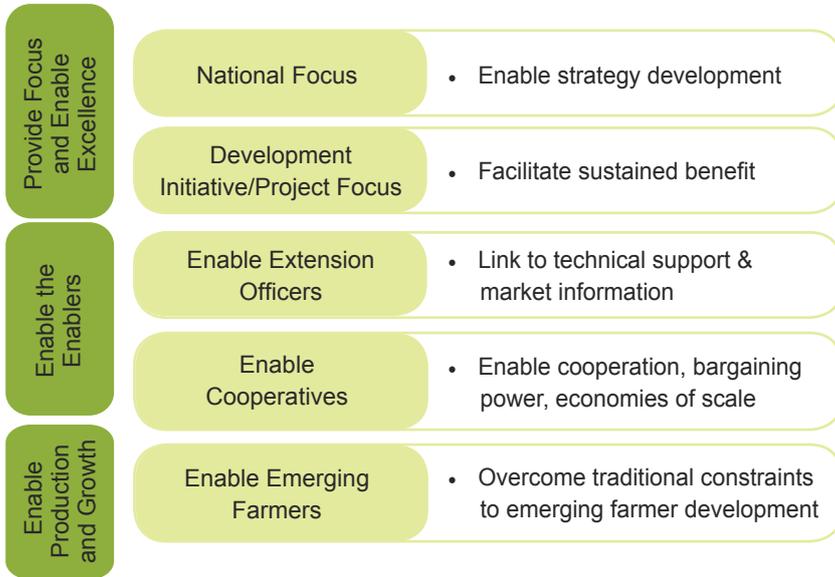
Where to focus ICT enablement

The opportunity with respect to ICT4Agriculture lies at the interface between ICTs, rural development and agricultural

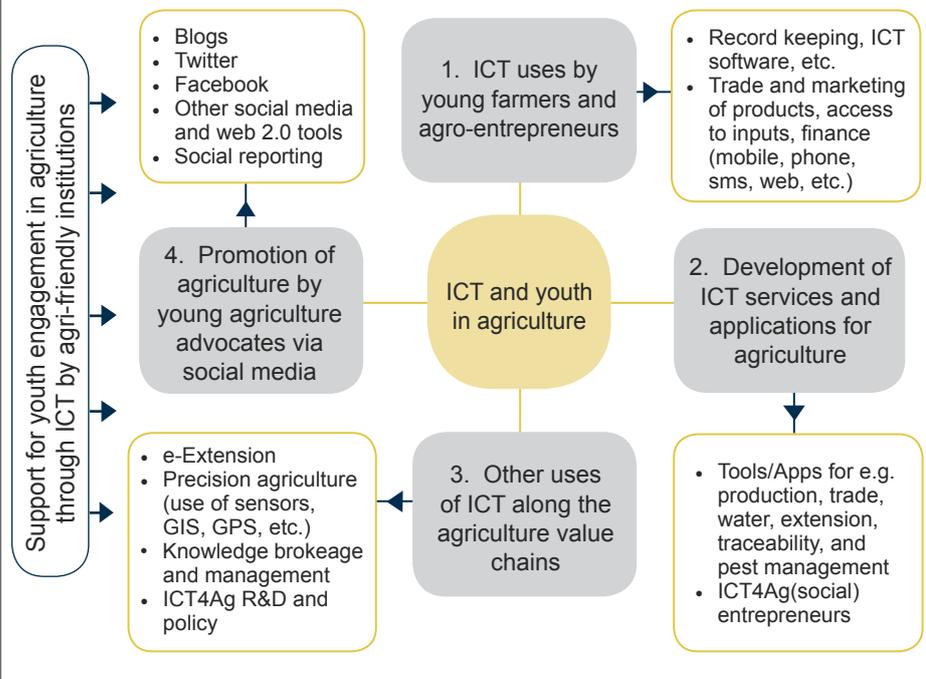
development: a role could potentially be defined in terms of the areas that are not currently addressed by the private sector, government and communities, and that can cross the disciplines of ICTs and agricultural development.

A framework is proposed within which to define areas where ICT4Agriculture can be used to support emerging farmer development. A holistic view is taken on the system of emerging farmer development through ICTs is taken. It is assumed that ICTs have a role to play along the entire spectrum, from the development of a national strategy, through enabling best practice to the development of individual farmers.

Areas to focus ICT enablement



Framework for engaging Youth in Agriculture through ICTs



Source: CTA ARDYS Project

Important questions to ask

Strategic questions

- What is the overall objective for the use of ICTs in agriculture?
- How can ICT4Agriculture be used to dis-intermediate, and enable new business models?
- How can ICT4Agriculture best be focused to enhance development for different categories of farmers?
- Where along the value chain should the focus be directed, to augment the current ICT4Agriculture initiatives?
- Where should the research focus be?
- What institutional development needs to take place to ensure that ICT4Agriculture has a sustained impact?

Tactical questions

- How can best practice for development initiatives that promote the use of ICTs in agriculture be determined, and how can it best be used to “lift the game” of development initiatives?
- How can success be measured? Which initiatives should best be left to private sector role players, development agencies and government respectively, and how can their initiatives be supported by research, policy and strategy?
- Similarly: what part of the information chain should be subsidised, and what part should be handled by commercial players?

Examples of ICT4Agriculture projects

A review of local and international initiatives in ICT4agriculture confirms a focus on improving farm-level productivity through a number of interventions aimed at access to advice and information, as well as a focus on market linkages and marketing, and mobile money. There is also a local focus on enablement of extension officers. Some examples are as follows:

e-Agriculture

South Africa

<http://www.ida.gov.za/AdditionalMenu/EAGricultureProject/Pages/default.aspx>

Agtag Agricultural Magazine App

South Africa

<http://www.agtag.co.za>

Agri-suite online

South Africa

<http://www.manstratais.co.za>

Kilimo Salama

Kenya

<https://kilimosalama.wordpress.com/about/>

Digital Green

India, Ethiopia, Ghana and Tanzania

<http://www.digitalgreen.org/>

e-Choupal

India

<https://www.echoupal.com/>

AquaDeD ONG

Benin

<https://www.aquaded-ong.org>

Way forward

The next step is an ICT4Agriculture workshop to which stakeholders in the agriculture domain will be invited to:

- Map the ICT4Agriculture landscape
- Identify needs and opportunities for investment and research