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ACCRA, GHANA

# Prospects for smart agriculture in Africa by 2030 and beyond

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## Starting points towards 2030

Digital services will only transform smallholder farming if the agricultural context is right.

Smallholder farmers can benefit from digital services even if they are not the target users.

Investments in infrastructure and skills need to cater to tomorrow's digital solutions, not (only) today's.

# Opportunities for advanced digital technologies in African agriculture

## PLATFORMS



## DATA FOR DECISION-MAKING



## AUTOMATION AND ROBOTICS



## BLOCKCHAIN TECHNOLOGIES



## Data for decision-making



### Vision 2030

data collection through sensors, crowd-sourcing, incidental data etc. to inform (human) decision-making in the field, along the value chain and in policy

### Beyond 2030

use of data for machine learning to move towards automated decision-making and actions

### Required measures for 2030



Regulations and standards for data collection and sharing



Infrastructure to lower cost and improve the quality of the internet



Skills to evaluate information and use data output for decision making



## Platforms



### Vision 2030

social media platforms for information sharing,  
business linkages and crowd-funding; mobile money;  
platforms that aggregate different ICT4 Ag services

### Beyond 2030

virtual marketplaces with quality control using M2M  
devices; platforms for online work / service provision

### Required measures for 2030



Regulations for platform economies  
e.g. labour, finance



Investment in quality control and  
fraud detection for online platforms



Skills to take advantage of online  
work / trading



## Blockchain technologies



### Vision 2030

supply chain management to trace products from source to end consumer; land registries; smart contracts (e.g. insurance pay-outs)

### Beyond 2030

use of ready-made Blockchain applications for distributed ledgers at all stages of the value chain

### Required measures for 2030



National / international regulations for Blockchains



Investment in adaptable platforms for private Blockchain systems



Skills to develop and use Blockchain technologies



## Automation and robotics



### Vision 2030

industry 3.0 in food processing for value addition, efficiency and consistent quality; drones for data collection and simple services

### Beyond 2030

autonomous robots that use machine learning to optimise and automate production processes

### Required measures for 2030



Safety nets to compensate for job / income losses



Infrastructure for automation, incl. electricity, broadband



Skills to develop and use industry 3.0 and 4.0 technologies



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Thank you

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