

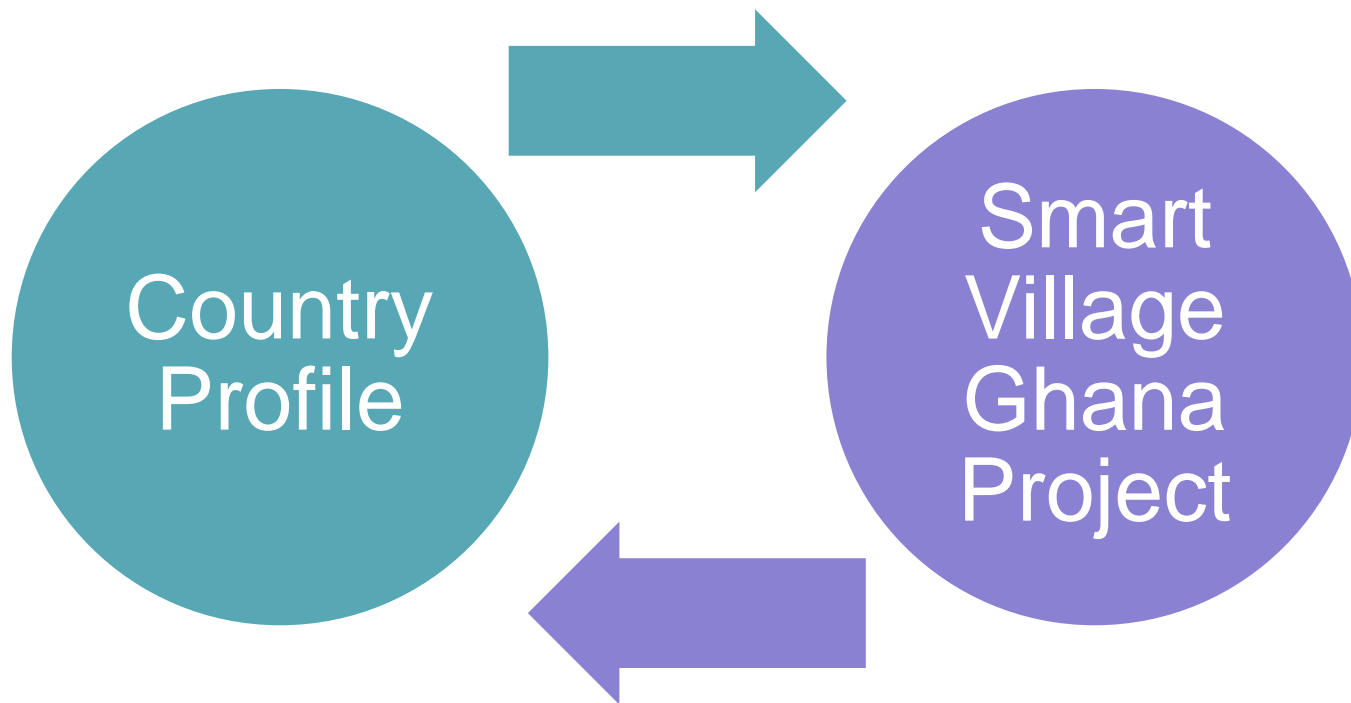
SMART VILLAGE GHANA

Model for Africa's Future Rural Development



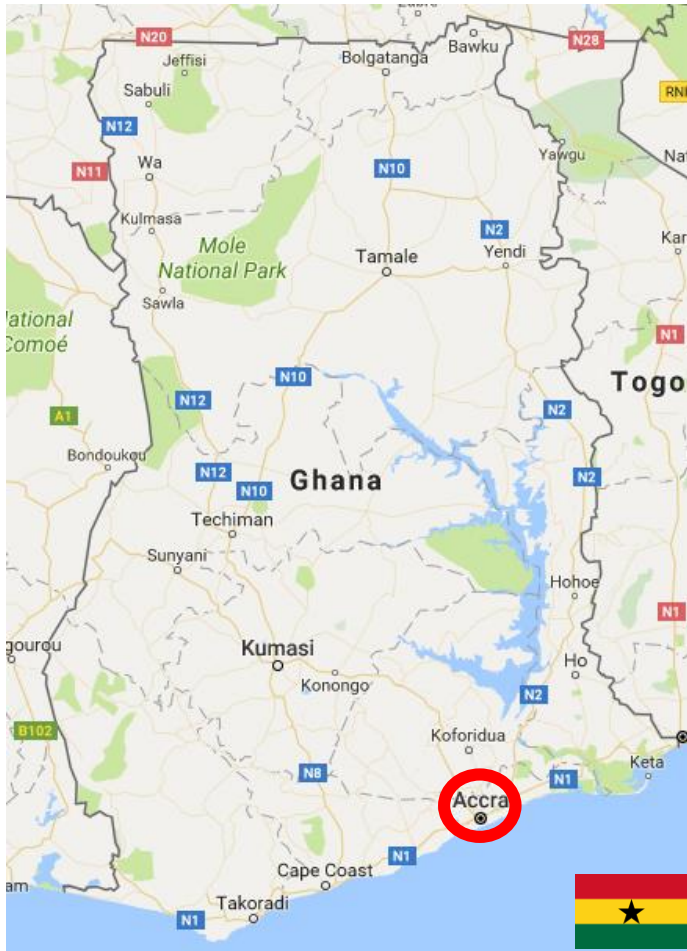
Edwin Opare. PhD Researcher @ KAIST

Overview



Country Profile

Country Profile



Item	Key Stats
Country	Republic of Ghana
Capital	Accra
Admin Regions	10
Admin Districts	216
Population Est. (2016)	28.21 Million
Pop. Growth Rate	2.3%
Land Area	238,842Km ²
GDP(Nominal, 2016)	\$42.69 billion
GDP (PPP, 2016)	\$1,513.46
Principal Agric Exports	Cocoa, Timber, Horticultural Products, Fish/Sea Foods
Principal Agric Imports	Wheat, Rice, Chicken (frozen), Milk, Fish
Principal Mineral Resources	Petroleum, Gold, Bauxite, Manganese & Diamond

Country Profile

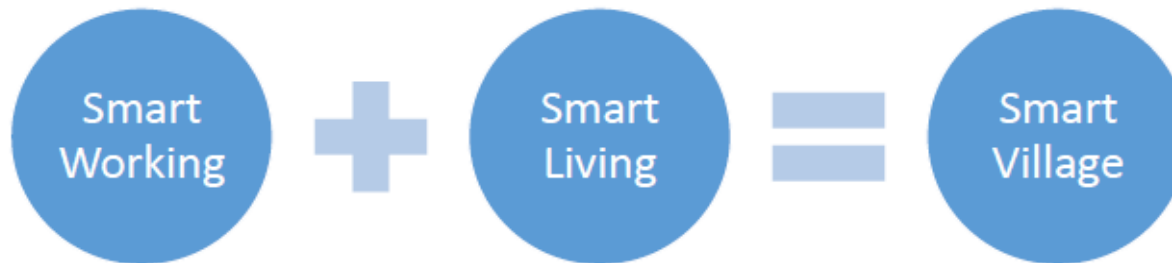
Type of Land Use	Hectares	(%)
1.0 Total Land Area (T.L.A.)	23,884,245	100.00
2.0 Agric. Land Area (A.L.A.)	13,600,000	56.94
2.1 Area under cultivation (2015)	6,421,450	47.22
2.1.1 Total area under irrigation (2015)	221,000	3.44
3.0 Area under inland waters	1,100,000	4.60
4.0 Others (forest reserves, savannah Woodland etc.)	8,746,021	36.60

Source: Ministry of Food And Agriculture, 2016

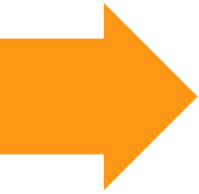
Smart Village Ghana Project

What is Smart Village?

An attractive future community space that is **economically**, **environmentally** and **socially sustainable** through the innovation of **rural areas** as a working and settlement space by fully utilizing the benefits of new technology.

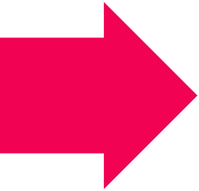


Background



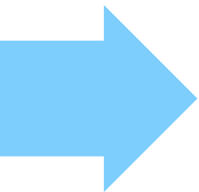
47% of world's population

Rural areas are simply home – a place to live, work and raise families



70% of the world's poor

Live in rural areas



60% of Ghanaians

Are into agriculture, mainly subsistence farming

Current Challenges

Migration of youth to city Centre's in search of non-existent jobs & better quality of life

Importation of foodstuffs from neighboring countries into Ghana

Policies & Initiatives



One District
One Factory



One Village
One Dam



Planting for
Food and Jobs



Water for all
Projects



\$1million
1 Constituency



Zongo
Development
Fund



Free Public
Senior High
School



Re-institution
of Allowances
(nurses and teachers)



Sanitation
Projects



National Entrepreneurship
and Innovation Programme

Objectives of Smart Village Ghana

Bring about production efficiency

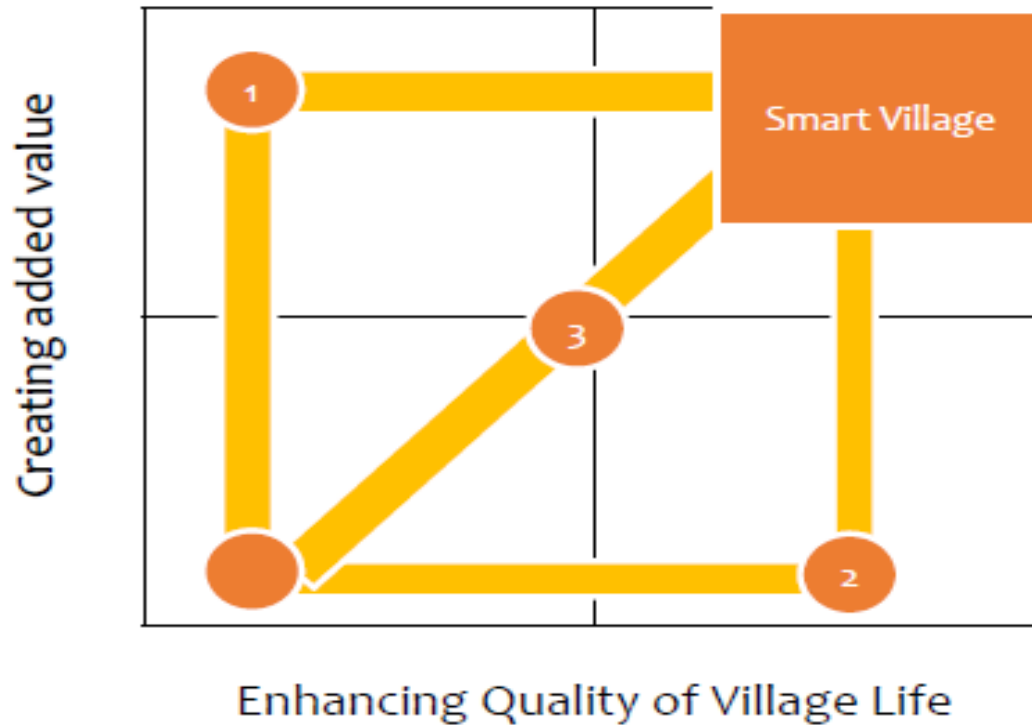
Value addition to agricultural products and linkage with multifunctional composite industries and start-up companies

Planned production and distribution of products through local joint smart factories centered on local communities

Ensure the safety and quality of agricultural products through smart distribution and provenance tracking system

Diversify income generation of farm households through providing services of experience, sightseeing, etc., beyond simple food production and processing activities

Goal of Smart Village Ghana



Agro-Biz Valley Model: rural economic development approach focusing on increasing income of farmers through smart farm, smart factory, smart processing, distribution etc.

Design of Smart Village Ghana

Smart Village Implementation Process



Value Addition & OpEff Process

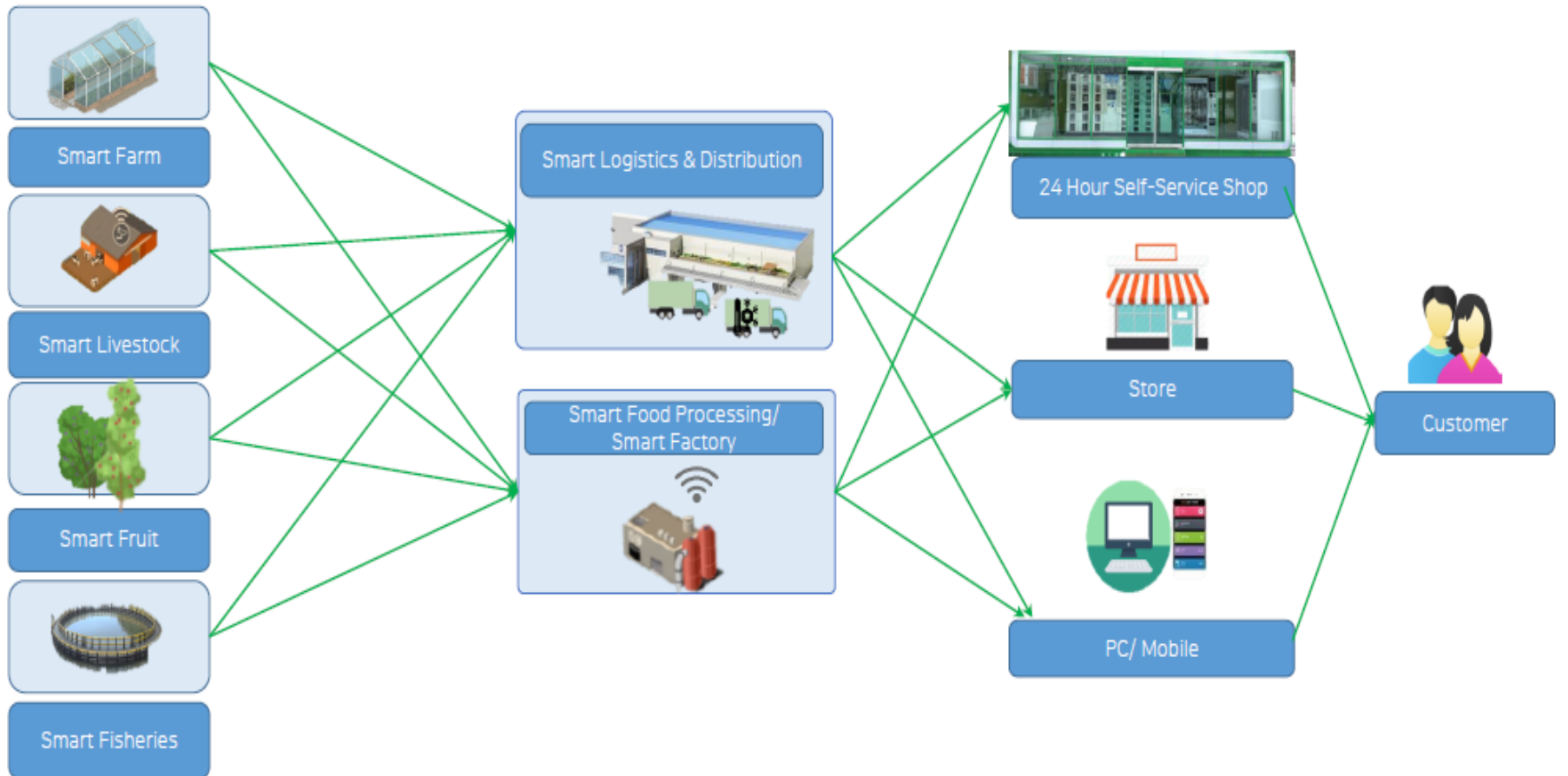
Rural Value Chain		1 st Product	1 st Processing	2 nd Processing	Packaging	Storage	Distribution	Sale	
Operational Efficiency	Productivity	Planned production and planned system	Food Processing & Packaging System			Local Food Logistics Management System			
	Stability								
	Efficiency		Local Food Logistics Management System						
Added Value Creation	Quality		Food Processing & Packaging System		Local Food Logistics Management System				
	Freshness	Local Food Traceability System							
	Safety								



SVG Basic Components

Systems	Goal	Main Services
Planned Production and Supply Management System	Maximize efficiency based on supply-demand stabilization and sales algorithm	<ul style="list-style-type: none"> - Farmhouse information (item, area), sales information (product, shipment) - Production planning support module and training module - Collection and comparison configuration services of supply and demand estimation and planned production - Shipment schedule configuration service for weekly unit shipment, weighing, aggregation
Food Processing & Packaging Plant System	Supporting all processing of Agro-food products from storage to shipment	<ul style="list-style-type: none"> - Data input and retrieval service based on mobile device - Raw material and product history management service - Dash-Board system for important information management such as each work process history and product production, sales, and stock
Local Food Logistics Management System	Systematization and efficiency of logistics management in smart packaging, storage and distribution process	<ul style="list-style-type: none"> - Goods receipt and inventory management service - Product management service - Ordering management system - Calculation management service - Seller Management Service
Local Food Cooperative Platform	Effective organizing of Cooperative and systemic support for profit generation of the farmers	<ul style="list-style-type: none"> - Encouragement of co-production and management of small-scale farmers - Linkage with various village projects - Activation of farmers processing - Activation of local food contract cultivation - Activation of communication between consumers and producers

Putting All The Pieces Together



GS1 Tracking System / Cold Chain System

Project Duration & Budget

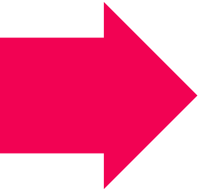


3 years

Project Duration:

Feasibility Study and Project Design: 1 year

Project Implementation and Evaluation: 2 years



\$4 Million

Estimated project budget

Expected Output





To our outstanding success!!
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Acknowledgments

KAIST GCC

Thank You!