



Innovative business models for
biogas by-products :
Case-Study of Smart Bioenergy Group « SBG » based in Senegal

Study Tour on integrated Biogas System in Senegal

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SBG in key numbers

- **+2000 KWh of Biogas capacity installed**
- **+3000 Tons of organic fertilizer produced and sold**
- **+1000 Square-Meters of factory Unit to transform organic fertilizer**
- **+50 jobs created**
- **3 innovative biogas technologies introduced in-country**
- **1 proprietary biogas technology with local indigenous name :
« WoyofGaz » which can be translated as « Easy Gas »**
- **1st Digital Layaway platform to pay for organic fertilizer and biogas equipments via Orange Money, Free Money, Visa and Mastercard**
- **+270 millions FCFA of cumulated direct commercial financing**
- **+600 millions FCFA of cumulated revenues**

ABOUT SBG



www.sbgafrika.com

WHO WE ARE

SBG is a company active in the field of organic fertilizer, sanitation and renewable energies.

It builds Autonomous Production Units (APU) allowing local production of organic fertilizer under the **FERTIBIO** brand

OUR VALUE PROPOSITION

For Entrepreneurs

Enable entrepreneurs to increase their income through the production, use and distribution of organic fertilizer



For The Community

Develop the circular economy to boost food security by improving soil fertility and enabling healthy and sustainable agriculture to feed Africa.



OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a local commercial biofertilizer brand - **FERTIBIO**

DESCRIPTION OF THE ORGANIC FERTILIZER PRODUCED BY THE EQUIPMENT

BRAND	FERTIBIO	
TYPE	Organic fertilizer	
ORIGIN	100% Made in Senegal	
AGRONOMIC INTERESTS	THE CONSTRAINTS OF CHEMICAL FERTILIZERS	THE ADVANTAGES OF ORGANIC FERTILIZER
	<ul style="list-style-type: none"> • It decomposes too quickly and is therefore not sufficiently assimilated by plants; • It impoverishes the soil in organic matter; • It feeds on the soil and weakens its fertility; • It negatively impacts the environment; • It is mainly composed of chemical substances and it can constitute a danger for humans , plants and animals; • It dissolves quite quickly; • It is released very quickly and may burn the plants. 	<ul style="list-style-type: none"> • It decomposes slowly and is thus assimilated little by little by the plants; • It enriches the soil with organic matter and thus stimulates micro-organisms; • It nourishes the soil; • It promotes the good development of plants; • It is respectful of the environment; • It does not contain any chemical substance and is therefore safe for humans, plants and animals; • It does not dissolve; • It is released very slowly and does not risk burning the plants.

OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a local commercial biofertilizer brand - **FERTIBIO**

PHYSICO-CHEMICAL CHARACTERISTICS		STANDARDS	VALUES
	Organic matter	$\geq 20\% \text{MB}$	$\geq 70\%$
	Organic C / total N	> 8	> 8
	Azote (N) total (%MB)	$< 3\%$	$> 2\%$
	Phosphorus (P205) (% MB)	$< 3\%$	$> 2\%$
	Potassium (K20) (%MB)	$< 3\%$	$\leq 1\%$
	Humidity (%)		25 to 30%

OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a bundled package integrating biogas units - **APU**

THE AUTONOMOUS PRODUCTION UNIT (APU)

















APU is an integrated biogas kit including an organic fertilizer production system and an on-site dedicated trained staff. It can also come with various options such as (1) solar water pump, (2) tricycle, (3) solar lighting kit, (4) toilets. It is a concrete response to the issues of Self-Employment, Entrepreneurship and Development of the activities of economic operators in rural and peri-urban areas

OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a bundled package integrating biogas units - **APU**

AUTONOMOUS PRODUCTION UNIT

EQUIPMENT DESCRIPTION

	MODEL :	APU SL60
	PRICE :	14 400 US Dollars
	SPACE REQUIRED :	5 METERS TO 10 METERS
	PRODUCTION CAPACITY :	60 TONS PER YEAR
	INPUT :	WATER, ANIMAL AND VEGETAL MATTER, SUN
	EXPECTED REVENUES :	24 000 US Dollars PER YEAR
	EXPECTED CHARGES :	14 000 US Dollars PER YEAR
	EXPECTED MARGIN :	10 000 US Dollars PER YEAR
	CONSTRUCTION DURATION :	30 DAYS
	START OF PRODUCTION :	60 DAYS AFTER CONSTRUCTION
	LIFETIME :	10 YEARS
	GUARANTEE :	2 YEARS
	NUMBER OF JOBS CREATED :	10
	QUANTITY OF RENEWABLE ENERGY PRODUCED :	30 TO 70 KWH PER DAY

OUR INNOVATIVE BIOGAS BUSINESS MODELS

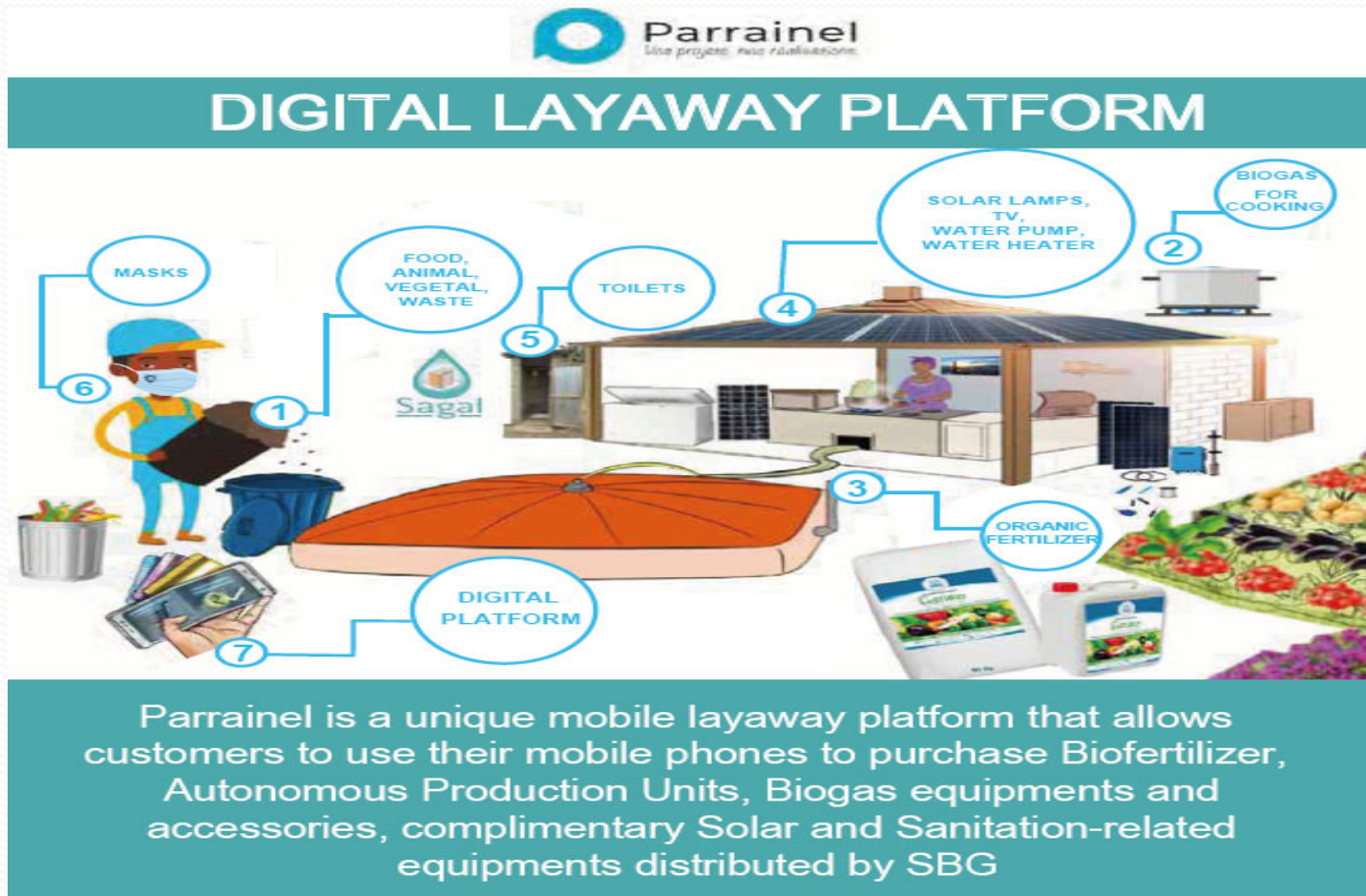
Case of a bundled package integrating biogas units - **APU**

ECONOMIC, SOCIAL AND ENVIRONMENTAL INTERESTS

- Green investment opportunity with an expected return on investment of 70% per year
- Creation of 10 green and sustainable jobs
- Improvement of the socio-economic conditions of 200 persons
- Promotion of agroecological products in agricultural value chains;
- Sustainable access to organic fertilizer which is 100% produced in Senegal, by the communities themselves under an entirely Senegalese local brand called **FERTIBIO**

OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a digital layaway platform - **PARRAINEL**



Parrainel is a unique mobile layaway platform that allows customers to use their mobile phones to purchase Biofertilizer, Autonomous Production Units, Biogas equipments and accessories, complimentary Solar and Sanitation-related equipments distributed by SBG

www.parrainel.com

Tél: 78 479 64 64 / 33 824 49 21



OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a digital layaway platform - **PARRAINEL**



 www.parrainel.com

WHO WE ARE

Parrainel is a unique mobile layaway platform that allows customers to use their mobile phones to purchase Biofertilizer, Autonomous Production Units, Biogas equipments and accessories, complimentary Solar and Sanitation-related equipments distributed by SBG.

Parrainel is an Open Layaway Platform, which also means that other entrepreneurs can similarly use the Layaway Platform for their own products and services.

Parrainel accepts payments through Orange Money  which is a Telco operator already present in 13 countries in Africa (Botswana, Cameroon, Côte d'Ivoire, Guinea, Jordan, Kenya, Madagascar, Mali, Mauritius, Morocco, Niger, Senegal and Uganda)



OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a digital layaway platform - **PARRAINEL**

OUR VALUE PROPOSITION

For Entrepreneurs

Enable entrepreneurs to increase their sales and income by selling their products and services through the Parrainel Layaway Platform.

This method of acquiring their products and services will ease the conditions of access and increase their sales.



For The Community

Develop inclusion and facilitate access to products and services necessary for the development of community members and the achievement of the Sustainable Development Goals by 2030



LE DIGITAL
POUR TOUS



Parrainel
Le Digital Pour Tous

COTISATION DIGITALE
CAMPAGNE DIGITALE
POINTS DE VENTE
BOUTIQUE DIGITALE



 www.parrainel.com

1

Adapté aux besoins des Particuliers

2

Adapté aux besoins des Commerces de proximité,
Groupements et Associations

3

Adapté aux besoins des Associations, ONGs,
Projets, Programmes et Annonceurs

OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a sustainable partnership model for impact

RELEVANCE

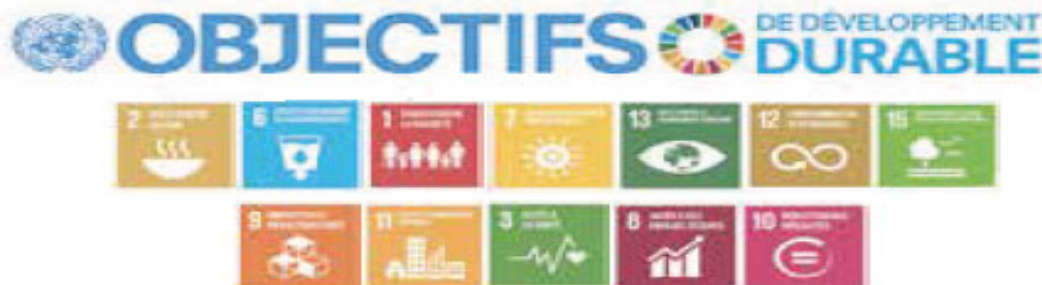
**ADAPTED
SOLUTION,
AGILE AND
SUSTAINABLE**

The Autonomous Production Unit (APU) is a concrete response to the issues of Self-Employment, Entrepreneurship and Development of the activities of economic operators in rural and peri-urban areas

CREDIBLE AND SUSTAINABLE INVESTMENT

IMPACT

The APU will in particular accelerate the achievement of the following 12 Sustainable Development Goals:



OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a sustainable partnership model for impact

The Autonomous Production Unit (APU) is an equipment that allows the production of organic fertilizer **FERTIBIO**. It is a mini industrial processing unit like this one located in Sédhiou, Casamance - SENEGAL (see image below)



OUR INNOVATIVE BIOGAS BUSINESS MODELS

Case of a sustainable partnership model for impact

PARTNERS



A company active in the field of organic fertilizers, sanitation and renewable energies



A USAID project that focuses on water, sanitation and behavior change is already supporting the identification of rural agricultural groups and investors in rural and peri-urban areas for the production of organic fertilizer



A leading microfinance institution in Senegal specializing in issues of access to financing in the rural world provides support in the event of financing needs of groups and investors



OUR INNOVATIVE BIOGAS BUSINESS MODELS

Next steps for growth

FERTIBIO

+5000 Tons of organic fertilizer per Year on our 2021-2025 growth plan

APUs

500 APUs on our 2021-2025 growth plan

+1,5 million US Dollars of investments in 2022

+2,5 million US Dollars of revenues per Year

+1 million US Dollars of margin per Year

PARRAINEL

+100 000 Digital Platform users on our 2021-2025 growth plan

Partners

+10 Strategic partners such as USAID, ECREEE, ORANGE, ENDA, FONGIP, etc...

Thank you for you attention



SBG

Clean. Cook. Grow

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