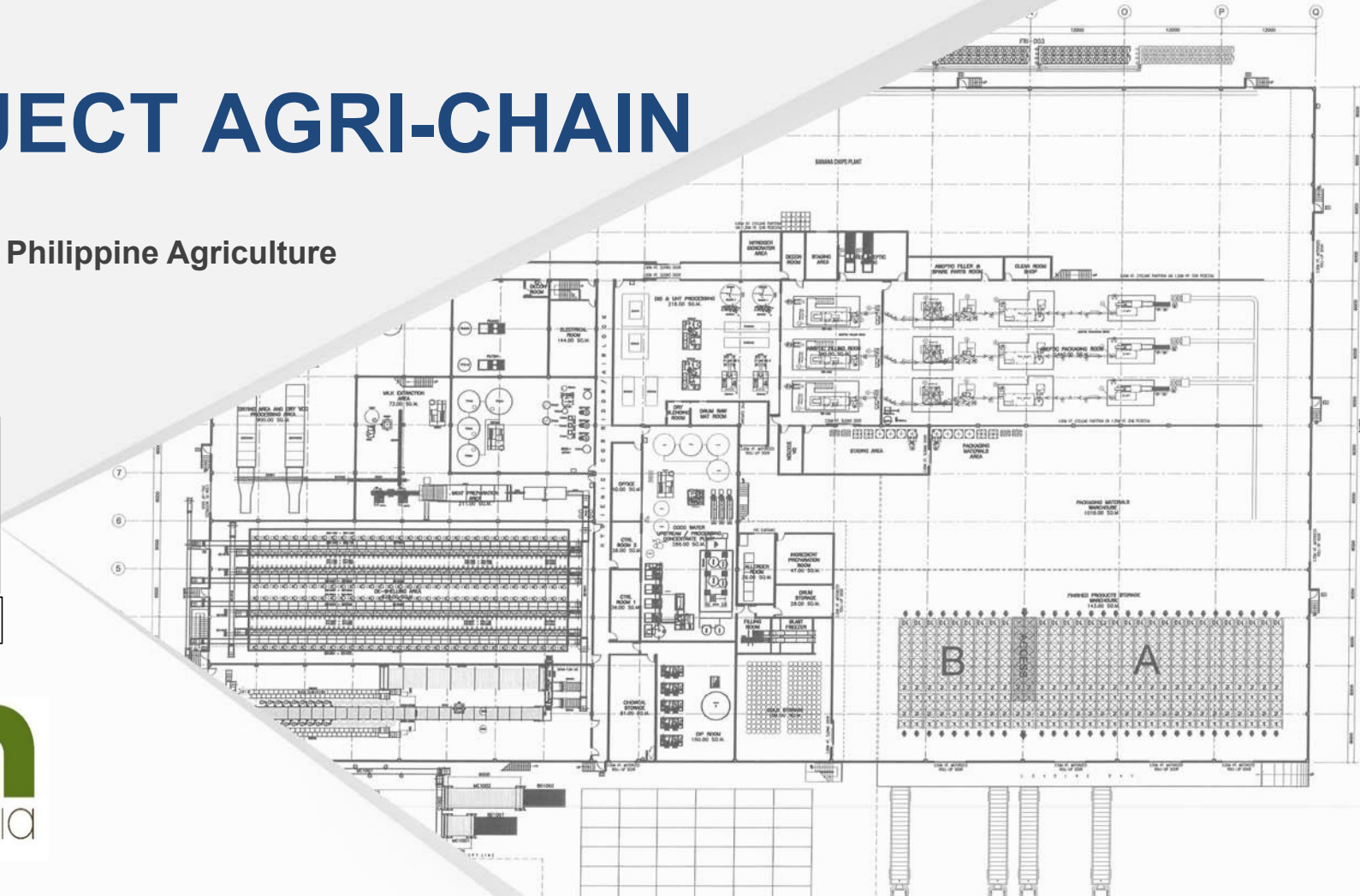



# PROJECT AGRI-CHAIN


## Modernizing Philippine Agriculture



The architectural floor plan of the OBRA PALMA facility is a complex layout divided into several functional zones. On the left side, there are large rectangular areas labeled 'PACKAGING MATERIALS AREA' and 'PACKAGING MATERIALS AREA', each measuring 100.00 SQ.M. The central part of the plan features a 'HYDRAULIC SORTING/ALLOM' section, which includes a 'SORTING AREA' (100.00 SQ.M.) and a 'PACKAGING MATERIALS AREA' (100.00 SQ.M.). To the right of this central section, there are several smaller rooms and areas, including a 'PACKAGING MATERIALS AREA' (100.00 SQ.M.), a 'PACKAGING MATERIALS AREA' (100.00 SQ.M.), and a 'PACKAGING MATERIALS AREA' (100.00 SQ.M.). The bottom right corner of the plan shows a large rectangular area labeled 'PACKAGING MATERIALS AREA' (100.00 SQ.M.) and a 'PACKAGING MATERIALS AREA' (100.00 SQ.M.). The plan also includes various other rooms and areas, such as a 'PACKAGING MATERIALS AREA' (100.00 SQ.M.), a 'PACKAGING MATERIALS AREA' (100.00 SQ.M.), and a 'PACKAGING MATERIALS AREA' (100.00 SQ.M.). The overall layout is designed to optimize the flow of materials and products through the facility.



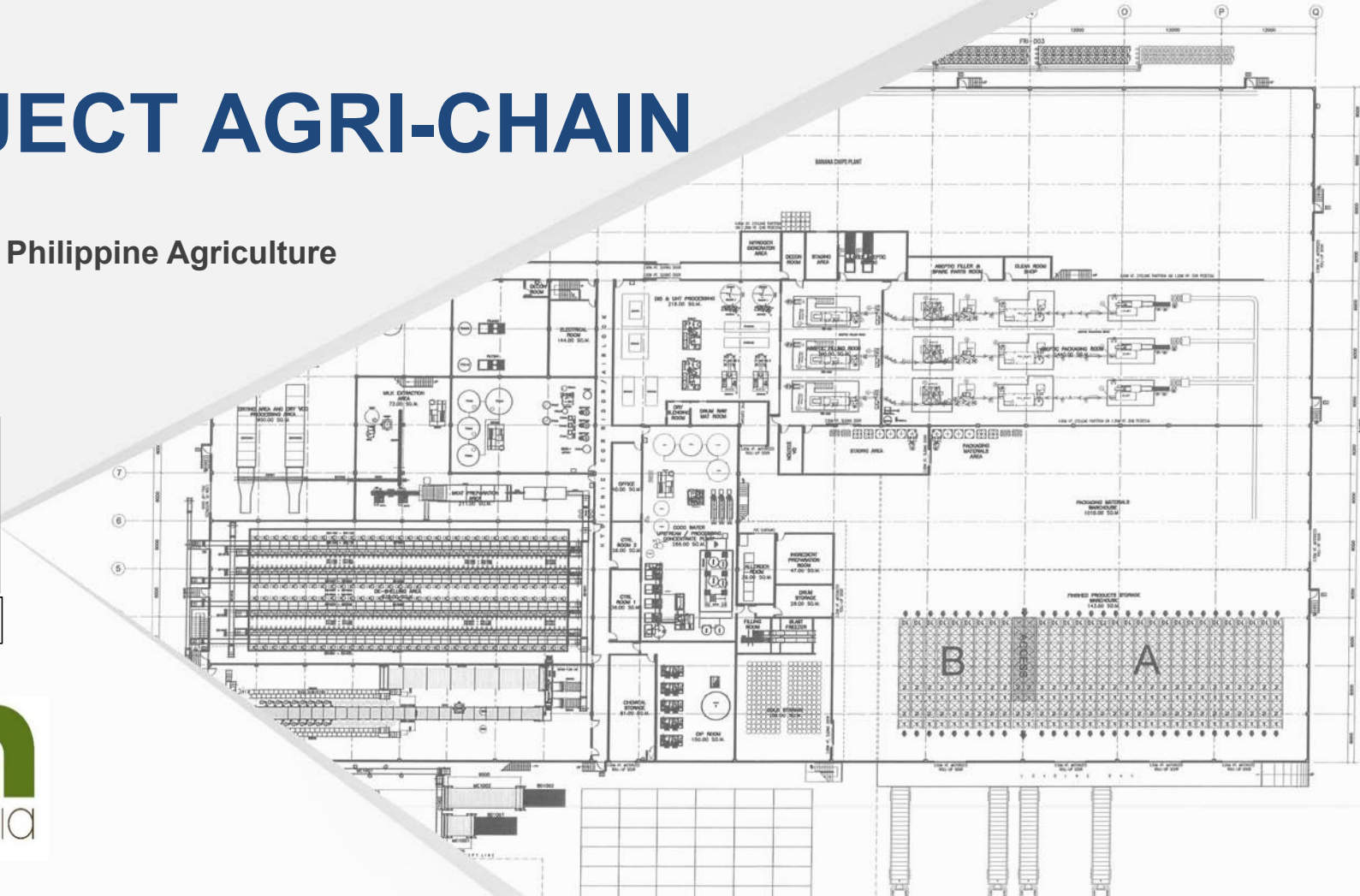
OBRA PALMA




nu agri asia

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OBRA PALMA



NUA  
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OBRA PALMA



# Project Pillars

Advanced  
Technology

Uplift  
Farmers

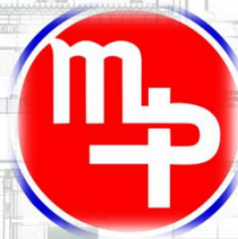


**OBRA PALMA**

**NUA**  
nu agri asia



**Batangas**



# Project Overview

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## **Integrated Food Terminal Complex**

Infrastructure for high-value food processing

- Frozen and Refrigerated Storage
- 24/7 Stable Power
- Pure Elemental Water
- 100% Waste Remediation
- R&D and Sanitary Lab
- Logistics Support
- Canteen / Laundry / Security



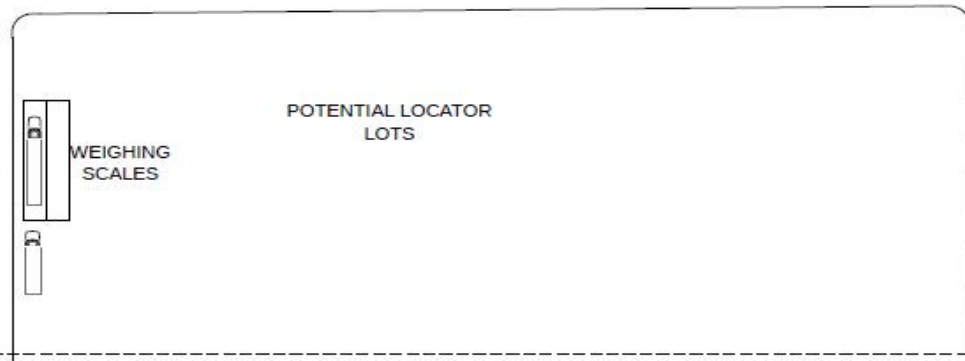
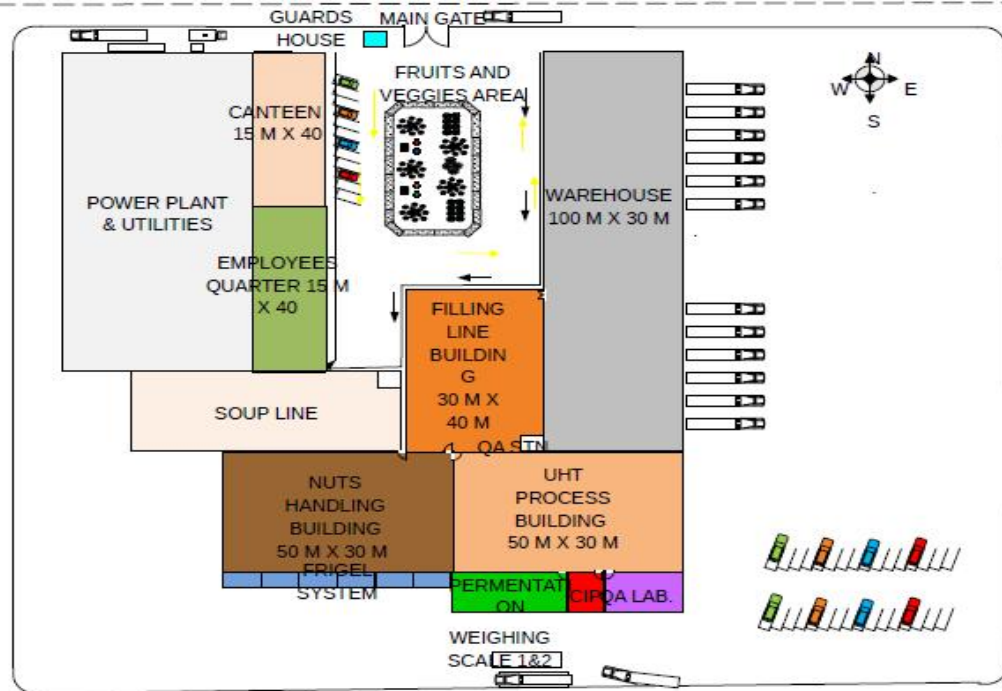
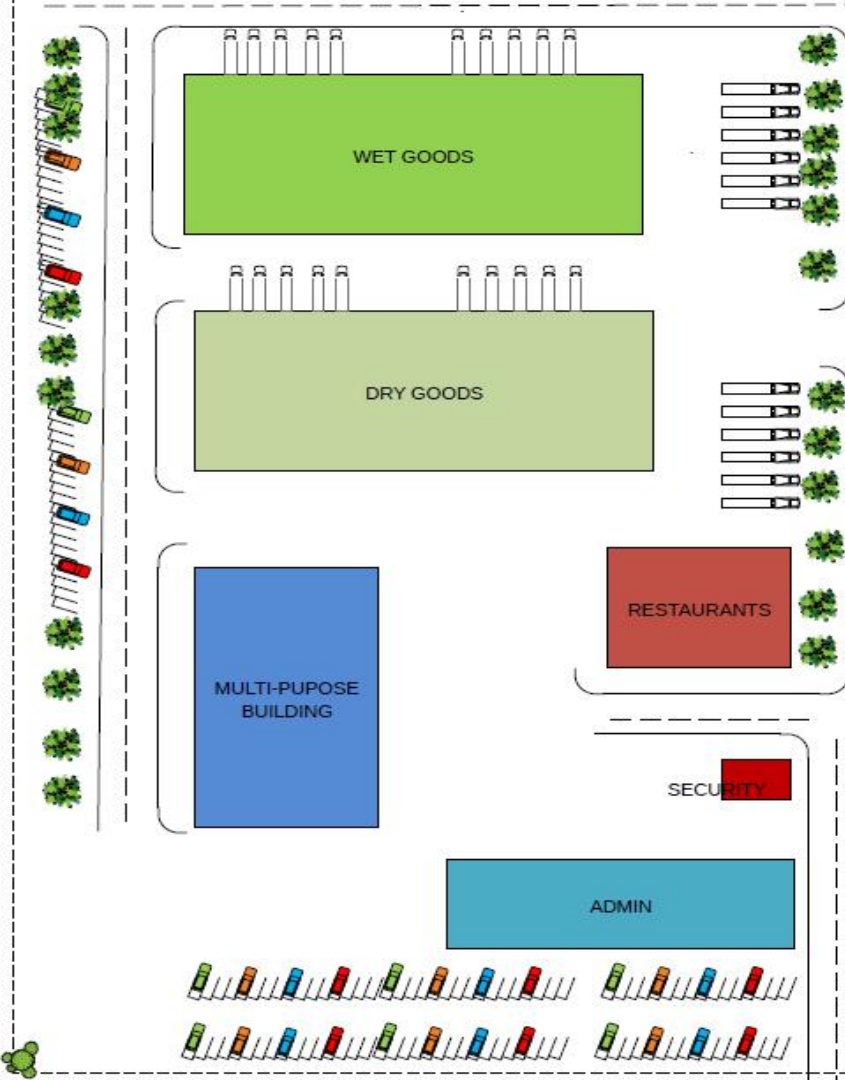
# Project Overview

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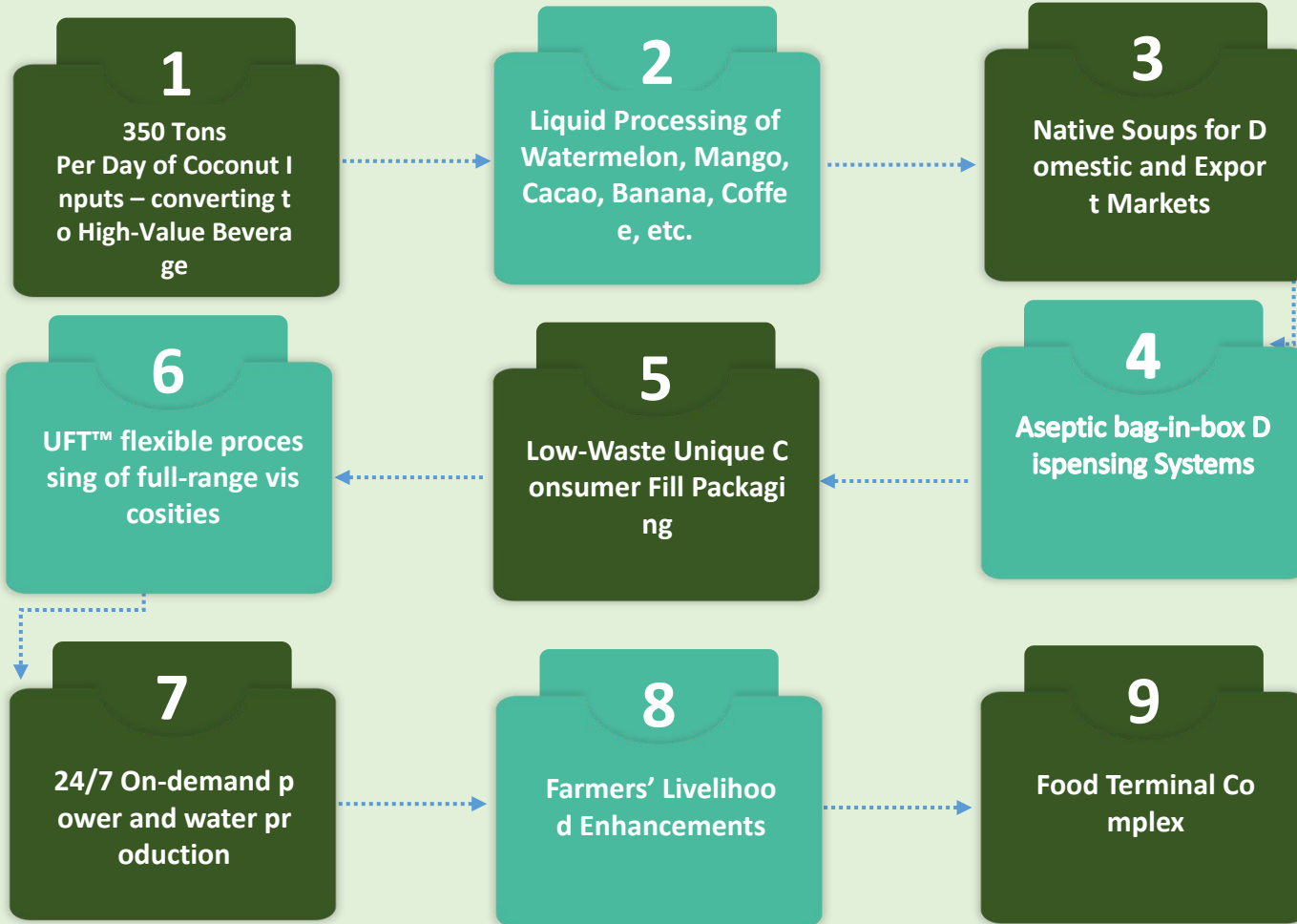


## High-Value, fruit and vegetable processing facility

- Primarily focusing on **350MT per day input of de-husked coconuts**, Each location will produce coconut non-dairy beverages, coffee creamer, coconut water, coconut cream and flour.
- Each will also process fruit puree, 100% fruit juices, and pure vegetable soups – **all with 12-18 month ambient shelf-life** using the most advanced UFT® technology – and filled for consumers in exciting and innovative packaging



# Project Highlights



# Why Are We Different?

Our Model is unique among coconut processing facilities.

01

## Intercropping

The plant “de-risks” its dependence on 100% coconut and is therefore able to accept harvest that can be grown efficiently among the coconut trees. This includes, for example, banana at mid-level and watermelon on the ground.

02

## Finance

Fully expanded financial model taking into account every variable of operating this type of plant. Designed by engineers who have been in the industry for 30+ years.

03

## Social Impact

The foundation of our model is to “uplift community”. And by doing so, we operate with fair labor and farmer practices. The supply chain is determined by sustainable supply, not awarded to the lowest price available.

04

## Green Energy

Energy and fresh water production using plant liquid waste materials.

05

## Earth-Friendly Packaging

Our consumer packages cut food waste by 10% and packaging waste by 80% compared to packages from similar factories (Tetra).



# Project of the People – Social Impact

Our Model is unique among coconut processing facilities.

**01**

## **Higher Incomes through Intercropping / Training**

Triples the income of the local farmer

**02**

## **Housing for the Poorest**

Our project will build housing for the poorest farmers and workers near the plant site

**03**

## **Farmers as Stakeholders**

Through the local cooperative, individual farmers will become stakeholders in the project and receive quarterly distributions. This will be based on the volumes of raw material provided to the plant

**04**

## **Mobile Medical Care**

Mobile Medical, Dental and Eye care units will be established at no cost to the local farmers

**05**

## **Pay Off Trader Loans**

This project will undertake a program to rid the farmers from their indenture of local traders

# Project Investment Impact

## Anchor for Economic Development

Infrastructure projects such as ports, barging, roads, energy, waste management, cooperative recovery, etc., will be accelerated as a result of the design and operation of this plant.



## Farmer & Food Security

This conversion into high-value **intercropped fruit & vegetables** will bring abundant returns to farmers of intercropped lands – lands that have traditionally only produced low-value copra for regional oil mills



## Uplift Community

The result of this project is expected to “uplift community” and help maintain peace & order.



## Benefits to Labor Supply

this project will spur 1500 direct jobs and positively affect more than 6000 people both directly and indirectly in the region



# Competitive Advantage - Technology

Our Model is unique among coconut processing facilities.

01

Newly designed UFT™ system allows for the natural and organic processing of foods/drinks without use of sugar, acid, stabilizers or chemicals. Allows for operation 22 hours per day.

02

Digital Inline Blending plus MST technology.

03

Low-waste packaging system, using flexible EcoLean consumer packages.

04

Aseptic bag-in-box latest technology for advanced dispensing systems which remain shelf-stable for many weeks or months

05

Clean, Green, Energy and Water Production – Carbon Negative

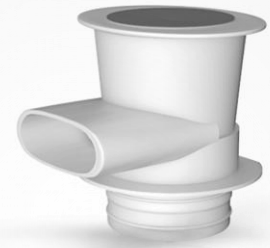
# Technology Advancement

Developing eco-friendly dispensing solutions – new wave of packaging



only low-acid, aseptic liquid foods and beverages continuously for weeks without refrigeration.

UFT™ Technology  
Digital Inline Blending  
MST



Capacity up to 7,500 packages per hour

# Technology Advanced System – UFT™

Our processing concept is based on flexible liquid processing.



**The plant will operate four filling lines:**

- A foodservice filling line that will enable cutting-edge bag-in-box technology for dispensing low-acid beverages while remaining aseptic (stored ambient) for many weeks
- Two consumer packaging lines with Unparalleled format which will allow for 200, 250, and 350 ml pouches
- A consumer packaging line with unparalleled format which will allow for 500 ml and 1 liter pouches

## JCS Process Systems

Whether it is coconut water, coconut cream, fruit juice, vegetable soup or other liquids – it can all be processed through the same set of direct & indirect UHT lines. This system is designed to maximize the quality and flavor of the raw material without using any preservatives, stabilizers, sugar or acidification.

**JCS Innovation in the Real World:**

- Low and High Acid Aseptic Processing
- Digital Inline Blending
- Pasteurization and UFT Pasteurization
- Smarter Batching and Line Distribution










JCS Toolbox® - *DIB™*

# Competitive Advantage – Green Energy



24/7 Stable Power Production at 5 Megawatts that is 100% Green Baseload Renewable Energy

No more Brown-outs and NO harmful emissions!

Production of large volumes of Potable water and steam

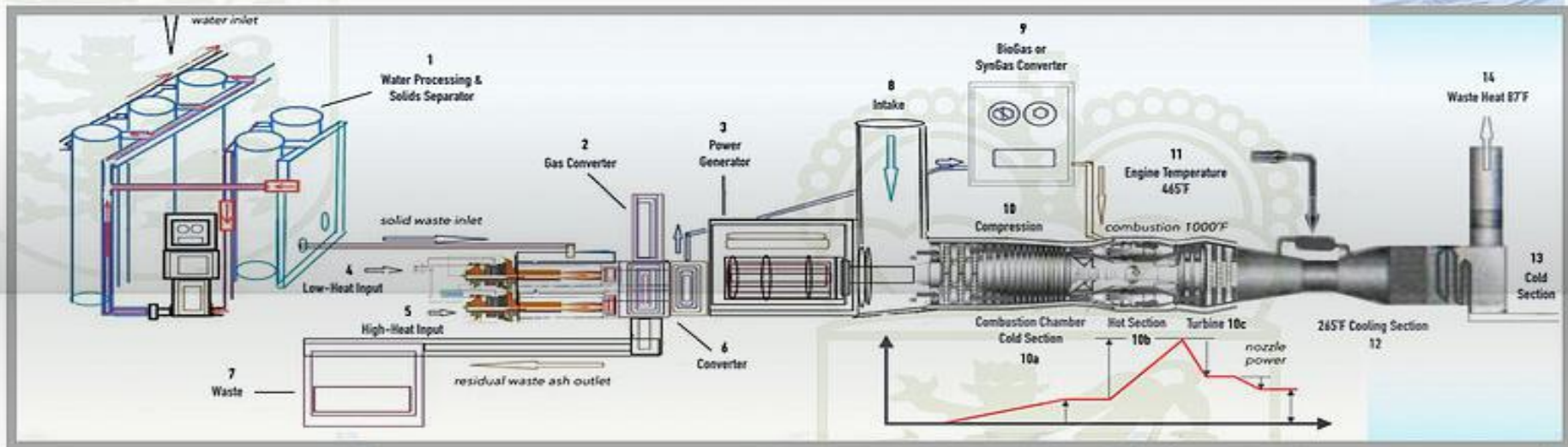
Production of Carbon Free power direct from gasification to power turbines

A permanent 100% “Green” Sustainable Solution for Sewage, Garbage and all Wastewater treatment

A fully scalable, cost effective Green Technology that is quick to implement, and one that works 100 % with the Environment, not against it.



# Langenburg Technologies Water-Power Processing



- |                                       |                             |
|---------------------------------------|-----------------------------|
| 1 Water Processing & Solids Separator | 10 Compression/Combustion   |
| 2 Gas Converter                       | 10a Combustion Cold Section |
| 3 Power Generator                     | 10b Combustion Hot Section  |
| 4 Low-Heat Input                      | 10c Combustion (turbine)    |
| 5 High-Heat Input                     | 11 Engine Temperature       |
| 6 Gas Converter                       | 12 Cooling Section          |
| 7 Waste (solid)                       | 13 Cold Section             |
| 8 Intake                              | 14 Waste Heat               |
| 9 BioGas/SynGas Converter             |                             |

The Water Processing & Solids Separator (1) accepts waste slurries comprising solids, water and other liquids where all solids are filtered and separated from all liquids. Solids are expelled into the solids processor having Low-Heat Input (4) and High-Heat Input (5) sections for converting solids into inert ash, and also for evaporating any/all residual liquids exiting the Gas Converter (2/6). Residual Waste (7) ash is held for later removal and disposal. Gaseous material exiting the Gas Converter (2/6) enters the BioGas or SynGas Converter (9), where it is converted to organic or synthetic gas – primarily Hydrogen. Intake (8)-air is under Compression (10), within the engine's pre-combustion stage at the Combustion Chamber Cold Section (10a). The engine's Hot Section (10b) is the combustion chamber, where temperatures reach about 1000°F. The overall Engine Temperature (11) remains about 445°F. A controlled flow of non-combustible SynGas produced by the BioGas or SynGas Converter (9), regulates the ambient temperature of the engine's Turbine (10c), in which the turbine's blades drive a shaft connected to Power Generator (3) to produce electrical power. From the engine's Hot Section (10b), and Turbine (10c), gases exit and expand through the engine's exhaust nozzle, then into the Cooling Section (12) where the exhaust temperature is reduced to about 265°F. Within the Cold Section (13), water vapor absorbs any Waste Heat (14) that is reduced to about 87°F, which is ejected into the atmosphere. Not shown in the schematic (for clarity) are feedback loops carrying extracted heat and unburnt gases into the engine's combustion chamber – Hot Section (10b), for reburning.



# LANGENBURG

*technologies.llc*



Creating the Future with the Power of Water™



# Foodservice Output

Focusing on creating ready to eat (RT D) liquid products derived from coconut, and other fruits & vegetables -- intercropped and certified as organic, kosher and halal.



All-natural ingredients processed sustainability and within food safety guidelines for export to USA, EU, Australia

# Consumer Output

## Coconut Drinkable Yoghurt



## 100% Fruit Juice & Puree



## Vegetable Soups



# Consumer Output

Coconut Cream



Coffee Creamer



Coconut Milk Beverage



# Consumer Output

## Coconut Flour



## Shakes & Smoothies



## Coconut Milk



# RECAP

## Modernizing Philippine Agriculture

The ultimate in flexible liquid processing technology

Sustainable agriculture designed to benefit the farmers and Indigenous Peoples

Green energy solution which is carbon negative

Low Waste consumer packaging

Aseptic foodservice dispensing units

Completely scalable model that can be placed anywhere





Total Project Cost Per Location  
\$55,000,000

All-Cash IRR 39.6%

Leveraged IRR 29.4%



Revenues	100,030,577
Cost of Good Sold	46,490,118
Gross Profit	48,538,930
Total Operating Expenses	10,594,343
EBITDA	42,923,586
Operating Income (EBIT)	37,944,586
Net Income	30,736,314



**OBRA PALMA**



**Thank You**

**Project Agri-Chain**