the
gaia
project
red

5000

Community

Two batches

Nestlé
Nestlé
CERELAC
Banana
Just add water
NUTRITIONALLY COMPLETE
From 7 months
Nestlé
NIDO
INSTANT FULL CREAM MILK POWDER
Protein
Protéines
Proteínas
Calcium
Calcium
Cálcio
Vitamins
Vitamines
Vitaminas
75%

Transport

Livelihood

MILK

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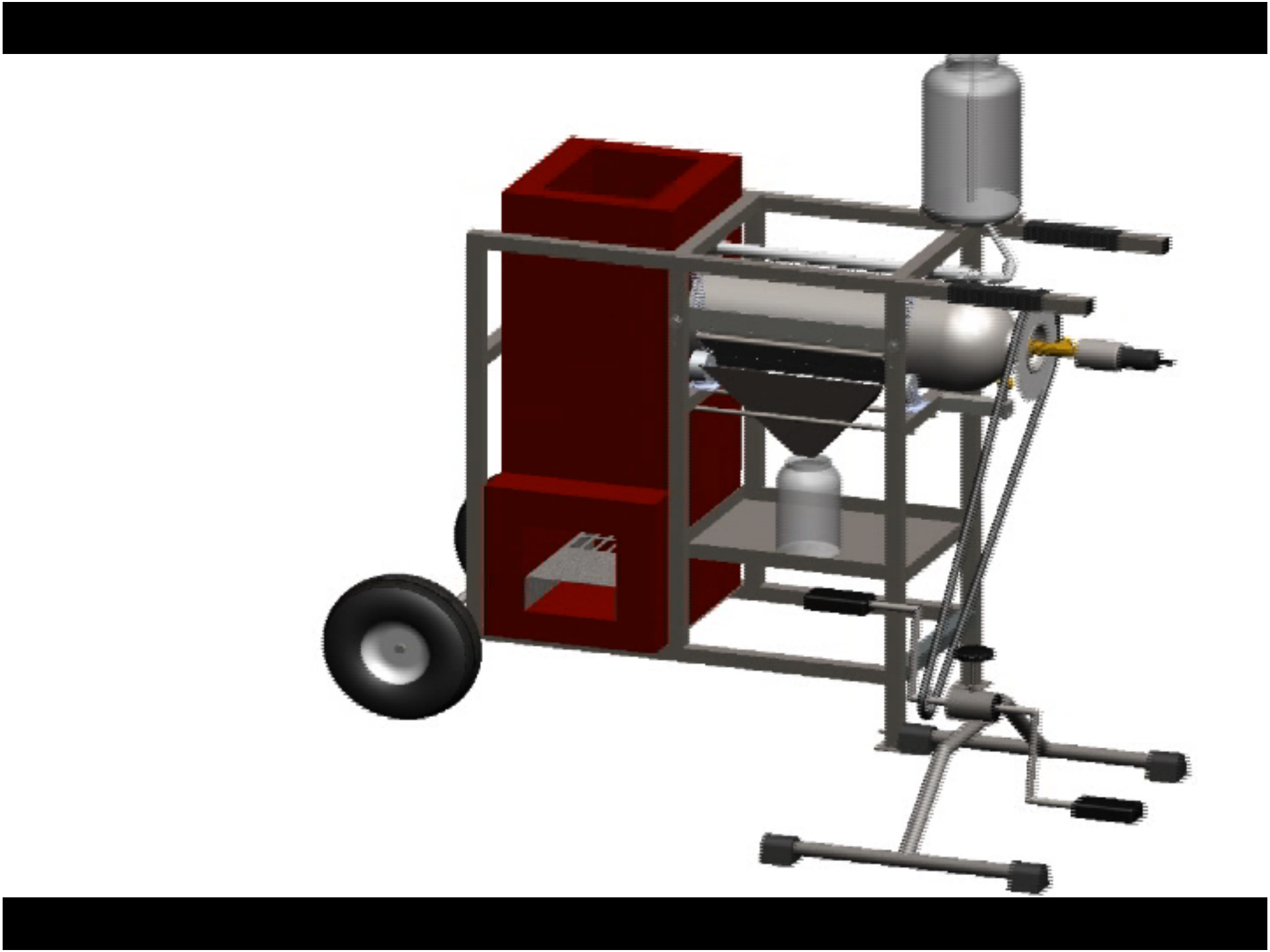
gaia
milk dryer



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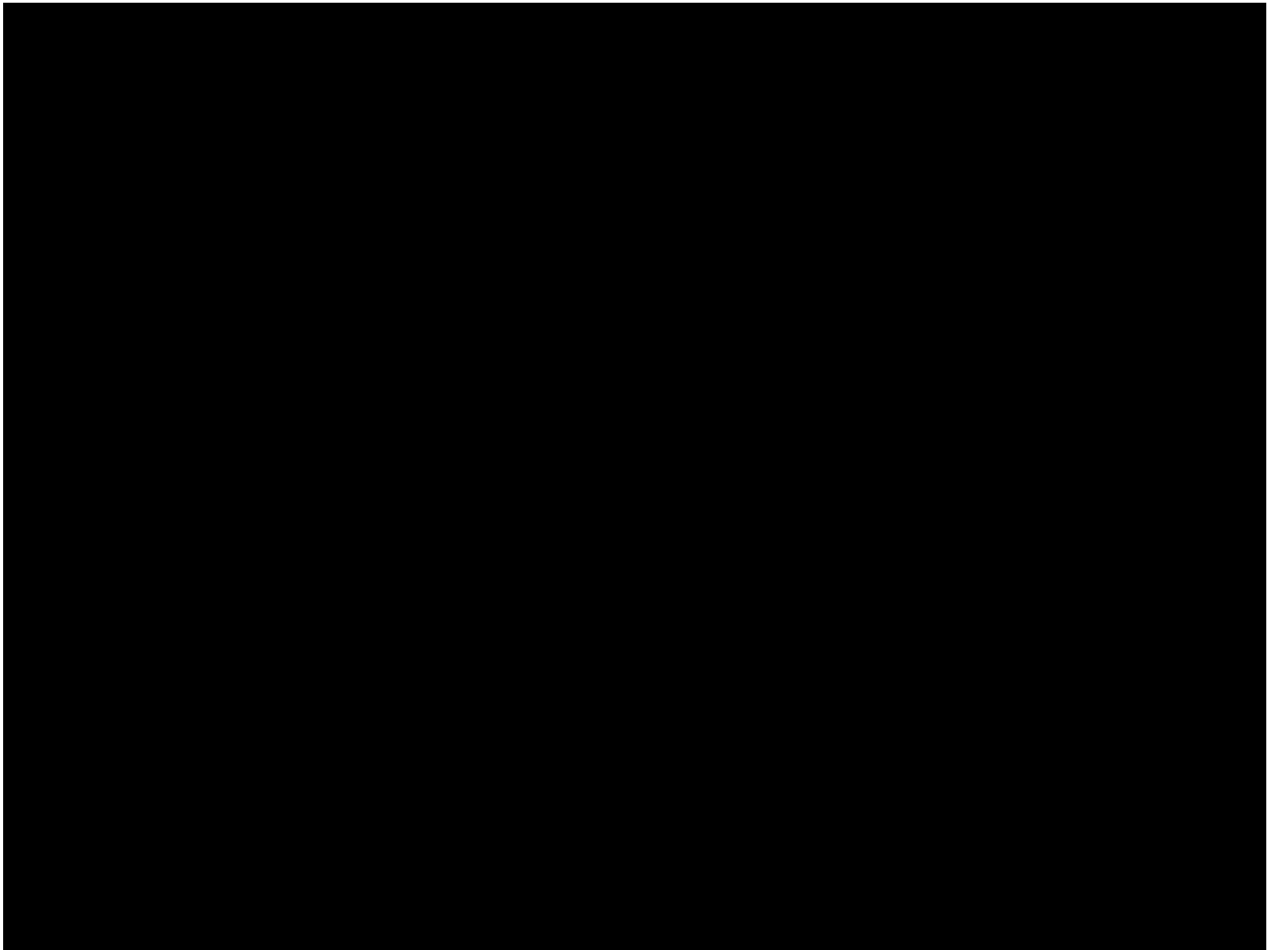

The scraper needs additional iterations

Testing in tropical environments

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POPULATION

2.5 BILLION Farmers Worldwide

900M Dairy Farmers

250M Rural Dairy Farmers

5K Guyanese Rural Dairy Farmers

8K – 5M USD

Large scale options are

too expensive

Locals rely on

commercial imports

Our small scale approach empowers rural communities and stimulates local economies

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Average dairy farmers make 3.27 USD/day

Our product would allow them to make 4.10 USD/day
(26 % increase)

Our product pays for itself in 2 months

200 USD to manufacture

Selling for 40 USD/unit

Fixed donations 45,000 USD/yr

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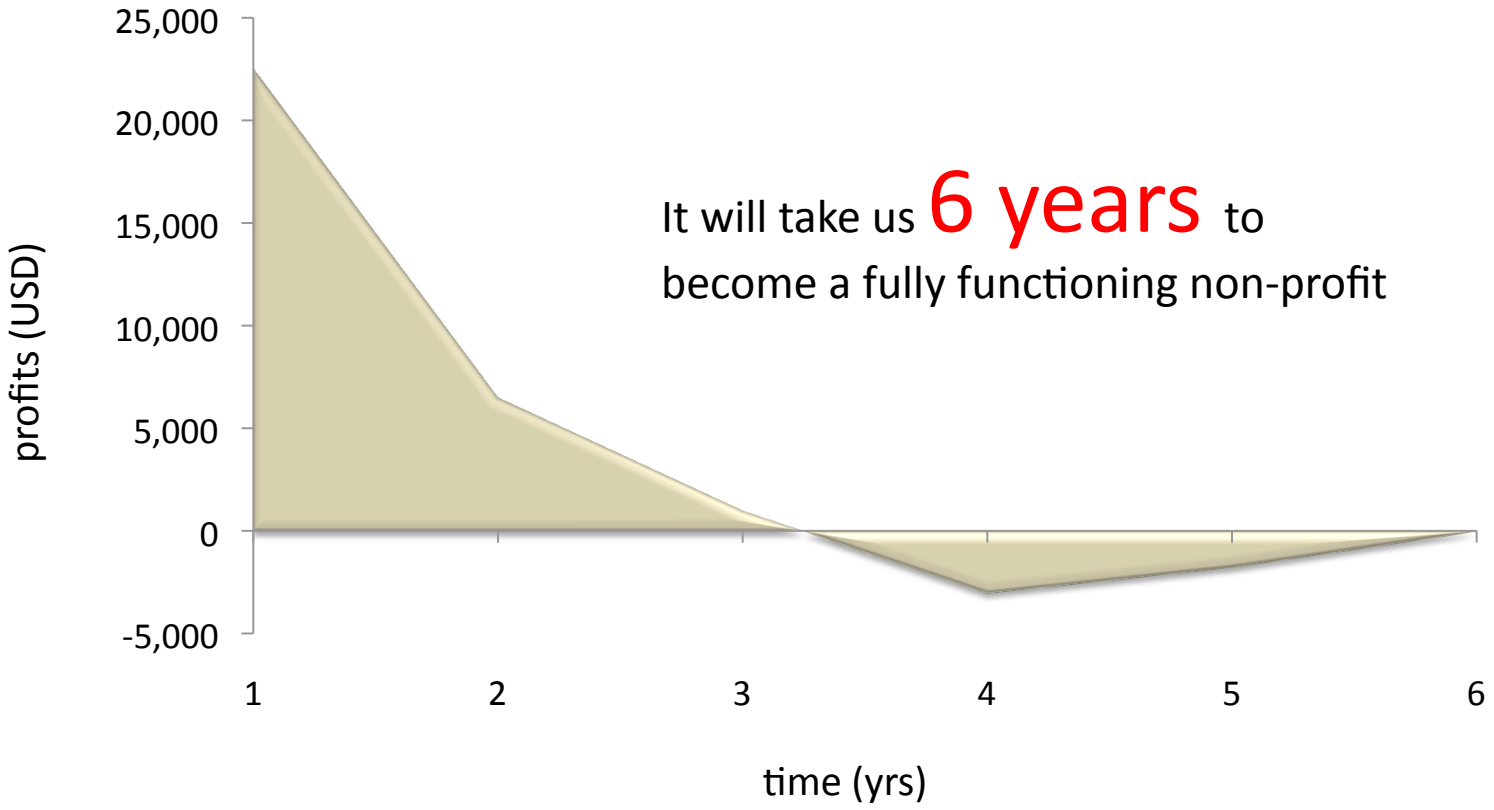
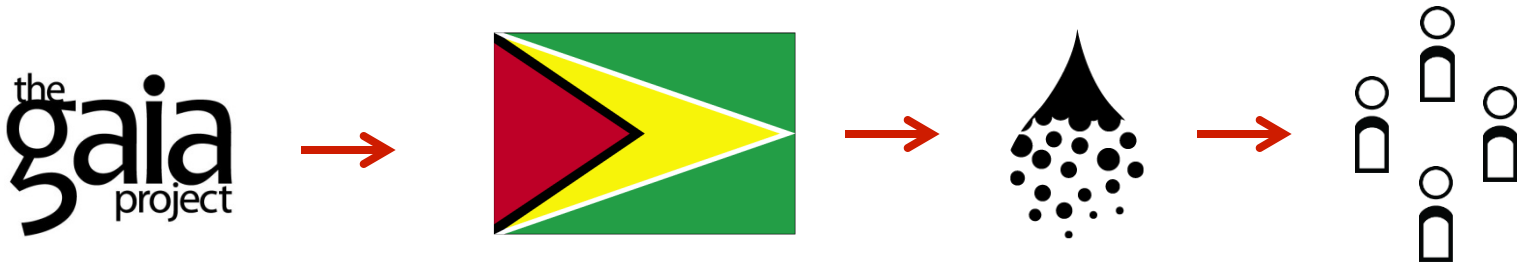
Projected Subsidized Profit





Potential NGO Partners

Guyanese Rural Women's Network
Habitat for Humanity
St. Francis Community Developers

Impact

Special Thanks

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James Dudley
Conrad and Candace Wilson
Chevalley Duhart
Judith Anderson
Jose Gomez-Marquez

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Chiedozie Okafor
Wiki master

Jasmine Florentine
System integrator

Juan Valdez
Information officer

Maia Bageant

Michael Dobson
Safety officer

Q Harris
Financial officer

Thi Tran

Travis Hery

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Financial officer

Michael Fraser
Safety officer

Moji Jimoh
Public relations

Stephan Hawthorne
System integrator

Tim Grejtak

Tommy Ciesielski
Tool officer

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Reference Slides

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Selling price for GAIA milk is less than 1/2
of the price for store bought powdered milk

Our product would process ~2 gallons of milk/hour

Typical Guyanese farmer has 6-8 cows

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Price/gallon [GSD(USD)]:

Liquid milk

413.99 (2.07)

Nestle powdered milk

902.69 (4.51)

GAIA milk

361.08 (1.81)

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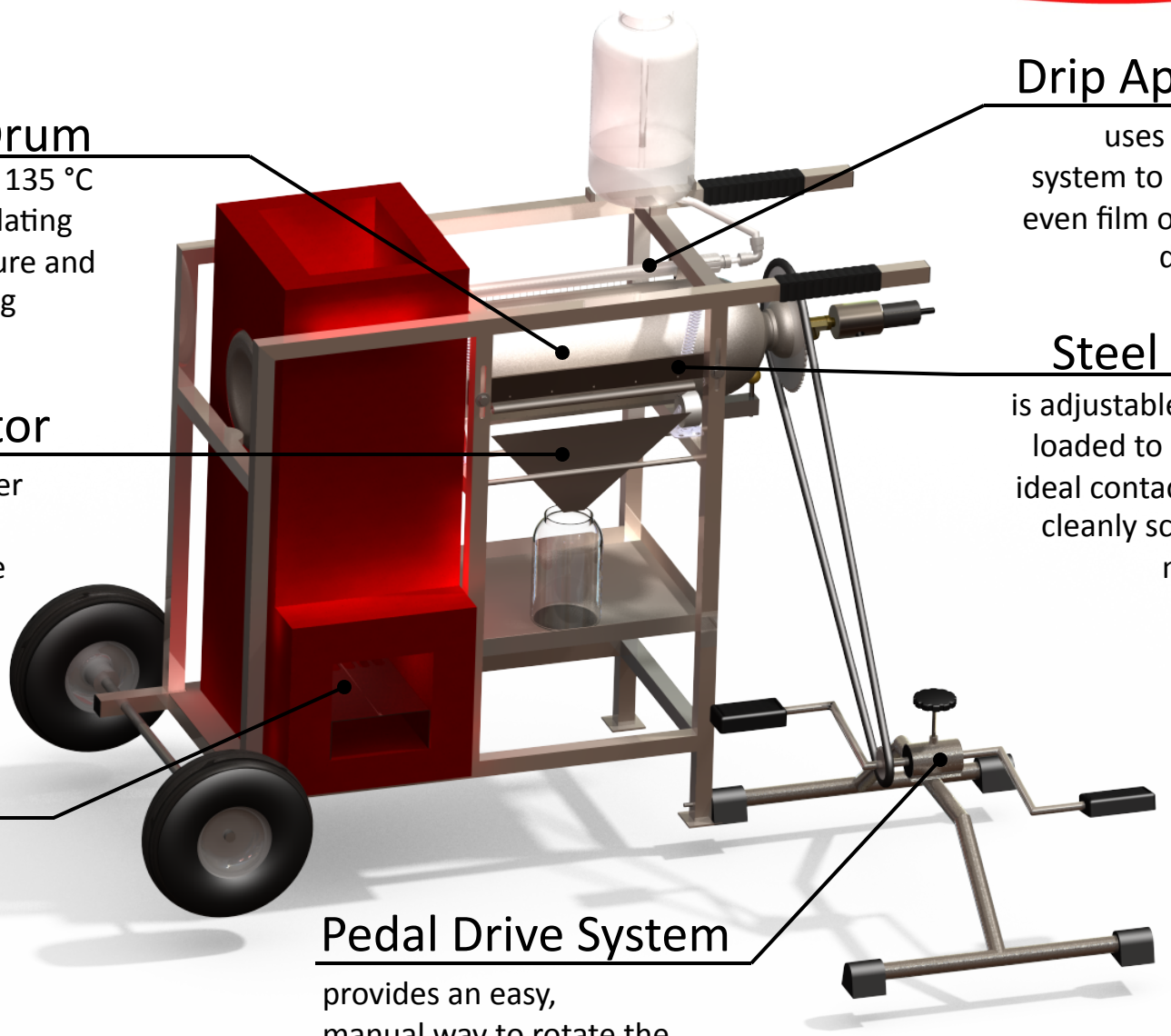

Pressurized Drum

maintains a constant 135 °C temperature by regulating internal steam pressure and also acts as our drying surface

Drip Applicator

uses a gravity fed system to apply a thin, even film of milk to the drum surface

Steel Scraper

is adjustable and spring loaded to maintain an ideal contact angle and cleanly scrape off the milk powder

Funnel Collector

directs the milk powder into a collecting unit and shields it from the outside environment

Rocket Stove

made of concrete, provides efficient heat transfer from the fire to the drum

Pedal Drive System

provides an easy, manual way to rotate the drum and power the drying process