

**FROM
CHAOS
TO
CLARITY**

**2023 ANNUAL REPORT
WILFRID LAURIER UNIVERSITY**

We would like to acknowledge that Wilfrid Laurier University and its campuses are located on the Haldimand tract, traditional territory of the Neutral, Anishnaabe, and Haudenosaunee peoples.

THE ROOT OF THE PROBLEMS

INDIGENOUS HOUSING IN CANADA

CHAOS for Indigenous communities in the NWT

HOUSING CONDITIONS ARE UNACCEPTABLE

42.7% INDIGENOUS HOUSEHOLDS in the Northwest Territories fail to meet at least one of the national housing standards

HOUSING IS UNAFFORDABLE

Typical cost of single-family home in a remote community **UP TO \$900K**

HOUSING IS UNSUITABLE

25.8% of Indigenous people live in overcrowded conditions

HOUSING IS INADEQUATE

28% of Indigenous people are living in homes in need of major repairs

COMMUNITIES FACE LOGISTICAL CONSTRAINTS

36% of communities accessible ONLY by air

COMMUNITY EMPLOYMENT RATES ARE LOW

35.1% of Indigenous people are unemployed

CAMEL MILK IN EAST AFRICA

CHAOS for East Africa's dairy farmers

CLIMATE CHANGE IS LEADING TO MORE SEVERE AND PROLONGED DROUGHTS

71% of cattle farmers are switching to more drought resistant camels

RAW CAMEL MILK CARRIES DISEASES

Raw milk from East African camels can contain a number of **harmful pathogens**, including MERS - 10x deadlier and faster spreading than COVID-19

UP TO 90% of farmers sell their milk **raw** through the informal unregulated market

HIGHEST GLOBAL INCIDENCE OF ILL HEALTH

East Africa has the **highest DALY** in the world - loss of 1250 years/100,000 due to milk-borne disease

CURRENT SOLUTIONS ARE LACKING

Milk kiosks boil the milk **3X** before selling causing the milk to **lose taste** and **nutritional value**

CUTTING THROUGH THE CHAOS...

By actively listening to understand the root causes of these issues we were able

... TO GET TO CLARITY



KUPONYA INNOVATIONS

Healing climate and community through housing

Kuponya Innovations is building tiny homes in northern Indigenous communities using sustainable materials and practices, and employing local residents to build capacity and economic prosperity.

SAFI

Bringing safe milk to East Africa and improving the livelihood of farmers

Safi is enabling East African families to have access to safe and nutritious milk through a cost-effective and easy-to-use pasteurization handle for farmers - reducing the risk of milk-borne diseases.

ENTREPRENEURIAL LEADERSHIP

NEEDS

- Sustainable housing that respects the land
- Homes that are resilient to climate impacts
- Energy efficiency and self-sufficiency
- Quick construction for short building season
- Meet/exceed minimum housing standards for adequacy (condition), suitability (family size) and affordability (capital and operating costs)
- Build capacity in impacted communities

OPPORTUNITIES

- Use sustainable materials to reduce climate impacts
- Innovate in ways that build climate resiliency
- Replace fossil fuels with renewable energy sources
- Utilize materials that assemble quickly, don't require expensive labour, and lower operating costs
- Provide transitional housing to alleviate overcrowding
- Build for quality *and* affordability
- Employ local labour and train to build marketable skills

We saw the need and opportunity for a **SUSTAINABLE** solution to this **COMPLEX** problem

USE OF BUSINESS PRINCIPLES

UNIQUE VALUE PROPOSITION

For communities that seek affordable, sustainable housing solutions, Kuponya is innovating new applications for tiny homes using SIP construction that makes quality housing more accessible.

BUSINESS MODEL

- **Joint venture** business model - working with communities to adjust to local needs and create economic growth within the community
- Small initial margin focusing on impact, scaling in other markets to drive cost reductions

GO-TO-MARKET STRATEGY

- Targeting remote northern Indigenous communities
- Starting with a model home in accessible location - **August 2023**
- Followed by pilot home in remote community - **Spring 2024**

SUPPLY CHAIN STRATEGY

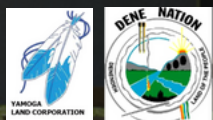
- Choose suppliers either local or close to NWT
- Flat pack all housing components in sea cans
- Fill extra space with items the community needs and backhaul recyclables to help clean up the community

PLANS TO SCALE

- Strong interest received from 3 other communities in NWT + Nunavut looking to pilot in Fall 2024
- Replicate across Canada in First Nations, Métis and Inuit communities
- Staff housing for medical facilities in NWT
- Work with UN to support other vulnerable communities
- Mainstream construction and B2C market

STRATEGIC PARTNERS

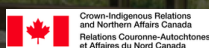
Indigenous Org'ns



Key Suppliers



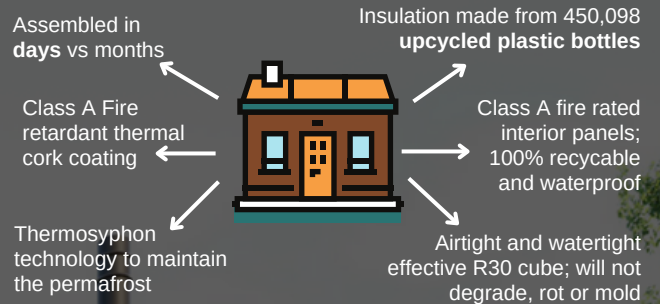
Government



INNOVATION

HOUSING INNOVATIONS 'IN A BOX'

- All components arrive together for quick assembly within short northern construction season



BUILDING CAPACITY IN THE COMMUNITY

- Residents will be trained to build and maintain their own homes, with minimum 50% local labour on each build

SUSTAINABLE POSITIVE IMPACT

People	Model and Pilot	2024/25
Households provided with housing	2	20
Green jobs	6	+40
Planet		
Waste Eliminated	<ul style="list-style-type: none"> • Up to 8,000 pounds (SIPs vs Stickbuild) • 450,098 plastic bottles upcycled per home 	
CO2 Reduced	<ul style="list-style-type: none"> • 45% less emissions (SIPs vs Stickbuild) • 92.85% reduction (Tiny vs Avg.) 	
Energy Saved	<ul style="list-style-type: none"> • 1/3 less energy consumed (SIPs vs Stickbuild) • Consumes 7% of electricity (Tiny vs Avg.) 	
Prosperity	Model and Pilot	2024/25
Projected Revenue	\$600,000	\$6.6M
Funding Received this Year		
\$10,771 direct funding		

KUPONYA INNOVATIONS CONTRIBUTES TO THE FOLLOWING UN SDGS:



ENTREPRENEURIAL LEADERSHIP

NEEDS

- Reduce the spread of deadly milk-borne diseases
- Extend the life of the milk so that it doesn't spoil and get rejected, resulting in lost income to farmers
- Find replacement for existing pasteurization units that are too large, expensive, require power, and extensive training
- Increase the value of milk earlier in the value chain to empower rural farmers

OPPORTUNITIES

- Create an easy, affordable way to pasteurize milk at the farmer level to reduce spread of diseases
- Decrease wasted milk due to spoilage
- Reduce energy use and expense for the kiosks
- Increase revenue for the kiosks by selling safe, pasteurized milk
- Provide milk that tastes better, lasts longer, and has higher nutrients

We saw the need and the opportunity for a **SIMPLE** solution to this **COMPLEX** problem

USE OF BUSINESS PRINCIPLES

UNIQUE VALUE PROPOSITION

For dairy stakeholders that seek a practical and affordable way to pasteurize milk for health and economic reasons. Safi has created a simple pasteurization solution that anyone can use, without access to expensive electricity and industrial experience.

BUSINESS MODEL

- B2B model, selling directly to milk cooperatives

11 MILK CO-OPS will distribute the Safi handle to individual farmers and finance the initial upfront cost

GO-TO-MARKET STRATEGY

- Pilot with 302 farmers in **Fall 2023** in Rwanda with support of the Ministry of Agriculture
- Integrate across all 10 IAKIB collection centres = **4,706 farmers** in 2024



PLANS TO SCALE

- Scale to Kenya, Tanzania and Uganda
- Scale across all of East Africa, Pakistan and India
- Working with the New York Farm Bureau to implement an electric version of handle in New York state for small rural farmers

STRATEGIC PARTNERS



SAFI CONTRIBUTES TO THE FOLLOWING UN SDGS:



INNOVATION

A SIMPLE BUT INNOVATIVE SOLUTION

Unit is compact, extremely light, does not require power, and is simple to use

Can pasteurize a small farmer's daily yield in approx. 3 minutes

Use any existing heat source

Made from food-grade stainless steel

Handle height and width is adjustable to fit any sized pot

Proprietary colour-coded LED display that indicates when pasteurization conditions have been met

2 VERSIONS

- Mechanical hand-crank with solar powered LED lights
- Motorized whisk with built-in heating component

SUSTAINABLE POSITIVE IMPACT

People	Pilot	1 year
Agreements with 2 milk cooperatives • IAKIB and Kibirizi	302 farmers	4,706 farmers
Rwanda National Dairy Platform distributing to kiosks		1,132 kiosk operators
Planet		
67% less coal and gas used by farmers AND 10% less milk wasted		
67% less electricity used by kiosks		
Prosperity		
Revenue from 302 handle pilot	\$4,530	
Revenue from 4,706 farmers		\$70,590
Revenue from 1,132 kiosks		\$56,600
Payback Period for Farmers 15.9 days / for Kiosks 3.4 days		
Funding Received this Year		
\$12,000 direct funding + \$37,000 in in-kind support = \$49,000		

MEET OUR TEAM



Jordan Prentice
Kuponya Founder
Competitions Team



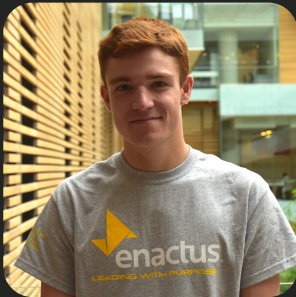
Alya Najla
VP Marketing
Competitions Team



Miraal Kabir
Safi Co-Founder
Competitions Team



Huzaifa Saeed
VP Competitions
Competitions Team



Zander Smith
President



Laura Allan
Faculty Advisor



Daria Margarit
Safi Co-Founder



Martin Turuta
Safi Co-Founder



Vandan Thacker
Videographer

Alex Mather-Pedro
VP Human Resources
Graphic Designer

