



HANNY G CASE STUDY

Transforming Cooking in Tanzania
with Clean Energy Innovation



September 2025



Contents

1.	MARKET OPPORTUNITY	03
2.	COMPANY INTRODUCTION	05
3.	COMPANY OVERVIEW	07
4.	CUSTOMER SPOTLIGHT	11
5.	GROWTH JOURNEY	13
6.	IMPACT	15
7.	FUTURE PLANS	16

Figure 1:	Growing market opportunity for alternative cooking fuels	03
Figure 2:	Adoption of clean fuels and technologies for cooking (% of population) - Tanzania	04
Figure 3:	Hanny G customer segmentation	05
Figure 4:	Hanny G's development impact	05
Figure 5:	Hanny G supply chain	08
Figure 6:	Business model comparisons	09
Figure 7:	Timeline of key milestones	13



Energy source:
biomass

1. Market opportunity

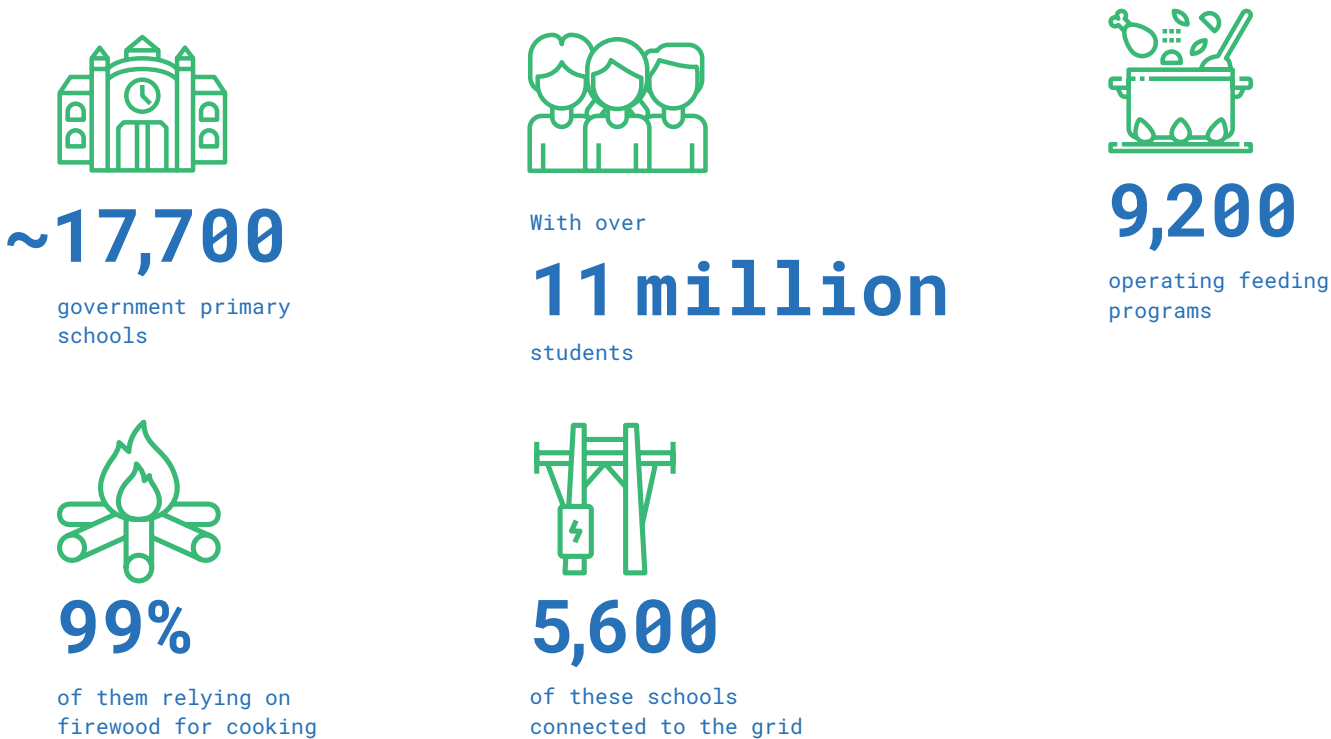
The persistent reliance on traditional fuels

Over 90% of Tanzanian households, schools and rural enterprises rely on traditional fuels such as firewood and charcoal for cooking and heating, despite 80% of the population having access to electricity¹.

There are ~18,000 government primary schools in Tanzania, over 50% of which run feeding programs, nearly all relying on firewood for cooking. This is a large untapped market as educational institutions require affordable, clean fuel alternatives, primarily driven by regulations limiting the use of traditional fuels. Additionally, 5,600 of these schools are already connected to the grid, creating an opportunity to shift to electric cooking (E-cooking).

The reliance on traditional cooking fuels has severe health and social consequences, particularly for women and children. Indoor air pollution (IAP) from firewood and charcoal is a leading cause of respiratory diseases, disproportionately impacting women as they make up majority of kitchen staff in households and institutions while also contributing to environmental degradation and deforestation.

Figure 1: Growing market opportunity for alternative cooking fuels²



¹ UNDP, Driving Efficiency: Propelling Tanzania’s Clean Cooking Revolution, [link](#); The Citizen, Shifting the heat: Tanzania’s push toward clean cooking gains momentum, [link](#)

² Clean Cooking Alliance, Development of Communication Materials for Clean Cooking Transition in Schools in Tanzania, [link](#)

An evolving regulatory landscape

The clean cooking sector in Tanzania is gradually expanding, supported by increased private sector involvement and government initiatives such as the National Strategy for Clean Cooking Energy (NSCCE). The NSCCE aims to increase clean cooking adoption to 80% by 2034³. The strategy outlines several key initiatives to accelerate that adoption, notably:

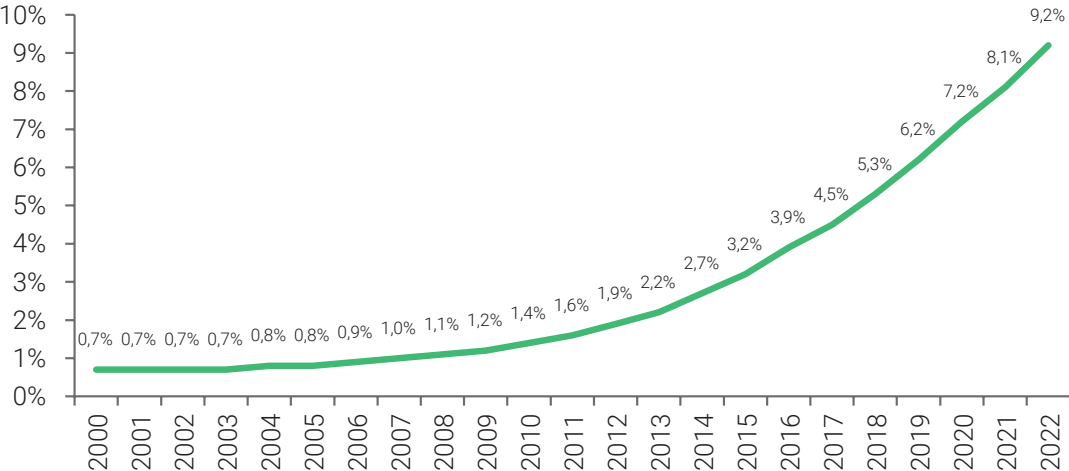
- **Tax and fee reductions:** A planned decrease in taxes and fees on clean cooking energy, appliances, and efficient stoves by June 2026.
- **Restriction on traditional fuels use:** A ban on firewood and charcoal for institutions serving over 100 people.

Measures such as these not only serve to create markets in the B2B market segment but also enhance the affordability of products such as briquettes and cookstoves, widening access to products while growing the total addressable market.

A future based on sustainability and access to clean energy

One innovative and sustainable clean cooking solution is briquettes – an affordable and eco-friendly alternative to firewood made from biomass waste that burns more efficiently. Several initiatives and government efforts promote the use of clean cooking fuels and solutions such as electricity, liquefied petroleum gas (LPG), ethanol, biomass pellets or briquettes, and improved cookstoves. However, most of these initiatives such as Tanzania Improved Cookstoves (TICS) program are more curated towards households, leaving the institutions and businesses segment largely underserved⁴. Most cookstoves and cylinders are designed for small-scale, or households use, and similarly, most of the fuel supplied in the market is tailored to this segment.

Figure 2: Adoption of clean fuels and technologies for cooking (% of population) - Tanzania⁵



³ Ministry of Energy, National Clean Cooking Strategy, [link](#); The Citizen, Inside Tanzania’s Sh4.6 trillion clean cooking energy plan, [link](#)

⁴ SNV, Tanzania Improved Cookstoves (TICS) Programme, [link](#)

⁵ World Bank Group – Data, [link](#)

2. Company introduction

Empowering communities through sustainable energy

Founded in 2016 by Hanny Mbaria and George Swai, Hanny G is a women-led, locally founded company based in Arusha, Tanzania, with two production plants (Arusha and Mafinga). To date, Hanny G has supplied its briquettes, Kuni Poa, to over 3,000 customers. It also supplies improved cookstoves for institutional use. The company operates a B2B model, serving primarily educational institutions.

Figure 3: Hanny G customer segmentation⁶

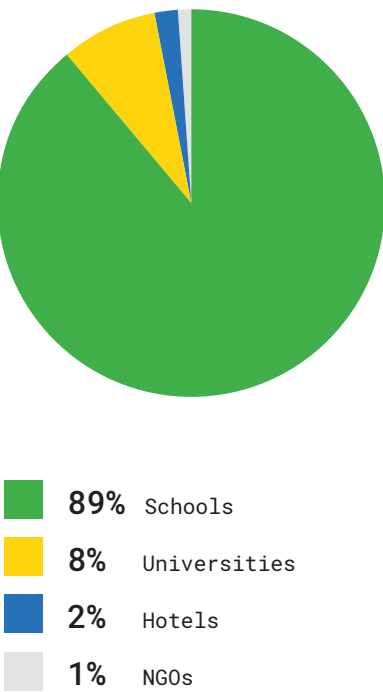


Figure 4: Hanny G’s development impact⁷

	Hanny G's solutions drive cost efficiency, especially in rural areas, reducing institutions' expenses by at least 30%, contributing to indirect poverty reduction		Institutions rely on Kuni Poa briquettes as a sustainable and cost-effective cooking fuel. These briquettes support an inclusive clean energy transition by benefitting women, the primary cooks in households and institutions. ~27K tonnes of briquettes have been sold to date
	Hanny G's briquettes provide a cleaner, more efficient fuel, minimising smoke inhalation and reducing respiratory health risks for kitchen staff working in the institutions served		All briquettes are produced through waste repurposing and sustainable production practices. Types of waste used include sawdust, coffee husk, rice husk, groundnut shells and sugarcane bagasse
	Over 75% of Hanny G's workforce, including leadership roles, comprises of women		Estimates suggest that replacing firewood and charcoal as a cooking fuel can reduce up to eight tonnes of CO ₂ emissions per household/year

⁶ Hanny G's documents
⁷ Hanny G's documents and consultations

Hanny G's two product offerings tackle critical pain points, including:

- **High fuel costs:** From 2020 to 2022, kerosene prices surged nearly 60%, disproportionately impacting rural households and institutions as they have limited disposable income/savings to cover price hikes⁸.
- **Health risks:** Indoor air pollution from traditional biomass fuels is a leading cause of respiratory diseases in rural Tanzania, home to 63% of the population⁹.
- **Safety concerns:** Firewood burns intensely, increasing the risk of kitchen accidents, whereas briquettes provide a steady, controlled flame for safer cooking.
- **Cooking inefficiencies:** Certain alternative cooking fuels such as LPG have poor heat distribution, especially at a large cooking scale, leading to uneven cooking or burnt food.



Kuni Poa briquettes in action:
delivering safer, cleaner cooking for
Tanzanian schools.

⁸ Bank of Tanzania, [link](#)

⁹ World Bank data, *Rural population (% of total population) – Tanzania*, [link](#)

Note: International Organization for Standardization (ISO) standards are internationally recognised guidelines that ensure quality, safety, efficiency, and interoperability across industries

3. Company overview

Addressing market needs with impact-driven solutions

Hanny G's solutions include efficient, tier 3-4 International Organization for Standardization (ISO) standard rated clean cookstoves (according to official testing results) designed for institutional use and briquettes/pellets produced from agricultural and industrial waste¹⁰.

The company employs an integrated "tool-and-fuel" business model that pairs efficient cookstoves with its briquettes. This model is supported by a Pay-As-You-Go (PAYGO) system, lowering upfront costs and increasing adoption among low-income customers, ultimately accelerating the shift toward cleaner, more efficient cooking solutions.



Jiko Poa (efficient cookstove):

- Optimised for Kuni Poa briquettes but can also use firewood or charcoal in locations outside Kuni Poa service areas.
- Rated Tier 3-4 with thermal efficiency >30-40%
- 2-year warranty offered.
- Available in sizes ranging from 100L-600L, priced between approximately USD 450-1,600.
- **4,200 institutional stoves sold** from 2020 to date.
- Contributes to 20% of revenues.



Kuni Poa (briquettes / pellets):

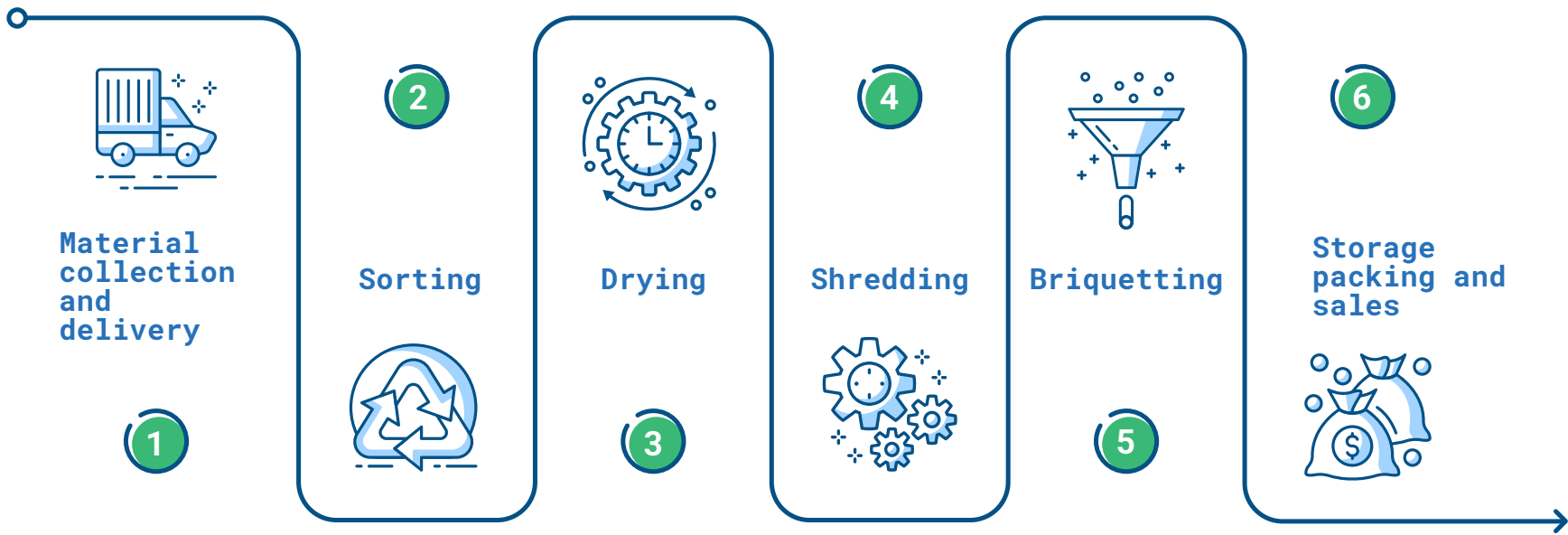
- Designed to burn longer and more efficiently, with minimal smoke emissions.
- Sold in 25kg bags at USD 0.11 per kg, considerably cheaper than charcoal or Liquefied Petroleum Gas (LPG).
- **26,700 tonnes of briquettes sold** from 2020 to date.
- Contributes to 80% of revenues.

¹⁰ According to official testing results with the Kenya Industrial Research and Development Institute

Delivering value through a robust supply chain network

Hanny G produces briquettes primarily from sawdust due to its consistent quality and year-round availability (mainly collected from plantation forests). Other materials like bagasse, coffee husks, and rice husks can also be used. Once raw materials are collected, they undergo sorting, drying, shredding, briquetting, and bagging before being stored and distributed. Products are sold primarily through Hanny G’s sales shop in Arusha and retail shops, with plans to ultimately outsource retail sales through agents operating under Hanny G’s brand.

Figure 5: Hanny G supply chain¹¹



¹¹ Hanny G’s documents

Innovative and integrated business model

The PAYGO lease-to-own model used by Hanny G is an innovative approach that seamlessly integrates stove costs into the briquette purchases, ensuring affordability through competitive pricing, while driving long-term product adoption. After the lease period and upon fulfilling the agreed consumption levels, customers gain full ownership of the stoves. The payment collection cycle varies on a case-by-case basis, but the standard plan is a six-instalment payment plan with a tied-in minimum briquette supply contract.

To enhance customer experience and maximise retention rates (currently above 70%), Hanny G provides a two-year warranty on institutional stoves that allow customers to have access to free stove repairs by trained engineers and free swaps. Additional measures include frequent surveys, training sessions, and the operation of a toll-free customer care hotline. Hanny G has also leveraged partnerships to increase the adoption of its clean cooking solutions, such as its collaboration with UNCDF (United Nations Capital Development Fund) to supply briquettes and stoves to 17 schools in

Kigoma, ultimately converting them into long-term customers. A second collaboration with UNCDF, which provided subsidies across five regions (Dar es Salaam, Morogoro, Pwani, Dodoma, and Mwanza), allowed Hanny G to supply clean cooking solutions to over 100+ schools in these regions.

Overall, Hanny G’s model makes clean cooking solutions more accessible for schools, especially in rural areas, offering a more affordable alternative fuel to options like LPG.



Business model employed by Hanny G

¹² MECS, *Clean cooking: financing appliances for end users*, [link](#)

Figure 6: Business model comparisons¹²

Models	Description	Cooking technology / appliance type applicable
Cash and carry	In the cash & carry model, customers pay 100% of the cost of the appliance upfront	EPCs, induction stoves, hot plates, LPG, bioethanol, biodigesters, biomass gasifiers, improved biomass cookstoves
Layaway Savings	Customers reserve appliances and build up savings to pay for them, typically over 1 to 6 months	EPCs, induction stoves, hot plates, bioethanol
Third party financing partnerships	Clean cooking companies partner with local financing institutions to finance the sales of the stoves	LPG, bioethanol, biodigesters, biomass gasifiers, improved biomass cookstoves
PAYGO	The PAYGO technology removes the upfront price barrier of the cooking kit, by allowing end users to pay a small deposit, or none at all, followed by affordable installments over time	EPCs, induction stoves, LPG, biodigesters, biomass gasifiers
Asset financing	Asset financiers provide loans for household and productive use equipment, including clean cooking	EPCs, LPG
Razor and Blades	In the razor and blades model, a product such as a clean cookstove is sold at a discounted or zero price in order to increase sales of the complementary product such as fuel for the stove	Biomass gasifiers
On-bill Financing (not yet piloted)	The devices are financed on the balance sheet of the utility and the repayments are collected through the utility bill	EPCs, induction stoves, hot plates

Operational challenges and mitigation strategies

- One of the key challenges Hanny G faces are delayed or defaulted payments from their customers, most of whom are government-funded. While public schools often have budgets for firewood (which can be reallocated to briquettes), they typically lack funds for efficient stoves, which are essential for optimal briquette use.
- Another challenge is the inconsistent and improper use of efficient stoves by schools. While stoves are designed to be used with briquettes, some schools eventually abandon use of the cooking stoves (due to lack of briquettes or repair challenges) or use traditional fuels as the energy source for the stoves, causing damages to the stoves. This leads to underutilisation of the cooking solutions and frequent repairs on the stoves under the warranty, increasing costs and reducing margins.
- Hanny G also faces logistics challenges. With customers spread out across the country, the company relies on third-party distributors which raises costs and poses risks to the integrity of the briquettes as they can easily be contaminated during transit if not properly handled.

Mitigation:

Hanny G expanded its customer base to include more private schools as they have shorter payback periods, shifting from over 90% of public clients to 70-75% today. For private schools, Hanny G enforces a payment deadline of two months, after which supply is halted if instalments have not been received. The company also encourages cash payments to improve cash flows. Furthermore, the Tanzanian government has introduced an E-procurement system in 2023 called NEST, allowing Hanny G to bid for contracts through the platform with the assurance that payment will be received. These approaches and solutions have shortened the average payback period from over one year to two months.

Mitigation:

Hanny G continues to raise awareness on the proper use of the stoves and briquettes and encourages customers to purchase briquettes in bulk to lock in long-term use. Additionally, Hanny G has redesigned their stoves to minimise the damage of using traditional fuels on their product while offering a 2-year warranty period to allow for long-term use of their solutions.

Mitigation:

Hanny G ensures to sign an agreement with the distributors before each delivery confirming that the briquettes will not be transported with any other packages. The company also provides training to the distributors on proper handling of the briquettes to improve their awareness. Furthermore, by encouraging customers to purchase the briquettes in bulk, Hanny G is able to mitigate the cost and complexity challenges involves with regular deliveries to customers.



Operational resilience: Hanny G’s stove and briquette solutions adapted for real-world challenges.

4. Customer spotlight

Customer 1

a teacher's college in Eastern Tanzania that has been using Kuni Poa to cook meals for students and staff, the impact of which has been better quality meals and a safer kitchen environment.

"Now, when you enter the kitchen, our cooks work in a neat and presentable environment. Even the flame that burns in the kitchen is efficient, contributing to better health and working conditions in our kitchen." – Deputy Principal

Customer 2

a secondary school in the Morogoro region, has experienced faster meal preparation, reduced smoke-related discomfort and less wastage since they started using Kuni Poa briquettes.

"The Kuni Poa project is truly a game-changer! We now work in a clean and comfortable environment, almost like an office where people work with papers and computers. Cooking is efficient, and we no longer suffer from exhaustion or dealing with overwhelming smoke." – Head Cook

Customer 3

a memorial high school in Morogoro who was able to eliminate excessive smoke and soot buildup in the kitchen with the use of Kuni Poa briquettes, allowing cooks to remain clean and presentable after a full day of work.

"Now that we've switched to Kuni Poa, at least the smoke challenge is gone. We don't get soot, and the cooks remain clean. Even when I finish cooking, I leave clean, and people ask if I am really a cook." – Kitchen staff

Customer 4

a secondary school in Morogoro highlighted that Kuni Poa briquettes helped reduce deforestation, improve environmental conversation, and support the school's commitment to sustainability.

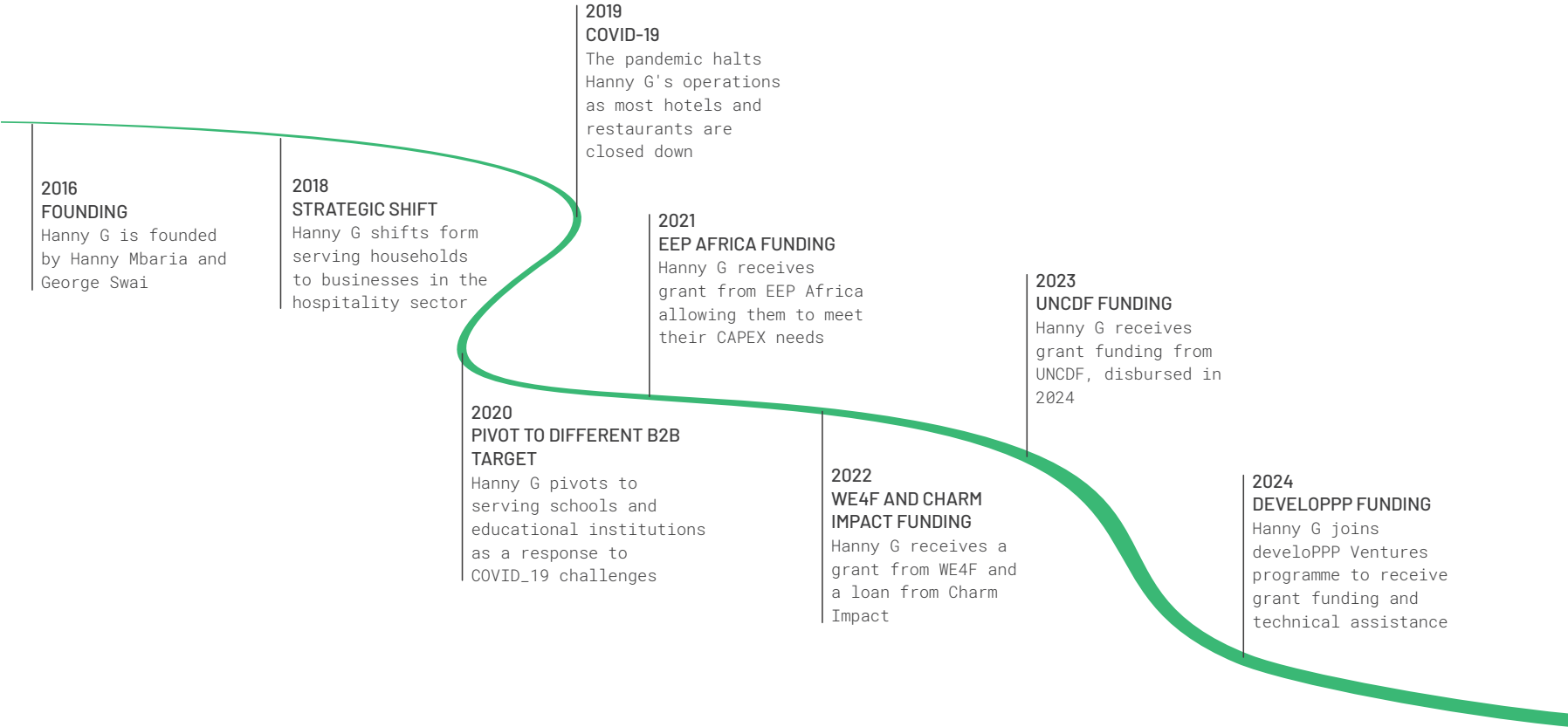
"We fully support the government directive through our partnership with Hanny G, and we are truly grateful for this project. We are committed to maintaining these stoves as they benefit not only our current generation but also future generations. This project contributes to the good of our institution and the nation of Tanzania as a whole." – Principal

5. Growth journey

A strategic pivot

Hanny G began as a B2C enterprise (targeting households); however, following legislation that banned firewood use within the hospitality industry, they quickly pivoted to a B2B model targeting this segment. The COVID-19 pandemic severely disrupted the hospitality and tourism sectors, prompting a strategic shift toward educational institutions, a more resilient and consistent customer base. Recognising the importance of the impact of customer satisfaction in this space, Hanny G adopted a hands-on approach to customer service (i.e. hiring and training cooks to demonstrate the use of the Kuni Poa briquettes and Jiko Poa stoves, offering product training, and operating a toll free customer hotline) – a strategy that has proven successful with a more than 3x growth in sales over the last 3 years and a customer retention of over 70%.

Figure 7: Timeline of key milestones¹³



¹³ Consultations with Hanny G

Powering growth through strategic partnerships

Strategic partnerships played a pivotal role in scaling operations. Since inception, Hanny G has received support from over four institutions (EEP Africa, Water and Energy for Food, Charm Impact, United Nations Capital Development Fund) allowing them to grow their production and customer base to 8 tonnes of briquettes per day and over 500 schools respectively. The company uses a hybrid distribution model with its own fleet of trucks handling 70% of their distribution while the remainder is outsourced to third-party distributors. It currently delivers 800 tonnes of briquettes on average per month, with 70% handled in-house to ensure product integrity. The long-term goal is to fully transition to third-party distribution as product awareness grows.

Strategic partners testimonials

Charm Impact invested in Hanny G in 2022 and has since witnessed a significant 3x growth in monthly revenues over the last 3 years.

“Hanny G is the only company in our portfolio where the female owner holds up to 70% ownership. Clean cooking and cooking fuels make up the largest share of our portfolio, and within that segment, Hanny G is among our strongest companies – I would say in the top three.” – Investment officer

DeveloPPP supported Hanny G in 2024 with grant financing through DeveloPPP ventures, a grant program that selects 5 businesses to support from a pool of over 100 applicants.

“What was most interesting for us about Hanny G is Hanny, she’s a strong and capable female founder who is the driving force behind the business and is committed to building a sustainable and viable business.” – Investment officer

WE4F supported Hanny G from 2021-2023 with grant funding and technical assistance, with Hanny G experiencing double-digit growth in revenues and profitability during this period

“We usually find SMEs very focused on raising funds, Hanny G is different. They were very focused on profitability and building a sustainable business model. During our support period, we saw revenues and profitability grow while still creating community impact.” – Investment officer

Financial scale-up

Hanny G has established a consistently profitable business model, delivering strong financial performance over the years. Between 2020 and 2023, revenues grew by over 40% per annum, with an average net profit margin of 10%. Its scalable business model allows them to serve a large audience without compromising margins, with a positive EBITDA margin of ~25% between 2020 and 2023.



Between 2020 and 2023, revenues grew by over

40%

6. Impact

Empowering rural young women

Hanny G has a strong commitment to gender inclusion (75% of Hanny G employees are women and over 80% of management positions are held by women), reflecting their commitment to fostering economic and social advancement for women in the communities it serves.



75% of Hanny G employees are women

80% of management positions are held by women

Empowering the community at large

Hanny G creates significant economic and social value through job creation and cost savings. It employs over 80 staff at its factory and engages close to 1,500 individuals in raw material collection. Additionally, Hanny G's briquettes enable customers to reduce their fuel costs by 20-30%, with added benefits including lower exposure to harmful air pollution from cooking activities, better cooked meals and time saved through more efficient heat distribution. Ultimately, the use of briquettes drives economic growth within the communities while promoting clean cooking adoption.



Hanny G employs over **80** staff at its factory and engages close to

1,500 individuals in raw material collection



Hanny G's briquettes enable customers to reduce their fuel costs by

20-30%

7. Future plans

Ambitious expansions plans

With <10% adoption of clean cooking solutions across Tanzanian institutions and the push to limit the use of traditional fuels, Hanny G's primary goal is to continue to capture this untapped market (estimates suggest there's at least 5,000 schools still using traditional fuels before adding the number of hospitality institutions that will also be impacted by the regulatory push to clean energy solutions) by continuing to refine its product offering and leveraging strategic partnerships for accelerated growth.

The company is also piloting a new electric stove, Jiko Cool, similar to the current institutional stoves it offers, which will be powered by grid electricity. Aligned with the government's push for electrification, the stoves will offer schools a flexible option to use electric stoves when power is available and traditional ones when it's not. At a later stage, Hanny G plans to explore solar integration as a backup energy source.

Hanny G's future plans do not only involve new products, but new markets with plans to expand beyond Tanzania's mainland and build market presence in Zanzibar. Hanny G's current customer

focus remains on educational institutions, but it plans to expand more into the hospitality space once operations are solidified, supplying at least 3,000 tonnes of briquettes per month.

To ensure scalability, Hanny G aims to fully transition its distribution model to third party retailers, allowing for broader market reach. This will also enable the company to focus on product design and customer service, both clear strengths for Hanny G. In the longer term, Hanny G seeks to expand regionally and is looking to explore the viability of exporting to neighbouring countries.

Enabling future growth

To realise its vision, Hanny G requires strategic support in key areas:

- **Technical assistance and investment readiness:** Assistance in automating operations and preparing investor materials to secure financing.
- **Targeted financing support:** Facilitating funding solutions for schools that lack the budget for clean cooking installations, building on the success of previous partnerships.
- **Infrastructure and equipment expansion:** Investing in larger drying machines to scale up production and meet rising demand.
- **Strategic partnerships:** Forming alliances to support the commercialisation of the electric cookstove and accelerate market adoption.

By securing the right partnerships, technical support, and capital investment, Hanny G is poised to unlock significant market opportunities, catering to a diverse customer base with innovative and accessible clean cooking solutions.

Disclaimer
The views expressed in this publication do not necessarily
reflect the donor governments' official policies.

EEP Africa is hosted and managed by the Nordic Development Fund
(NDF) with funding from Austria, Denmark, Finland, Iceland, NDF,
Norway and Switzerland.

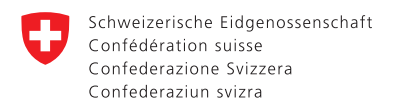
Published by EEP Africa
Nordic Development Fund
Fabianinkatu 34, 00100 Helsinki, FINLAND

info@eepafrica.org
www.eepafrica.org
Copyright © EEP Africa 2025

 Austrian
Development
Cooperation



Government of Iceland
Ministry for Foreign Affairs



Swiss Agency for Development
and Cooperation SDC



eepafrica.org