

Transforming the care economy through impact investing case study:

# Nazava



The Care Economy  
Knowledge Hub

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## FOREWORD

Vital for our society to function, the care economy – domestic work and caring for children, elderly people, and people with disabilities – as it is now, operates as one of the most pervasive structural barriers to women’s economic autonomy and gender equality.

Across the world care work is mostly done by women and girls, who perform three-quarters of unpaid care work. Representing more than 11 percent of total global employment, paid care work is also a significant source of employment, particularly for women. However, these jobs are poorly paid, in positions that fall outside of formal employment structures, and insecure due to ingrained gender and racial biases and the work’s perceived value. The precariousness of paid care work and the unequal distribution of unpaid care work restricts women’s time and mobility, as well as their equal participation in social, economic, and political life. And this dynamic is unlikely to change without collective action. The climate crisis is increasing the demand for care and domestic work globally, while the COVID-19 pandemic generated a [care crisis](#) that exacerbated pre-existing gender inequalities.

Both formal structures and informal structures (norms) hold care economy inequalities in place. Gendered norms also shape national policies on how care work is recognized and valued, and how the responsibilities between families, governments, and the private sector are distributed.

While public investment and policies must be at the core of the solution, a renewed role for the private sector is crucial. Announced as a [commitment at the Generation Equality Forum](#), in 2021 Canada’s International Development Research Centre (IDRC) and the Open Society Foundation’s impact investment arm, the Soros Economic Development Fund (SEDF), launched an [action-oriented research initiative to help Transform the Care Economy through Impact Investing](#) (TCEII). Through this partnership, IDRC continues to build on its commitment to transform the care economy and mobilize finance for gender equality.



Erin Tansey



Catherine Cax



Since its launch, a global consortium of partners has built an [extensive knowledge and evidence base](#) to mobilize capital and impact investment to address the care economy's challenges in emerging markets. The program is now launching a collection of 20 case studies on care economy social innovations and impactful businesses, which complements 59 business profiles and mapping of 165 market-based solutions operating in emerging markets in Latin America, Africa, and Asia. The [TCELL program](#) also involves care-economy businesses incubation and acceleration, research on regulatory frameworks and policies, awareness raising, and industry policy dialogues.

As we witness growing momentum and understanding of the urgency of addressing the care crisis, we hope these case studies on pioneering companies will help advance concrete strategies to move from awareness to action. These case studies help to demonstrate viable and impactful business models, ranging from building social security infrastructure to labor-saving products and services. They offer a unique and nuanced understanding of the businesses' theories of change and impact journeys. The case studies also help to share the lessons these innovators have learned on their pathways to scale, and it is our hope that they will attract more capital into the care economy for deepened impact.

We invite you to read this collection of case studies and engage with them, and the other resources and tools developed by the TCELL program, to mobilize investment into the care economy.

Together we can advance [towards a care society](#) where social innovation, entrepreneurship, and investment can be part of the solution for economic justice globally.

**Erin Tansey**

Sustainable and Inclusive Economies  
Director  
International Development Research  
Council

**Catherine Cax**

Managing Director, Investments  
Soros Economic Development Fund

## INTRODUCTION

The care economy consists of paid and unpaid labor and services that support caregiving in all its forms. In Africa, Asia and Latin America, women spend between 3 to 5 times as many hours on unpaid care and domestic work as men. This represents 80 percent of a household's total hours devoted to unpaid care work.

Care economy enterprises can help recognize, redistribute, reduce and reward – also known as the 4 Rs – unpaid and paid care and domestic work in the following ways:



**Recognize:** Initiatives that increase visibility and recognition of paid and unpaid care and domestic activity as "productive" work that creates real value and contributes to economies and societies.



**Redistribute:** Services and initiatives that redistribute care work from individuals to public and private sector entities, and redistribute care and domestic work within the household.



**Reduce:** Products and initiatives that reduce the time spent on and burden of unpaid care and domestic work.



**Reward:** Products, services, and initiatives that ensure that care and domestic workers are paid fairly and have professional growth potential. This provides them with financial reward and security.

The Care Economy Knowledge Hub – the research pillar of the Transforming the Care Economy Through Impact Investing Program – aims to address the knowledge gap around care businesses by showcasing various business models and creating a resource base for relevant stakeholders. It also aims to raise awareness and increase knowledge of the state of impact-driven care economy business models and attract a broad range of funders to invest in care economy solutions by showcasing opportunities.

A curated set of 20 business case studies, of which this case study is one, has been researched and written between October 2021 and January 2024. The case study businesses were selected out of a set of 165 businesses that were mapped between October 2021 and August 2022, and then a further 59 that were profiled between September 2022 and May 2023. They present a wide variety of different ways in which care work can be recognized, rewarded, reduced, and redistributed, from different sectors and different geographies, from different stages of the growth journey and different business models, from different products and services and different impact pathways. Each case study was

written based on extensive desk-based research, including a literature review; a review of key business documents; a series of deep conversations with founders, CEOs, and key staff; and impact-focused qualitative research with 8 - 15 consumers of business products and services.

Each case study starts with a 1-page executive summary that provides “at a glance” information on the business and Section 1 provides an introduction. Section 2 describes the ecosystem within which the business operates. The business deep dive can be found in Section 3. Section 4 presents an impact deep-dive, including customers’ own experiences of the care economy solution, and a unique set of qualitative impact data. Section 5 outlines the business’s future plans in their look forward.

Shifting attention towards and investment in the care economy is one of the single most important actions that policy makers, investors, and community leaders can take to achieve gender, racial, and climate justice. We hope that these case studies contribute to the much-needed transformation in our economic and social systems.



**Rebecca Calder**

Principal Investigator, Transforming the Care Economy Through Impact Investing  
Co-Founder and Co-CEO, Kore Global

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*This project is supported by Canada's International Development Research Center, in partnership with the Soros Economic Development Fund at the Open Society Foundations. Building on their track record and commitment to transforming the care economy and mobilizing finance for gender equality, they are jointly supporting this action research program to help transform the care economy through impact focused business and investment. This case study is a joint research product, developed by a consortium led by Kore Global, including Intellectap, Core Woman, Busara, Sagana, and Volta Capital. Copy editing and graphic design were done by Big Blue Communications.*

**This particular case study should be cited as follows:**

Intellectap, Busara Center for Behavioral Economics, Kore Global. (2024). *Transforming the care economy through impact investing: Nazava case study*. Kore Global, International Development Research Centre, and Soros Economic Development Fund.

## 1 - EXECUTIVE SUMMARY

Nazava Water Filters is a for-profit enterprise that manufactures and sells affordable gravity-based ceramic water filters, with its regional offices located in Indonesia and Kenya. Nazava water filters replace the need to boil water for drinking purposes, using fuels such as wood, charcoal, or liquified petroleum gas. Water purified through Nazava filters is 3 times cheaper than boiled water and 9 times cheaper than water bought from water kiosks and shops in Indonesia. By using Nazava water filters, women save up to 160 minutes per week (approximately 139 hours per year)<sup>1</sup> on collecting fuel for boiling water and boiling the water itself, or traveling long distances to collect safe drinking water for their households. Women can also sell Nazava purified water within their communities and earn, on average, US\$26 per month.<sup>2</sup> The enterprise exports its products to over 30 countries. The enterprise has 42 full-time employees and has served over 600,000 people since its establishment in 2009. In 2021, Nazava Water Filters earned revenue of US\$353,640. The enterprise was established in Indonesia and has expanded its operations to Kenya. Nazava Water Filters needs US\$1.5 million to scale its operations in Kenya, of which US\$650,000 has already been raised.



### Nazava at a glance

Established	2009
Country of operations	Indonesia, Kenya
Offerings	The enterprise designs, manufactures and sells affordable gravity-based ceramic water filters.
Reach	Served over 600,000 people to date
Staff	42 full-time employees

Revenue	US\$1,167,201
Investment to date	US\$1,085,000 in loans and US\$133,000 from grants/awards
Leadership	Guido van Hofwegen, Co-founder and Director Lieselotte Heederik, Co-founder and Director
Contact for partnerships	<a href="mailto:guido@nazava.com">guido@nazava.com</a> <a href="mailto:lisa@nazava.com">lisa@nazava.com</a>
Website	<a href="http://www.global.nazava.com">www.global.nazava.com</a>

## 2 - ECOSYSTEM

### 2.1 Indonesia: statistical snapshot

 <p>Demographic information</p>	<p><b>Total population</b> (<a href="#">World Bank</a>, 2021): 273.8 million</p> <p><b>Female population</b> (<a href="#">World Bank</a>, 2021): 49.6% of the total population i.e. 135 million</p> <p><b>Urban &amp; rural population</b> (<a href="#">World Bank</a>, 2021): Urban (57%)   Rural (43%)</p> <p><b>Population in different age segments</b> (<i>percentage of the total population</i>) (<a href="#">World Bank</a>, 2021)          0-14 years: 25%          15-64 years: 68%          65 and above: 7%</p>
 <p>Unpaid Care Work</p>	<p>40% of women in Indonesia leave workforce because of marriage and childcare and move to unpaid care work (<a href="#">ILO</a>, 2022)</p>
 <p>Social &amp; Economic</p>	<p><b>Literacy level</b> (<a href="#">Global Gender Gap Report</a>, 2021)          Females (94%)   Males (97.3%)</p> <p><b>Poverty</b>  <b>Share of the total population living in extreme poverty and the share in rural and urban areas</b> (<a href="#">Statista</a>, 2021)   (<a href="#">The Jakarta Post</a>, 2019)          10.14% of Indonesia's total population lived in extreme poverty (less than US\$1.9/day) compared to the global poverty rate of 8.9%. In 2019, 14.93 million people in extreme poverty lived in rural areas, while 9.86 million lived in urban areas.</p> <p><b>Proportion of the total population who are facing water poverty</b> (<a href="#">water.org</a>, 2021)          18 million Indonesian lack access to safe water due to distant, contaminated, and expensive water sources.</p> <p><b>Sanitation and hygiene</b> (<a href="#">water.org</a>, 2021)   (<a href="#">WHO</a>, 2021)          20 million people in Indonesia do not have access to improved sanitation services. Approximately 7 out of 10 households in Indonesia drink water contaminated with E.coli.</p> <p><b>Formal &amp; informal employment</b> (<a href="#">Statista</a>, <a href="#">Statista</a>, 2022)          Out of 135.61 million people employed in Indonesia, 80 million (59%) people worked in the informal sector and 55.61 million (41%) worked in the formal sector.</p> <p><b>Gender-based violence</b> (<a href="#">UNDP</a>, 2021. <a href="#">National Library of Medicine</a>, 2019)          At least 42% of surveyed Indonesians have reported experiencing some form of gender-based violence (GBV) during the ongoing COVID-19 pandemic. In 2019, over 431,471 cases of violence were recorded.</p>



Women's work,  
labor, and  
entrepreneurship

**Labor force participation** ([World Bank](#), 2021)  
Female: 52% | Male: 65.3%.

**Unemployment** ([World Bank](#), 2021)  
Total: 3.8%  
Male: 4.3% | Female: 3.2%

**Women-owned businesses**

- Women-run MSMEs in Indonesia: ([National Library of Medicine](#), 2022): 60%
- Women-owned MSMEs represent a higher share of informal MSMEs at 60%: ([ResearchGate](#), 2020)
- Firms with female top managers as % of total firms: ([World Bank](#), 2015): 22.1%

**Gender pay gap** ([ILO](#), 2020)  
Total: 23%

**Financial inclusion** ([World Bank](#), 2021)  
52.3% of women had bank accounts

## 2.2 Context analysis

### Macro context in Indonesia

Almost 57% of the Indonesian population (estimated 159 million) lives in urban areas as of 2023.<sup>3</sup> As of 2020, an estimated 11.16 million people in urban areas and 15.26 million people in rural areas live in poverty.<sup>4</sup> Rural regions have especially high poverty rates, and a large percentage of the rural population lacks access to basic services, especially water and sanitation services. Women tend to be more vulnerable to poverty compared to men due to low wages and job insecurity. Women are mostly employed in the informal sector. About 58% of Indonesia's total female workforce is employed in the informal sector, characterized by low and unstable incomes and lack of access to basic protection services.<sup>5</sup>

In 2020, only 34.5% of the Indonesian population (estimated 94 million) had access to piped improved drinking water.<sup>6</sup> Only 21.5% of the rural population had access to piped improved drinking water compared to 44.6% of the urban population.<sup>7</sup> About 20 million people in Indonesia do not have access to improved sanitation services.<sup>8</sup> Furthermore, 25 million people lack access to toilets and practice open defecation.<sup>9</sup> In 2020, 11.2% of the rural population practiced open defecation, as did 2.2% of the urban population.<sup>10</sup> Open defecation, coupled with low access to sanitation services and untreated wastewater (only 7% of wastewater in Indonesia is treated)<sup>11</sup> has resulted in contaminated water supplies, which contribute to a myriad of diseases, especially among children. It is estimated that 7

out of 10 households in Indonesia drink water contaminated with E.coli.<sup>12</sup> A survey of drinking water in Yogyakarta (an urban area in Java) found that, as of 2017, 89% of water sources and 67% of drinking water were contaminated by fecal bacteria.<sup>13</sup>

### Care economy context

Research by the International Labour Organization (ILO) shows that, globally, women perform 76.2% of total hours of unpaid care work, which is 3 times more than time spent by men.<sup>14</sup> In Asia and the Pacific region, women do 4 times more unpaid care work than men.<sup>15</sup> Research by ILO reveals that men in Asia and the Pacific region perform the lowest share of unpaid care work compared to other regions in the world.<sup>16</sup> In Indonesia, most women, on average, spend between 3–5 hours a day on domestic care activities, compared to 2 hours or less for men.<sup>17</sup> Furthermore, it estimated that about 40% of Indonesian women leave the workforce because of marriage and children and, consequently, they transition to unpaid care work.<sup>18</sup>

Collecting fuel and water (firewood, charcoal) is a major component of the unpaid care work undertaken by women. Women and girls are mainly responsible for fuel or water collection, especially in households that do not have access to tap water or other water sources at their premises.<sup>19</sup> Consequently, they spend significant time collecting water or fuel and boiling water, rather than spending time on productive or leisure activities. Women with care responsibilities are more likely to be unemployed or work in

the informal economy, which is characterized by low wages.

As of 2022, about 18 million people in Indonesia had no access to safe drinking water.<sup>20</sup> Consumption of contaminated water increases the risk of contracting waterborne diseases such as cholera, diarrhea, typhoid, dysentery, and Hepatitis A, leading to over 60,000 deaths annually in the country.<sup>21</sup> In Indonesia, 50% of the population buys potable water from small-scale private water suppliers.<sup>22</sup> The remaining population purifies the available water to make it potable through boiling, often by using wood as a fuel.<sup>23</sup> Of this available water, only 9% is provided by PDAM (the municipal water supply), while the rest is obtained from sources such as groundwater, rivers, lakes, and springs.<sup>24</sup> Boiling water is more common in rural areas, while buying potable water is more common in urban areas. Families that lack access to safe drinking water are at greater risk of contracting diseases more often, and, consequently, facing higher health expenditures. Furthermore, the responsibility of caring for unwell family members also falls disproportionately on women. Beyond households, this issue also persists in schools. Schools do not have access to clean drinking water due to contamination of water sources, expensive purification processes, and

distant water sources of clean water. Around 79% of schools (~175,000 schools) in Indonesia cannot provide clean drinking water to their students.<sup>25 26</sup>

### Market opportunity

Labor-saving technologies lead to a reduction in domestic and productive work, and include water pumps/filters, solutions for storing and transporting water, improved cooking technologies, etc.<sup>27</sup> In Indonesia, there are significant business and impact opportunities for labor-saving technologies that improve access to safe drinking water. Since as many as 18 million people in Indonesia do not have access to safe drinking water, the country is a potential market for Safe Water Enterprises (SWEs).<sup>28</sup>

Seventy-percent of the Indonesian population rely on a self-provided source (private well, community well, or water truck) of primary water.<sup>29</sup> As such, there is no quality control for water, which consequently leads to low access to safe drinking water. Local governments rarely make funds available to address water and sanitation issues. On an annual basis, Indonesian households spend between US\$51 and US\$132 (equal to 1 monthly wage) to get safe drinking water.<sup>30</sup> People living in the informal low-income settlements in Jakarta pay 5 to 10 times more for water than those living in high-income areas in those same cities and more than consumers in London or New York. It costs around US\$150 to get a piped water connection installed in Indonesia, which is prohibitive for low-income households.<sup>31</sup>

In addition, a large part of the Indonesian population relies on private water suppliers (small-scale private service providers provide 20–45% of all water consumed in Jakarta),<sup>32</sup> but these suppliers face challenges such as lack of cooperation from the local government and an inability to invest to scale up their infrastructure and delivery.<sup>33</sup> These challenges faced by local water suppliers create space for SWEs to expand and scale up their operations. Some areas in Indonesia, such as Java, have a very high population density (60% of the population resides there) and provide further business potential for SWEs.

Labor-saving technologies, such as water pumps/filters and solutions for storing and transporting water, have great potential to reduce the time and effort spent by women and girls in unpaid care and domestic work, especially in water collection and caring for unwell family members. Since women are mainly responsible for cooking and managing household water resources, they are the main stakeholders in accelerating the adoption of labor-saving technologies. As micro-entrepreneurs and small-scale enterprise owners, women can also be the main catalysts in the community. However, women's adoption of labor-saving technologies is constrained by limited knowledge of modern technologies. As such, there exists a distinct opportunity to support women in their capacity enhancement (as leaders, entrepreneurs, salespersons, etc.) and skill development.

## 3 - BUSINESS DEEP DIVE

### 3.1 Business headline

Nazava Water Filters is a for-profit enterprise that designs, manufactures, and sells affordable water filters to low-income households in peri-urban and rural areas of Indonesia and Kenya, reducing the heavy and unequal burden of care work on women and girls. The enterprise also exports its water filters to countries such as India, Burkina Faso, Mali, and Mozambique.

Nazava Water Filters provides households with a labor-saving product that enables women and girls to save time spent on water collection and purification. The use of this product also reduces the amount of money households spend on buying purified water from refill kiosks. Water purified through Nazava Filters is 3 times cheaper than boiled water and 9 times cheaper than water bought from water kiosks. Furthermore, the use of Nazava water filters reduces the carbon emissions that would have resulted from boiling water using charcoal or wood. Nazava's water filters have been certified by the World Health Organization (WHO) for providing targeted protection against bacteria and protozoa in water. The use of these filters therefore contributes to the reduction of waterborne diseases within households.

The enterprise leverages multiple sales channels to reach its customers. The enterprise has leveraged its sales teams, e-commerce platforms, Microfinance Institutions (MFI) partners, and resellers to enable last mile distribution. It partners with MFIs so that low-income households can purchase the water filters by accessing loans from these MFIs. Nazava receives an upfront payment from the MFI partner, and therefore its default risks are mitigated. The enterprise has also engaged with small formal and informal resellers (merchants) to sell the water filters in their communities. The enterprise has partnered with Kiva (Kiva Microfunds, also known as Kiva.org) to provide these resellers with financing to purchase larger consignments of water filters and sell within their communities. This financing model reduces Nazava Water Filters' exposure to default risk.

Through its grant and cross-subsidy model, the enterprise provides access to clean drinking water for school-going children in Indonesia. The enterprise has partnered with local governments and corporations under their corporate social responsibility (CSR) programs to serve schools in Indonesia and provide them with water filters. The enterprise uses revenue generated from the sale of carbon credits to subsidize the maintenance and replacement of water filters in schools. The enterprise also sells water filters to NGOs and humanitarian aid agencies that supply water filters as donations or humanitarian aid to communities impacted by natural disasters.

Nazava's value proposition is that it makes water filters affordable and accessible (through multiple sales channels) to low-income households. The enterprise's competitive advantage is that it provides a cost-effective water filtration solution to low-income households. In Indonesia, the Nazava Water Filter costs about US\$30, and the Nazava PROT3CT replacement filter element costs about US\$8. These upfront costs are typically about half the costs of other filters available in the country.

Nazava Water Filters is an innovative enterprise that has developed an aspirational product for base-of-pyramid consumers. It is estimated that over 80% of its customers are women. These water filters are manufactured in the Global South, and customers receive a one-year warranty. The enterprise has pioneered partnerships with MFIs and resellers to reach a larger number of customers in Indonesia. Moreover, the enterprise has successfully replicated its model of last mile distribution and sales through MFIs in Kenya.

Between inception and the end of December 2021, Nazava Water Filters has sold 200,000 filters. Nazava is seeking US\$1.5 million in funding to scale its operations in Kenya, of which US\$650,000 has already been raised.

## Nazava Water Filters' journey<sup>34</sup>

**2009**

Established an enterprise in Indonesia and started selling assembled water filters. The enterprise sourced parts of water filters and assembled the filters in-house. These assembled water filters were sold to stores that served low-income customers in Indonesia.

**2012**

### Customer Discovery

The enterprise moved its operations from Aceh in Sumatra island to Bandung in Java to be closer to its intended customers.

**2015**

The enterprise finalized the design of the enhanced water filters.

**2017**

Established a sales team to sell the filters to groups instead of to individual households.

**2019**

The enterprise issued its first carbon credit (28,000 credits issued by Nexus for Development on behalf of Nazava Water Filters under the Gold Standard).

**2021**

Established subsidiary operations in Kenya.

2009

2011

2012

2014

2015

2016

2017

2018

2019

2020

2021

**2011**

The enterprise received its first investment of US\$100,000 from an angel investor. Some of these funds were directed to enhance enterprise functions, such as financial management and bookkeeping.

**2014**

The enterprise gathered feedback from customers and started re-designing the water filter for improved efficiency. The enterprise also engaged resellers to sell its water filters.

**2016**

As the enterprise struggled with obtaining quality raw materials from its suppliers, it started manufacturing water filters in Indonesia to ensure sustained quality of the water filters.

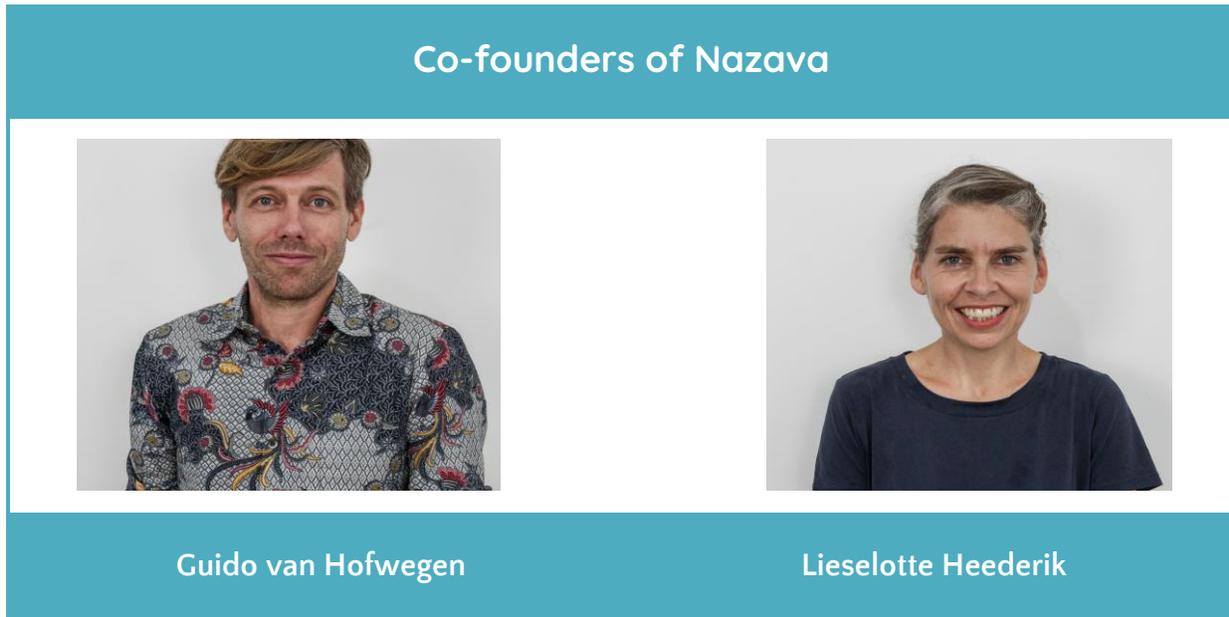
**2018**

Received WHO performance results (which confirmed that Nazava water filters remove 99.9% of bacteria). It also established a contract with a distributor in Ethiopia.

**2020**

The enterprise received revenue (first payment) from the issuance of carbon credits. The enterprise started direct sales through online platforms and started growing.

## 3.2 Founder story



Lieselotte Heederik and Guido van Hofwegen are the co-founders and directors of Nazava Water Filters. Lieselotte is responsible for managing Kenya operations (including business development), and Guido is responsible for managing Indonesia operations (including business development).

Lieselotte Heederik holds a Masters of Science in Rural Development Sociology from Wageningen University and Research and Masters in Advanced Development Studies from Radboud University in the Netherlands. She started her career in the development sector by working with Cordaid<sup>35</sup> as a Program officer for the Middle East and Eastern Europe. She has also worked at Hivos<sup>36</sup> as a Peace Building and Conflict Resolution officer. Lieselotte led Welthungerhilfe's<sup>37</sup> disaster response to the earthquake in Padang, Indonesia. She has also engaged in a number of short-term consultancy projects in the development sector. As a gender consultant for GIZ, she studied the gender disparities within the local government of Banda Aceh and provided recommendations for improvement. She has also served as a Course Director for the Global Water, Sanitation, and Hygiene program at George Washington University, in the United States of America. Lieselotte is well versed in sustainable and rural development, program management, conflict management and peacebuilding, climate change, gender, and microfinance.

Guido van Hofwegen holds Bachelors and Masters degrees in Tropical Land Use from Wageningen University and Research. During his course at Wageningen University and Research, he participated in projects related to erosion, and soil and water conservation. Guido also co-founded Resilience BV, an international research and consultancy firm. The firm specializes in horticulture, agribusiness, seed sector development, drinking water, and

farmer-led irrigation in emerging markets. In the past, he has worked as a journalist. Through his varied experiences, Guido is skilled in sustainable development, international development, research project management, product development, water resources management, mathematical modeling, and economics.

As development sector experts, Lieselotte and her husband Guido moved to Indonesia in 2007 to work with NGOs during the aftermath of the Tsunami. As the couple worked on reconstruction projects in the country, they realized that people faced significant challenges in accessing affordable and clean drinking water. People in the country spend a significant amount of time (collecting and purifying) and/or money in obtaining clean drinking water. Furthermore, there was widespread incidence of waterborne diseases in the country. The challenges in accessing affordable, clean drinking water in Indonesia motivated the couple to launch Nazava Water Filters. They were keen to develop a home-based point-of-use solution that could make clean drinking water accessible to low-income customers.



I moved to Indonesia after the tsunami in 2007. We only had a well in our garden, which had a very high iron content. We could boil that water, but the iron would not be removed. So, we had to buy water in big gallons, but this water was contaminated with E. coli bacteria. When we looked around for a simple water filter, we did not find any. So, we started to import filters from Brazil for our own use. When our friends and neighbors also asked for one, it started to dawn on us that no one in Indonesia had safe drinking water from their tap.

**Lieselotte Heederik, Co-founder & Director Nazava Water Filters**



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In the initial days, Lieselotte and Guido imported various parts for the water filter, assembled the filters, and sold the water filters. However, they experienced some challenges with this model, including the high cost of customer acquisition and lack of quality raw materials for assembling the filters. The Nazava Water Filters' team had to spend a significant amount of time explaining the benefits of the water filter to each customer and convince them to purchase the product. The enterprise also struggled with obtaining quality raw materials from its suppliers. The enterprise engaged several suppliers from Brazil, India, and China. Finally, to ensure sustained quality of the water filters, the enterprise decided to manufacture the water filters in-house.



*We started out as a water filters sales company, but we had to pivot our model and become both a manufacturer and seller of affordable water filters.*

**Guido van Hofwegen, Co-founder and Director Nazava Water Filters**



### 3.3 Business model

 <p>Customer segment</p>	<p>Water filters:</p> <ul style="list-style-type: none"> <li>Households: Nazava Water Filters targets low-income households (that earn less than US\$7 a day) in peri-urban and rural areas. Its customers are mostly women, who rely on boiling available water or purchasing water as they lack information about innovative and improved products' usage, costs, and reliability.</li> <li>CSR partners and NGOs: The enterprise also sells water filters to corporate foundations, humanitarian aid agencies, and NGOs. In Indonesia, CSR partners provide school children with access to clean drinking water by purchasing and setting up Nazava Water Filters in schools. NGOs purchase and deliver Nazava Water Filters to communities that have been adversely impacted by events such as natural disasters.</li> </ul> <p>Carbon credits:</p> <ul style="list-style-type: none"> <li>Corporates: The enterprise sells carbon credits to corporations interested in reducing their carbon footprint. These carbon credits are certified by the Gold Standard and issued by Nexus for Development.</li> </ul>
 <p>Value proposition</p>	<p>Nazava Water Filters designs, manufactures, and sells affordable gravity-based ceramic water filters to low-income customers. Through the enterprise's business model, low-income households can purchase the water filters by making payments in installments. The water filter reduces the time spent by women in water collection and purification. The use of Nazava water filters also reduces the carbon emissions that would have resulted from boiling water using charcoal and wood.</p>

 <p>Competitive advantage</p>	<p>There are limited affordable water filtration solutions available to low-income households in Indonesia. In Indonesia, the Nazava Water Filter costs about US\$30 and the Nazava PROT3CT replacement filter element costs US\$8. In Kenya, the filter costs about US\$43 and replacement filters are US\$14. These upfront costs are typically about half the costs of other filters and annual running costs are a fraction of the costs.<sup>38</sup> Through its MFI partners, the enterprise enables households to purchase the water filters by paying for the product in installments. Compared to other water filters and bottled water that is available in the market, Nazava Water Filters are not only affordable but also have other advantages. In both Indonesia and Kenya, the Nazava filter guarantees 100% bacteria-free water and comes with a one-year guarantee as well as local support and customer service. The Nazava Water Filter has a volume of 16 liters, which is higher compared to filters of other companies.</p>
 <p>Channels &amp; key partnerships</p>	<p>The enterprise uses multiple channels and partners to reach its customers. The enterprise sells directly through its sales teams and its website. The enterprise also leverages multiple indirect sales channels such as distributors, MFI partners (2 MFIs in Indonesia and 5 MFIs in Kenya), e-commerce websites, and small formal and informal resellers. In Indonesia, there are over 110 informal resellers located all over the country, though some are more active than others. In Kenya, there is currently no reseller channel. The enterprise also sells through distributors in countries such as India, Burkina Faso, Mali, and Mozambique.</p>
 <p>Customer relationship</p>	<p>The enterprise provides after-sales services directly through its team and indirectly through resellers. Nazava Water Filters provides maintenance and replacement services for direct purchasers and schools provided with water filters. It indirectly provides after-sales services and replacement services through resellers. The enterprise uses WhatsApp to engage customers in Indonesia and Kenya. Customers receive WhatsApp messages twice a year. Furthermore, it conducts an annual survey with a subset of its customers.</p>
 <p>Pricing and payment methods</p>	<p>Water filters: Customers can purchase the water filters outright or through installment payments. The number of installments depends on the MFI and the payment plan. Some customers chose to repay in as little as 5 payments, in which case each payment would be about US\$7-8, others pay for the filters over 52 weeks and pay around US\$0.80 per installment. Customers such as international agencies, NGOs, corporates (through CSR initiatives), government agencies, and distributors purchase the water filters outright. The enterprise has partnered with Kiva to provide loans to small resellers. This enables resellers to use a Kiva loan to purchase a larger consignment of filters from Nazava Water Filters. It allows these resellers to incur reduced shipping costs. Typically, the loan amount ranges from US\$200 to US\$2,000. Resellers receive a fixed fee of US\$4 per filter sold (-10% of filter price).</p> <p>Carbon Credits: Corporations buy carbon credits for about US\$12 (varies from deal to deal).</p>

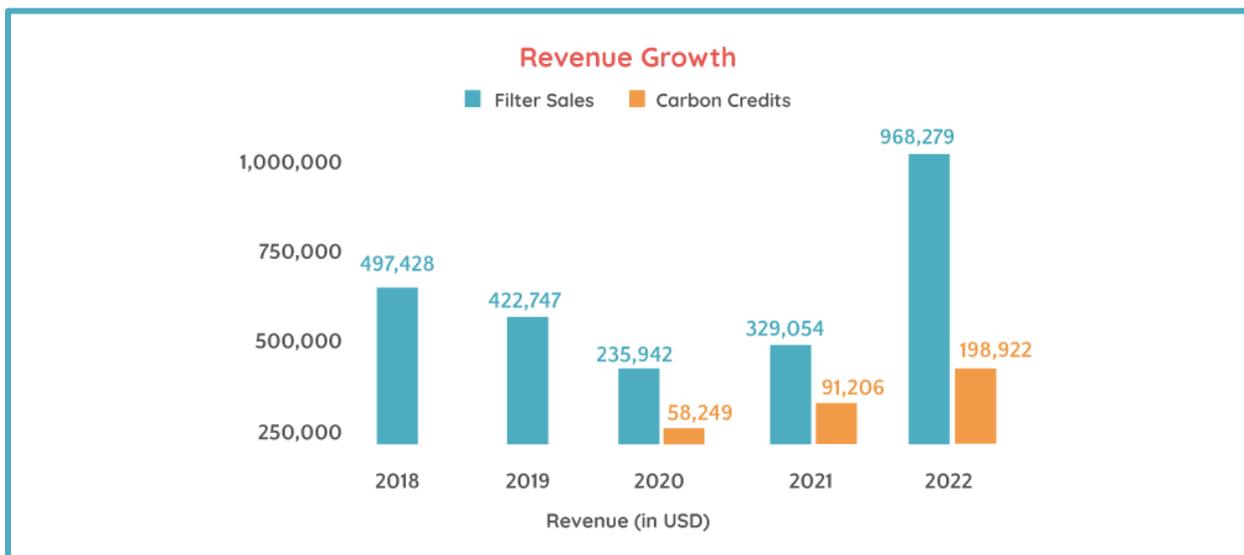
 <p>Revenue streams</p>	<p>The enterprise obtains revenue from the sale of water filters and carbon credits. 81% of revenue comes from the sale of water filters. The remaining 19% of the revenue comes from the sale of carbon credits to corporations.</p>
 <p>Cost structure</p>	<p>Fifty percent of Nazava’s expenditure is spent on cost of goods sold (COGS). Over a fifth of its expenditure (21%) is spent on marketing its products. The enterprise spends 10% on personnel. The cost of technology (R&amp;D, utilities, etc) is 11%. Nazava also provisions 8% of its cost on rent and other opex.</p>

### 3.4 Nazava’s growth story

Nazava has grown over the years, both in terms of business (by an annual growth rate of 18.6% over the last 5 years) and impact. The graphs below demonstrate a more or less steady rise in customer reach and sales. Nazava achieved breakeven in 2011.

#### 3.4.1 Revenue growth:

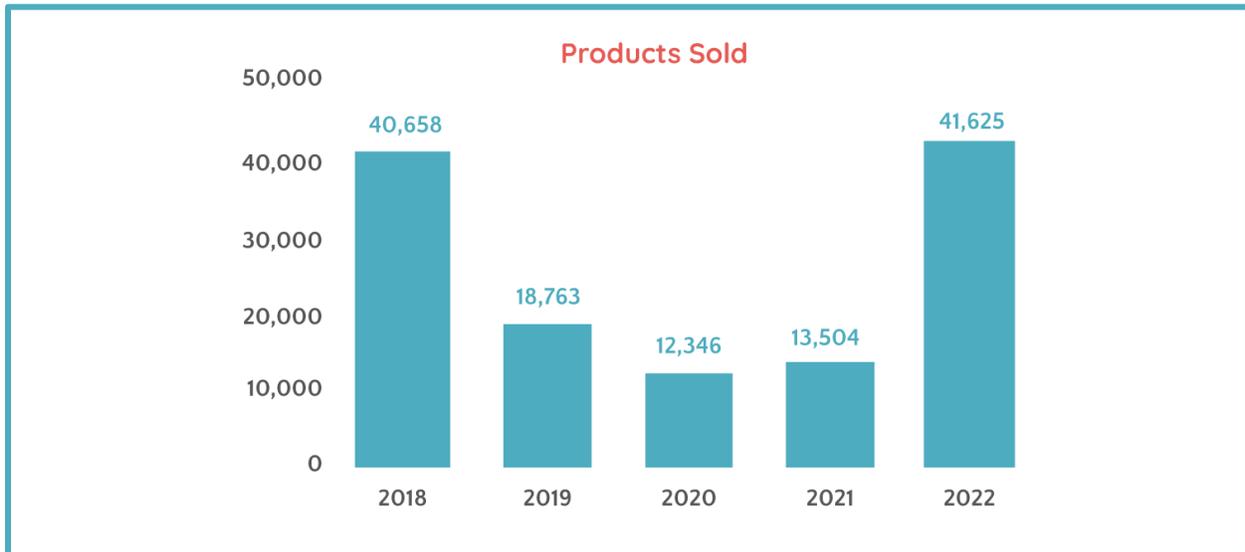
Nazava’s revenue growth has steadily increased from 2021 onwards. Revenues have continued to increase due to an increase in filter sales and an increase in revenue from carbon credits. The revenues decreased as the sales declined during COVID-19. In 2022, revenues have also been much higher due to a large purchase order from UNICEF.



#### 3.4.2 Product sales:

Nazava’s product sales numbers dwindled during the pandemic. Due to COVID-19 restrictions, the enterprise’s distribution of products through microfinance institutions

(MFIs) and sale agents was halted. The enterprise transitioned to online training during this period to provide sales agents and MFI distributors with the required product knowledge and sales training. The enterprise also focused on expanding its digital marketing and online sales initiatives. Through these initiatives, the enterprise was able to quadruple its online sales during the pandemic. In 2022, there was a significant uptick in sales as a result of water filters that were supplied to the Ukraine relief effort.



### 3.4.3 Gross margin:

Nazava has continued to increase its gross margin (except during the pandemic). The gross margin also decreased in 2022 owing to lower margins on bulk exports.



### 3.5 People and governance

Nazava Water Filters is committed to gender and climate justice and strives to achieve this not only through its product offerings but also through its people and governance structure, practices, and policies.

2X Criteria <sup>39</sup>	Climate and Gender Justice <sup>40</sup>
<ul style="list-style-type: none"> <li>• One of the 2 founders is a woman.</li> <li>• 66% of the board members are women.</li> <li>• 32% of full-time employees are female.</li> <li>• 50% of senior management are women.</li> <li>• Initiatives exist to advance women in the workforce.</li> <li>• 80% of customers are women.</li> </ul>	<ul style="list-style-type: none"> <li>• To a large extent, the company supports local economic regeneration and just transition, reducing the health impacts from environmental pollution and the care workload on women in vulnerable communities.</li> <li>• To a large extent, the company has introduced gender-intentional training on sustainable water usage, reducing the incidence of diseases and improving water management.</li> <li>• To a large extent, the company increases access to safe drinking water to improve health outcomes and reduce risk associated with fetching water for women.</li> <li>• To a large extent, the company has introduced a product that increases access to safe drinking water and/or reduces women's care responsibilities and free up time for leisure, education, and other economic activities.</li> </ul>
<p>Nazava Water Filters is a <b>gender-transformative</b> business.<sup>41</sup></p>	<p>Nazava Water Filters is a <b>gender-transformative</b> business.<sup>42</sup></p>

Nazava has 42 full-time employees, 32% of whom are women. There are 26 and 14 employees in Indonesia and Kenya, respectively. The 2 co-founders – 1 man and 1 woman – serve as directors for both countries. In Indonesia, there is 1 operational manager, 1 partnership manager, 7 sales personnel, 10 personnel in production and logistics, 3 marketers, 1 HR manager, 1 finance officer and 2 personnel in administration. In Kenya, the team consists of 1 country director, 1 customer service officer, and 12 sales representatives. Two of the 3 board members are women. The enterprise liaises with international universities to onboard interns who can support its operations and scaling efforts. In the past, interns have supported the enterprise to develop a framework to understand the impact of the water filters, develop manuals to train resellers, and enhance the design of the water filter.

Nazava has various policies to support its team, which include equal pay for equivalent work, paid sick days, family care days, employee grievance mechanisms, protection against violence at work, fully paid maternity/paternity leave and protection against discrimination. The enterprise also grants bonuses to the sales staff and monitors their career progression.

The enterprise has faced some challenges related to onboarding and retaining personnel. As a result of budget constraints, the enterprise has not been able to offer competitive compensation to personnel with significant experience. The enterprise founders have observed that there is a preference for hierarchical organization structures in Indonesia. This has made it difficult to maintain an open and entrepreneurial work culture within the enterprise. The enterprise is actively seeking an experienced HR professional to support its efforts to address challenges related to onboarding and retaining personnel.

### 3.6 Support received to date

The enterprise has received funds from various sources. Key funding includes:

Financial	
Angel Investor	In 2011, the enterprise received US\$100,000 in equity funding from an angel investor. This was the first external funding that the enterprise received. This funding played a critical role in enhancing business operations and enabled the enterprise to breakeven. Some of the funds were also used to improve business functions such as accounting and bookkeeping.
Kiva	Between 2013 and 2020, the enterprise obtained a loan of US\$373,000 from Kiva. This loan enabled the resellers associated with the enterprise to purchase Nazava water filters on credit. The loan played a critical role in increasing the sale of Nazava water filters through resellers in Indonesia. It enabled resellers to purchase a larger number of water filters at a discounted price for their inventory and save on shipping costs. It also translated to lower filter prices for the end customers.
Netherlands investment cooperative	In 2016, the enterprise received undisclosed equity funds from the Netherlands investment cooperative. This funding played a central role in enabling the business to move from a sales enterprise to a manufacturing enterprise. The funds were used to establish Nazava Water Filters' first production facility in Indonesia. Part of the funds were also spent on procuring inventory and marketing initiatives.
Non-financial	
Miller Center for Social Entrepreneurship	In 2012, Lieselotte (co-founder) participated in a boot camp organized by the Miller Center for Social Entrepreneurship in California, United States of America. This experience provided her with skills and networks to enhance business operations and obtain funding for Nazava Water Filters. Through this experience, she was also able to receive mentor support from professionals based in Silicon Valley. Furthermore, she continues to remain connected with the Miller Center for Social Entrepreneurship. The Miller Center for Social

	<p>Entrepreneurship provides Nazava Water Filters with interns periodically (every 2 years). These interns have supported Nazava Water Filters to enhance its business model and assess its impact. Some of the past activities conducted by interns include development of training manuals for resellers and impact measurement.</p>
<p><b>CEWAS</b></p>	<p>In 2021, Nazava Water Filters was part of the WASH Accelerator Kenya (WA-KE UP) organized by CEWAS for water-related enterprises. The program aimed to deliver personalized and long-term support for WASH &amp; Water Resource Management businesses that intend to become investment ready. The support provided included technical assistance from sector-smart business development experts, networking, matchmaking opportunities and access to seed capital grants to implement business development projects. This experience enabled Nazava Water Filters to train their staff and to consequently enhance operations and profitability.</p>

\*Full summary of the support received is [here](#).

### 3.7 Key business drivers and challenges to growth

Nazava's growth can be attributed to several factors:

Key business drivers	
<p><b>Founder experiences</b></p>	<p>Guido (co-founder) has worked extensively in international development and is well versed in understanding challenges faced by low-income populations. In 2004, he founded a consulting firm that specializes in horticulture, agribusiness, seed sector development, drinking water, and farmer-led irrigation in emerging markets. This experience enhanced his understanding of rural farmers. It enabled the enterprise to design the water filter and develop effective strategies to sell these water filters to rural customers.</p>
<p><b>Founders' ability to take risks and access to savings</b></p>	<p>The co-founders were in position to invest their time and savings to start Nazava Water Filters. When the co-founders decided to start this venture, they did not have competing needs for the saved funds such as supporting their families back in the Netherlands. Furthermore, the low cost of living in Indonesia allowed them to invest their savings for a period of one year to develop the enterprise.</p>
<p><b>Ease of doing business in Indonesia</b></p>	<p>For the co-founders (foreigners in Indonesia), it was relatively easy to establish the business and get the required permits to commence operations in the country. Furthermore, Indonesia's FDI regulations for the home goods sector are favorable and allow up to 100% foreign investments in enterprises in the sector. This has enabled the enterprise to obtain funding from foreign investors.</p>

## Partnerships with MFIs

Nazava Water Filters pioneered partnerships with MFIs in Indonesia to sell water filters to customers in rural areas. Through MFIs, it has been able to engage groups of potential customers and provide them with information on the product. This has helped the company reduce the time spent in onboarding individual customers and expand in other countries.



*If you want to introduce a new technology to BOP customers, it will only work if it is labor saving. The biggest motivation for uptake of new technologies is time saved.*

**Guido, Director Nazava Water Filters**



## Challenges to growth

### Operational

**Increasing customer acquisition:** The enterprise needs to run extensive customer awareness campaigns to drive behavior change and product uptake, which results in high costs. The enterprise addresses this challenge by enhancing its marketing collateral and developing partnerships to reach customers. Nazava continues to enhance its marketing collateral by developing infographics and videos that can be used to provide potential customers with more information on the water filters. These videos are used to showcase the features and benefits of using a Nazava water filter. To increase product awareness and/or uptake, the enterprise has developed partnerships with NGOs, government agencies, MFIs, and resellers.

In Indonesia, the enterprise has observed that there is resistance amongst some NGOs to establish partnerships as these organizations do not want to showcase products for sale from a single enterprise. The enterprise has also attempted to develop partnerships with Indonesian government agencies that have mandates to create awareness on clean drinking water. Through a partnership, Nazava Water Filters could be positioned as a possible solution for clean drinking water. However, the enterprise has not yet been successful in establishing partnerships with Indonesian government agencies.

The enterprise has been successful in developing partnerships with MFIs and resellers to source and acquire customers. Sourcing customers through MFIs has allowed the enterprise to showcase its products to groups of customers rather than sourcing and onboarding individual customers. The MFIs purchase the water filters and manage installment payments from the customers and hence reduce credit risk exposure for Nazava Water Filters. The resellers have also been an effective channel to sell water filters as these resellers make bulk purchases of the water filters and sell them to customers within their communities. This also reduces the cost of sourcing and acquiring customers for Nazava Water Filters.

**Human resources:** As a result of budget constraints, Nazava Water Filters faces some challenges in offering competitive salaries and benefits to senior personnel.

	<p>To attract personnel, it competes with multinational corporations in Indonesia that offer better salaries and benefits. Furthermore, the founders have observed that there is a cultural preference for more hierarchical workplace structures in Indonesia. This has made it difficult for the founders to maintain an open and entrepreneurial work culture in its Indonesia operations.</p> <p>To a certain extent, the enterprise has addressed these challenges in hiring and retaining fresh graduates instead of experienced hires. It has also commenced recruitment from lesser-known universities to address the challenges related to budget constraints. Nazava Water Filters has also established partnerships with universities such as Santa Clara University, USA and University of Singapore, Singapore to support and scale its operations. The enterprise periodically receives interns from these universities to enhance its operations. In the past, interns from Santa Clara University conducted field research to develop a manual to provide marketing and sales training to Nazava Water Filters' resellers. This manual helped the resellers to broaden their customer base and increase sales.</p>
<p><b>Ecosystem</b></p>	<p><b>Regulatory:</b> The enterprise is facing some regulatory challenges that impede its operations in Indonesia. It cannot get its filters certified in Indonesia, as there are no government agencies or private agencies that have accreditation to certify water filters in the country. In addition, the enterprise faces challenges in importing some materials for the production of water filters, which increases the cost of production.</p> <p>To a certain extent, the enterprise has addressed the lack of certification through a product evaluation from the World Health Organization (WHO). WHO's household water treatment technologies evaluation report shows that the water filters provide protection against bacteria and protozoa. WHO certification has also enabled the enterprise to sell its water filters to other countries. To address challenges related to imports, the enterprise is establishing a production facility in Kenya.</p> <p><b>Competition:</b> The enterprise faces competition from other clean drinking water solutions, such as boiling water within the household or purchasing purified bottled water. The enterprise is addressing this challenge through awareness-creation initiatives for intended customers. This is accomplished through development of marketing collateral such as infographics and videos that provide information on Nazava Water Filters as an affordable water purification solution. Furthermore, the enterprise has established partnerships with corporates and NGOs that provide Nazava Water Filters to schools in Indonesia. The use of Nazava Water Filters in schools creates awareness of alternative water purification solutions and increases uptake of Nazava Water Filters amongst households in the communities near these schools.</p>
<p><b>Financial</b></p>	<p><b>Access to funding:</b> The enterprise is facing challenges in accessing funding to scale its operations. This is because the available capital in the water sector is mostly channeled to establish and maintain huge infrastructure projects. There is limited funding available for point-of-use water solutions. In addition, the enterprise has also not been able to obtain capital from mainstream financiers such as banks in Indonesia and Kenya. This is because the enterprise does not have collateral and the loans are offered at higher rates of interest.</p> <p>To address these funding challenges, the enterprise has engaged with various private and impact investors. Over the years, it has been able to secure a mix of</p>

grants, equity, and debt capital. It is observed that most of its equity investments are from Dutch investors. The enterprise has been able to obtain some debt funding from American and European institutions. However, the enterprise has not been able to obtain any funding from investors based in Indonesia.

## 4 - IMPACT DEEP DIVE

### 4.1 The impact theory of change of the enterprise

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#### Mission statement

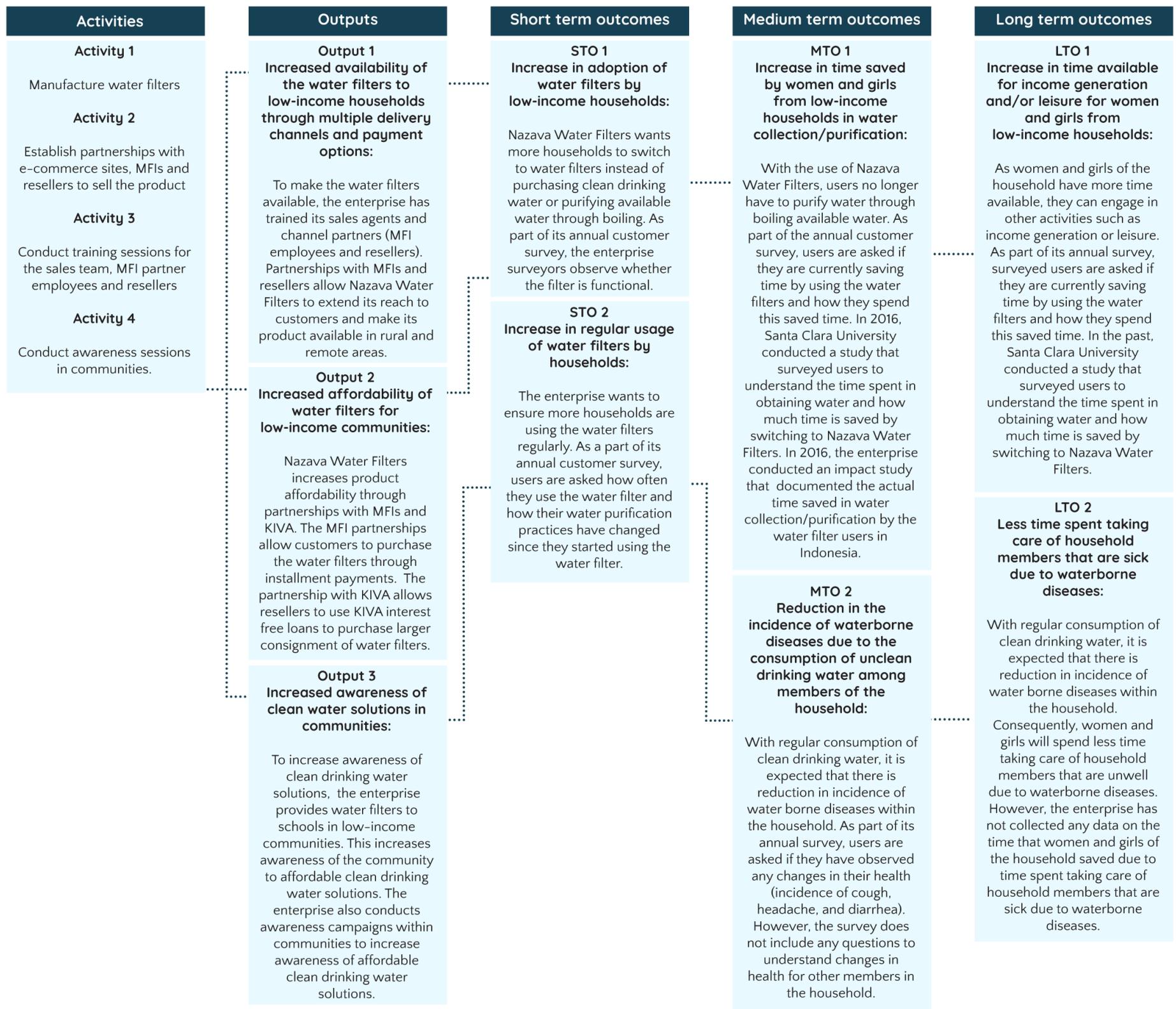
*Everyone everywhere should have access to safe and affordable drinking water. The enterprise's mission is to be the world's premier water filter company with safe and affordable water filters. The company focuses on marketing the best available water filters for the lowest possible price, especially targeting the base of the (income) pyramid.*

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#### Theory of change

In order to reduce the time women and girls spend collecting safe water from far distances and the time spent boiling unsafe water for household consumption, Nazava Water Filters has identified the following theory of change:

## Nazava's pathway to reduce the care workload on women and girls<sup>43</sup>



### Nazava Water Filters business impacts (as per internal measurement system)

- Number of water filters sold: 225,000
- Number of households that have benefited from Nazava Water Filters and have access to safe drinking water: 125,682
- Number of people provided with access to safe drinking water either by buying Nazava Water Filters directly or a member of the household purchased: 563,056
- Number of schools supported with access to clean drinking water: 600
- Increased disposable income for households which repeatedly use Nazava water filters instead of buying or boiling water: US\$2,300,000
- Increased disposable time for individuals that walk long distances to fetch clean water or take long hours collecting wood for boiling water: 2 hours and 40 minutes per week, which translates to approximately 139 hours saved per filter per year.
- The use of Nazava Water Filters has resulted in positive health impacts for consumers. There are reduced chances of contracting waterborne diseases for households. Results from one of the social impact assessments commissioned by the enterprise show a significant difference was found between users and non-users: 8% of Nazava users reported the occurrence of diarrhea within the past 6 months versus 21% of non-users.
- Nazava Water Filters eliminate the need for unsustainable sources of fuel (wood, charcoal) for boiling drinking water among the low-income communities. In 2021 the enterprise contributed 177,000-ton CO<sub>2</sub> equivalent in reduced emissions.
- Nazava Water Filters have additional positive benefits for consumers and communities in the following ways:
  - **Education:** The enterprise has a school program in Indonesia in which children learn about the importance of access to safe drinking water. The enterprise also improves awareness in local communities about the benefits of consuming safe drinking water.
  - **Women's economic empowerment:** So far, there are over 100 women informal water retailers who use Nazava filters to sell purified water and earn an average of US\$26 income per month.

## 4.2 Current impact and measurement practices

Nazava Water Filters has developed a system to collect and learn from data. The monitoring systems are financed entirely from internal resources. For specific requirements such as carbon credit verification, the enterprise has also commissioned external evaluations. The enterprise allocates 3% of its budget for monitoring and evaluation, and approximately US\$10,000-15,000 per year is spent for conducting the surveys. Internally, Nazava collects the following data:

## Commercial data

The enterprise collects data on the number of filters sold, number of households and schools served with access to safe drinking water, and number of MFI partners and resellers. As part of tracking carbon credits, the enterprise has started adding serial numbers to its filters so that the tracking and verification process is easier.

The enterprise also conducts annual customer surveys based on tracking/verifying the carbon credits. By activating the warranties, the enterprise can keep track of where all the filters are, and this also helps them in finding their customers. Carbon credits have therefore played a very instrumental role because the data collected by verifying the carbon credits led the enterprise to also start conducting annual surveys.

## Client satisfaction survey

For their water filters, Nazava collects primary data from clients about product usage and its impact on their lives. Users are surveyed by phone, and funds for this survey are taken from the marketing budget of the enterprise. The enterprise was also supported (pro-bono support) by the marketing department of Danone for designing this survey.

## Annual survey

Nazava conducts an annual survey through a questionnaire. The questions include inquiries about water use in the household, details about purchasing the water filter, maintenance of the filter as well as household practices (such as water source and treatment, fuel use etc.), money saved, and health of the family before and after purchasing the filter. For designing the annual survey, the enterprise partnered with Nexus for Development in Cambodia. The enterprise also works with local universities to conduct surveys, in addition to employing regular field staff for data collection. The founder and an external data analysis expert organize all the data, which is then used for communication and publication purposes.

In the future, Nazava would like to collect more evidence that relates to the following questions:

1. Has the use of water filters resulted in time savings in taking care of household members through reductions in waterborne diseases?
2. What is the comparative impact of regular use of water filters amongst households that use the water filters versus those that do not use water filters?
3. Has the use of water filters resulted in changed gender roles within the households?
4. How has the product reduced the burden of care on women and girls?
5. How has the product helped in time savings in terms of water collecting and purifying activities?

## Measurement challenges

1. **Budget constraints:** As a result of budget constraints, Nazava has not been able to expand the survey questions and the number of surveyed users. The enterprise would like to increase the number of questions asked to surveyed users. These questions would help the enterprise obtain more information on the various impacts related to regular usage of water filters on households. Furthermore, the enterprise would also like to survey a mix of users and non-users to understand the impact on filter user households versus non-user households.
2. **Personnel:** Nazava does not have dedicated personnel to carry out data collection, monitoring, and evaluation. Currently, personnel from various departments and interns collaborate to carry out data collection, monitoring, and evaluation. This limits the enterprise's ability to enhance its monitoring and evaluation activities.

To overcome these challenges, the enterprise also conducts larger and in-depth qualitative and quantitative impact study surveys (apart from the yearly surveys, which are less detailed) with the help of external agencies. The results from these surveys are then compared with data and statistics gathered from government agencies. In addition, the enterprise collaborates with universities

to onboard interns who can support its efforts to collect and analyze survey data.

## 4.3 Customer's own experiences of the solution

Understanding the social context, emotional needs, preferences, and barriers faced by Nazava's customers is key for potential investors to understand where Nazava excels and where it has room to grow. It also creates an opportunity for Nazava to identify ways it can adapt to better meet customer needs. The following sections provide insights into the foundation of the business' market success and its impact on the lives of Nazava's customers, with the aim of helping investors make informed investment decisions.

To inform this analysis, the research team conducted 12 in-depth interviews with Nazava's customers to gather insights into their lived experiences and realities.<sup>44 45</sup> This section presents the results of the qualitative impact deep dive, starting with a snapshot of the customers, followed by an examination of different customer "personas" and their journey to using the Nazava water filter. This section concludes with a qualitative overview of Nazava's impact experienced in customers' daily lives.

### 4.3.1 Customer snapshot

Nazava's customers are champions of the technological solutions provided by the business, and their experiences serve as testimonials to the physical, mental, and social benefits of improved access to their product.

Customers of Nazava share a relatively common profile in terms of basic demographics. They are predominantly women aged between 23 and 46 years, with the average age being 37. About half are married and live with husbands and/or other family members. A minority live with a husband and at least one child, and a tiny fraction live alone. A typical household consists of 3 members.

The entire sample was literate, having achieved at least a secondary education. The majority of the sample held a Bachelor's degree, while the rest held either a Master's degree, diploma, or vocational degree.

Average household incomes ranged from IDR4,000,000–9,000,000 (US\$267–US\$605)<sup>46</sup> per month. The mean income, IDR6,102,780 (US\$410), exceeds Indonesia's national average household income of IDR2,857,736 (US\$192) and sits well above the global poverty threshold of IDR357,327 per month (US\$65).<sup>47</sup> Most of the women interviewed had paid employment, mainly in the private sector as a laundry clerk or a manager of an online shop or business, with only a minority classifying themselves as housewives. Almost all women in the sample identified and purchased the

Nazava product themselves, although most of them reported discussing the product with other family members such as their husbands or parents.

Multiple motivations drive women to opt for the filter, including easy access to clean water, affordability compared to other alternatives, cost reduction, and increased long-term savings. Nazava water filters are favored for being user-friendly, time-efficient, and physically less demanding as it eliminates the need to carry heavy water gallons, and for assuring peace of mind regarding waterborne infections.

Current Nazava customers believe the products and services would be beneficial for specific demographics – young mothers, the elderly struggling with water gallons, and households seeking budget-friendly alternatives. This similarity between current and prospective customers likely stems from 2 factors: (1) Current customers are most familiar with their own needs and experiences, and thus draw inspiration from themselves when imagining new customers (a phenomenon known as self-reference bias); (2) Nazava is already effectively targeting the appropriate demographics who stand to benefit from their product (e.g., relatively well-educated women). As Nazava grows, sustaining its strength in identifying the correct demographics will be vital.

### 4.3.2 Customer personas

The qualitative research revealed 4 distinct customer personas who use the Nazava water filter:

- ❖ **First Movers** are early adopters of the products and role models demonstrating product value and use.
- ❖ **Researchers** make informed, well-researched decisions before purchasing any products and then champion the product.
- ❖ **Followers** tend to rely on positive recommendations of others and purchase products that are valued by others in the community.
- ❖ **Upgraders** are experienced users of a similar product but are looking for ways to upgrade to a better quality and more efficient version.

These distinct personas have been created through a qualitative analysis of customers' characteristics, beliefs, attitudes, and behaviors. Each persona is descriptive, actionable, and unique, reflecting the customer's primary motivations, challenges, and awareness levels concerning the benefits they receive from the filter, and provide insights relevant to their decision to use the filter. This understanding enables the Nazava team to empathize with the customers, thereby fine tuning their offerings to increase their reach and more effectively address customer demands.

Below is an in-depth examination of these four distinct personas.



### Nung's Bio

Nung Mamonto, a 46-year-old married woman, lives with her husband and father. She owns a small business growing and selling plants. Her monthly income is under Rp3,000,000 (US\$202).

Frustrated with the traditional ways of collecting water, Nung was searching for an affordable and long-lasting solution. Upon discovering Nazava's new water filter online, she bought the product believing it would save her money. Nung is inclined to experiment with any new products that Nazava might launch in the future and advocate for them within her community.

## Nung Mamonto The First Mover

### Demographic Information *(of the persona she represents)*

**Age:** 35-49 years old

**Marital status:** Married

**Children:** Likely to have 0-2 children

**Education:** Likely to have a bachelor's degree

**Income:** IDR2,000,000 (US\$134) to IDR3,000,000 (US\$ 202) (low-income bracket)

**Occupation:** Likely to be a small business owner such as a selling food through a home kitchen, local good retail shop or convenience store

**Time Spent on Care Work:** 8-10 hours per day, often all day

### Motivation

While browsing an online marketplace, Shopee, Nung stumbled upon the Nazava water filter. She was drawn to the filter's durability and affordability, including the group payment options available. Viewing it as a more economical alternative, she saw that it could save money for other household expenses. Nung uses the filtered water for her business needs, such as watering and cleaning her plants, enhancing their quality for sale.

Being a pioneer, Nung is among the first in her community to embrace the product and is highly receptive to innovative ways to reduce costs while ensuring clean water for her household. Her preferences lean towards discounts and flexible payment solutions such as group payments. She appreciates the long-term financial benefits of using the Nazava water filter, recognizing increased savings.

*You could say it's an easy and cheap solution. Because I very much need water, for drinking water as well as for cooking. I also use it to water special plants.*

**First Mover, 49 years old**

### Some behavioral traits

- Nung likes doing her domestic chores, viewing them as a moral duty. Since the male members of her household seldom help, she takes charge of her home and in-laws' care.
- She recognized that shifting away from traditional methods of collecting water to using a filter would require a change in her mindset, and she was curious about the Nazava water filter.
- Her behavior exhibits a blend of "risk-taking" and "risk-averse" inclinations. She is willing to be an early adopter in her community but also carefully assesses products, comparing them to alternatives and seeking family opinions before buying.
- This cautious approach to evaluating products may be influenced by her likely status as the persona with the lowest income, making such assessments vital for her financial decision-making.
- She feels the Nazava filter could have been faster in filtering the water, as she still has to store gallons in reserve.
- Despite being a pioneer, Nung seems less inclined to recommend the product, possibly reflecting a lack of confidence.



### Cindy's Bio

Cindy Astuti is a 24-year-old woman who lives with a large family of 8, including her parents, grandparents, siblings, and their spouses and children. Managing an online family shop from home, she earns an average of IDR6,000,000 (US\$403) per month.

Through her research, Cindy identified the Nazava water filter as one of the market's healthiest choices. Since trying the product, she has become an advocate, sharing her positive experiences with family, neighbors, and her community. She is satisfied with the filter and remains open to discovering other cost-effective, healthy household alternatives.

## Cindy Astuti

### The Researcher

**Demographic Information** (*of the persona she represents*)

**Age:** 23-30 years old

**Marital status:** Likely to be young and unmarried

**Children:** None, lives in a large family

**Education:** Graduate from vocational school

**Income:** > IDR6,000,000/> US\$403 (middle income bracket)

**Occupation:** Likely to be unemployed or partly supporting family business

**Time Spent on Care Work:** 4- 6.5 hours per day

### Motivation

Health is a priority for Cindy, leading her to the Nazava water filter during her research. She determined that the Nazava filter, with its ability to remove chemicals, metals, and plastics, was among the healthiest options available.

Cindy's investigative process involves utilizing her knowledge and social media reviews to identify suitable products. She dedicates time to thoroughly research the product's features, cost effectiveness, and ease of use. Her enthusiasm extends to sharing her experiences and persuading others, including family and neighbors, to try the filtered water.

She exhibits a typical behavior of a researcher, scrutinizing a product extensively before deciding to buy. Once convinced, she becomes a strong supporter of the product within her community, actively encouraging others to give it a try.

Cindy's behavior is that of a researcher, as she will study the product at length before making the decision to purchase. But once she is convinced, she will champion the product in the community and encourage others to try it too.

*I wanted to study health care because there were some problems with me and then I saw that the Nazava water tank is BPA (Bisphenol A) free. If you buy gallons of water, it contains a lot of BPA, and if you boil water from the "PDAM", it only kills the bacteria. The heavy metal is still there. This Nazava also filters the heavy metals, so I decided to buy it.*

**Researcher, 28 years old**

### Some behavioral traits

- Cindy places more emphasis on a product's specifications, financial, and health benefits to her family than her counterparts do.
- As an informed buyer, Cindy makes final decisions only after conducting thorough research and consulting her family. She is willing to take risks with new products, but only after gathering sufficient information about the product details, tests conducted by the organization and the kinds of chemicals it filters.
- She prioritizes those products that offer health benefits to her family while also affordable, reflecting her preference for economical options.
- Through diligent research and firsthand experience, Cindy overcomes her family's initial hesitation and persuades them to try the filter's water.
- Cindy relies on online sources like social media for information, even following influencers using the product and visiting the website for further details.
- She uses her savings to purchase the product and opts for a flexible payment plan to pay in installments.



### Dian's Bio

At 35, Dian Kulsum is an unmarried woman working as an employee in a private sector company. She lives with her mother, who supports Dian with minor household tasks.

Earning approximately Rp5,000,000 (US\$336) per month, Dian actively seeks out products that can ease her domestic responsibilities. She is more inclined than others to look for improved, affordable, and user-friendly household items.

### Dian Kulsum

#### The Upgrader

#### Demographic Information (of the persona she represents)

**Age:** 25–40 years old

**Marital status:** Equally likely to be married or unmarried

**Children:** Equally likely to have or not have children, lives with her mother

**Education:** Likely to have a master's degree

**Income:** IDR4,000,000 (US\$269) to IDR6,000,000/(US\$ 403) (lower-middle income bracket)

**Occupation:** Likely to be an employee in a private company

**Time Spent on Care Work:** 4–6 hours per day

#### Motivation

Striving to balance her work and home life, Dian has found relief in products like the Nazava water filter. This product has simplified her daily routine by lessening the time needed to purify water, making it readily accessible for her mother. Previously, Dian relied on outdated filtering techniques that led to health issues, so she searched for an upgrade. When she saw friends and their children drinking water from the Nazava filter, she deemed it trustworthy and opted to purchase it. Based on her favorable experience and the product's convenience, Dian believes other working women, including young mothers, could similarly benefit.

Dian's tendency to upgrade manifests in her willingness to invest in products that substantially cut down on her time or workloads. She is also open to exploring new and innovative products available in the market

*I previously used another product that was no longer on the market and was outdated. It was hard to buy a new one in the market. I was looking for another product. I found Nazava, which is more similar in function and practicality to what I was using before. But the main driver is that water is better quality.*

**Upgrader, 27 years old**

#### Some behavioral traits

- Dian is professionally successful and aims to utilize modern products that are both time efficient and suitable for her aging mother. While sometimes she can afford to hire domestic workers for basic chores, she ends up taking on the majority of the household responsibilities.
- As a "prudent risk taker", Dian was willing to transition from outdated water filters to the Nazava filter for its increased safety and convenience. Her trust in the filter increased after she observed others have positive experiences with it.
- Though she needed assistance with the installation, Dian found the product user friendly and appreciated the prompt customer service she received after her purchase.
- With limited time between her paid and unpaid work, Dian prefers visual aids like pictorial descriptions in instruction manuals. She feels she requires a reminder through an alarm or signal on the product for the filter to be changed. She appreciates aesthetic design choices like color options in products she installs at home.
- Having completed her payments for the Nazava water filter, Dian is already planning future investments in products that will further reduce her time and effort in household tasks.



### Atrika's Bio

Atrika Mulyani, a 40-year-old married mother of 3, lives with her family in a modest apartment. She values the opinions of her family, friends, and community in her purchasing decisions and is prone to adopting local trends, more so than her peers.

She discovered the Nazava filter through her friends and was encouraged to purchase it after seeing favorable feedback from influencers she follows on social media.

### Atrika Mulyani The Follower

#### Demographic Information (of the persona she represents)

**Age:** 35-40 years old

**Marital status:** Likely to be married

**Children:** 3-6 children

**Education:** Likely to have completed a bachelor's degree

**Income:** IDR4,000,000 (US\$269) to IDR6,000,000 (US\$403) (middle-income bracket)

**Occupation:** Likely to be a housewife, engaged in volunteer work

**Time Spent on Care Work:** 7-8 hours per day, often all day

#### Motivation

Atrika's reliance on her social network shaped her choice to purchase the Nazava water filter. The filter's safety features and convenience attracted her, especially after Atrika heard endorsements from acquaintances and saw positive reviews on social media. After consultation with her husband, she decided to invest in the product. Both contributed to the purchase of the product and paid it off in a single installment.

Given her positive experience with the filter, she is likely to continue using it for the long run. She expresses an interest in the availability of more offline stores for easier access to similar household products. Highly attuned to community behaviors, Atrika is receptive to various marketing tactics such as discounts, customer testimonials, installment plans, and group purchasing options.

*I've been looking for a water filter for a while but couldn't find it, so I finally switched to using gallons of water again. Then we met a friend who uses Nazava, so we saw the reviews for one month and finally bought it.*

**Follower, 37 years old**

#### Some behavioral traits

- Atrika is committed to her family's comfort and cleanliness, focusing on domestic tasks to ensure a pleasant home environment.
- Her interest in the Nazava water filter was sparked by friends and furthered by social media influencers and reviews; she often follows other housewives online to gain insights.
- Exhibiting "risk-averse" tendencies, she leans heavily on community trends and others' recommendations, often seeking suggestions before making decisions.<sup>48 49</sup>
- After discussing the water filter with her husband, they purchased it online and installed it together using a YouTube tutorial.
- Atrika is highly satisfied with the filter, leading her to wish for more offline stores and indicating her intention to purchase future products from Nazava.
- Her one-time payment and stated future commitment reflect a strong sense of brand loyalty and a propensity for repeat purchases

### 4.3.3 Journey maps

The personas are illustrative of different customer groups and how they discover, evaluate, and decide to purchase the Nazava water filter. In the section, journey maps are used to provide additional detail to describe the step-by-step emotional experience that customers undergo from first awareness of Nazava to finally making a purchase decision and using the filter.

Journey maps serve as a visual representation of the highs and lows that existing customers navigate as they use the filter. This map can enable Nazava to identify opportunities for improvement, making sure the different needs, desires, and limitations of distinct customer segments are factored into the ongoing development and refinement of their product.

The journey to using the Nazava water filter starts with recognizing the perils of consuming unclean water, particularly the potential health problems such as diarrhea. This awareness prompts customers to investigate alternative solutions within the Indonesian market and weigh what they have discovered. Subsequently, the decision-making phase ensues, with customers opting for the Nazava filter, encouraged by its affordability and simplicity. All our samples placed orders through various online platforms, including Shopee and Tokopedia.<sup>50</sup> Next is product usage, where customers interact with the filter daily, experiencing both its strengths and weaknesses. Customers continue using the filter until it reaches its lifespan. The journey culminates in loyalty and advocacy, as satisfied customers remain active users and recommend Nazava water filters to others.

**Table 1:** The process a customer goes through while purchasing the Nazava water filter

	Pre-product purchase		Product purchase		Post-product purchase		
Stage	The search for alternatives to refilled water	Discovering the product (consideration)	Purchase decision	Order of the product (payment + waiting)	Product usage	Sustained use	Loyalty and advocacy (product reviews and promotion)
Customer activities	<p>Customers distrusted the quality of water stored in drums as media sources reported dangers of contamination.</p> <p>Customers sought cost-effective and safer alternatives through various online platforms such as Google, Instagram, Twitter, and Youtube.</p>	<p>Customers discovered the filter online through positive reviews from followed influencers or neighbors, leading to extensive research on reviews and the official Nazava website to understand the filter's features.</p>	<p>Many women relied on reviews to evaluate the product, often consulting with husbands before purchasing, while some made independent decisions based on reading and watching online content.</p>	<p>Almost all women opted to order the Nazava product online, given the lack of physical stores, through platforms like Shopee and Tokopedia. On average, delivery times ranged from 1 day to a week.</p> <p>Prices varied across websites, ranging from IDR200,000 (US\$ 13.5) to IDR600,000 (US\$40).</p>	<p>All customers reported using the filter every day.</p> <p>Usage of the filter varied, with most using it for drinking and cooking, while others extended its use to watering plants and skincare, acknowledging its positive impact on health &amp; hygiene.</p>	<p>Customers highlighted the ease of use and viewed it as an investment. Once the product expires, they intend to replace it with another Nazava filter.</p>	<p>Although direct promotion within communities was not widely mentioned, customers recommended the filter to those inquiring, recognizing its benefits for low and middle-income households and suggested targeted promotion in these communities.</p>
Emotions	 Scared & worried	 Curiosity	 Trust & reliance	 Enthusiastic	 Satisfied	 Happy but slightly annoyed about cleaning & filtration time	 Satisfied



Levers

The product's availability on various online platforms enables people to easily search for reviews and form their own opinions.

Some customers noted that while the initial purchase cost is relatively high, the long-term affordability of the filter becomes evident as it reduces the expenses associated with ordering drums of water.

Nazava can use these insights and incorporate the long-term savings of using this product into their promotional material.

Customers discovered that the Nazava filter offers a superior taste compared to other filters. It is also remarkably user friendly, requiring less than a day to learn how to operate.

They reported saving money by reducing the number of water drums they need to purchase and also cutting down on gas expenses, as they no longer need to boil water as frequently as before.

The customers praised the user-friendly instructions for operating the filter. The brochure stands out from other pamphlets with its colorful pictures and concise, one-page length, making it easier to read and understand.

Customers reported cleaning the filter after approximately every 80 liters.

Customers suggested that Nazava should emphasize not only the competitive pricing of the product compared to others in the market but also its ease of use.



Barriers

**Availability of alternative cheaper products**  
In the Indonesian market, there are numerous similar products available, but the Nazava filter does not appear as the top search result. Customers often discover Nazava only when the initial search results present filters that are either too expensive or complicated to use.

Nazava can optimize its website and online content to improve its visibility in search engine results. It can also invest in online advertising campaigns to increase brand awareness and reach a wider audience. By incorporating specific keywords and demographics can help ensure that Nazava appears prominently when customers search for related products.

**Several customers experienced the product being unavailable or out of stock during their first attempt to place an order.**

**Time to Filter**  
The Nazava water filter is slower compared to other available filters, resulting in a longer water filtration process. The Nazava filter purifies 2-3 liters of water per hour.

Additionally, its storage capacity is smaller than other available filters.

**Complicated cleaning procedure**  
Several users expressed dissatisfaction with the complex cleaning procedure. They found disassembling the filter for cleaning to be cumbersome and expressed a preference for a more practical approach.

**Other brands appear more prominently to customers while searching online.**  
Nazava could enhance its advertising and visibility to increase awareness of the product among a wider audience, as many potential customers are not currently aware of the Nazava filter.

### 4.3.4 Nazava's impact

This section presents the impact of the Nazava water filter solution on customers' daily lives, based on their qualitative interviews. Quotes are the customer's own words.

All customers reported experiencing positive changes in their lives since using the Nazava's water filter, including reduced time spent procuring and boiling water, improved health conditions, and more free time. The impact has been consistent across all customer personas – first movers, researchers, followers, and upgraders – as their experience does not differ significantly once they have purchased and used the product.

#### Qualitative evidence of theory of change

##### Long-term outcomes:

**LTO1:** Increase in time available for income generation and/or leisure for women and girls of the household.

**LTO2:** Less time spent taking care of household members that are sick due to waterborne diseases.

- Increased free time:** Customers recognized Nazava water filter as a valuable solution beneficial for minimizing the time and effort spent on procuring and boiling gallons of water, leading to improved time management for household tasks. This surplus time has allowed them to engage in leisure activities such as quality time with family and friends or watching television. However, many women chose to utilize this extra time to complete other household chores and/or even pursue additional income-generating opportunities through paid work or their own small businesses.

*“There is a time when I watch TV without being bothered by the arrival of the water gallon delivery man. I don't need to wait for the delivery man to come”.*

**Upgrader, 36 years old**

- Improved well-being:** The product has led to reduced fatigue and an increased resting time. Customers have noticed a significant improvement in their mental well-being, as they are no longer burdened by concerns regarding the delivery and handling of water gallons. They expressed feeling less anxious about the possibility of running out of water. They shared their previous fears and worries about falling ill and encountering strangers during water deliveries, which have now been alleviated by having the filter conveniently located within their homes.

*“The advantage is there is no need to lift the gallons anymore. Therefore, we don't have to wait for the help from the men to get drinking water.”*

**Upgrader, 36 years old**

- Reduced expenditure:** Customers reported reduced expenditure in 2 key areas.
  - Firstly, they reported a decrease in expenses related to procuring water in gallons. Many found the Nazava water filter to be notably more affordable compared to other filters available in the market. By directly filtering tap water, the Nazava filter offered a cost-effective solution. Although the initial purchase of the filter represents a significant expense, it is a one-time investment that leads to long-term budget reductions. On average, customers reported savings up to 20-30% more on water-related expenses.
  - Secondly, customers appreciated the filter's user-friendly design, which made cleaning and maintenance effortless. The availability and affordability of spare parts, such as filters and tubes, further contributed to the

cost-effectiveness of the Nazava filter. None of the customers mentioned any recurring costs associated with the filter, highlighting its economic benefits in the long-run.

*"It reduces the cost to buy gallons of water. I can save a little more money, up to 40% more."*

**First Mover, 40 years old**

*"It reduces the financial burden of my household. I also don't need to buy and carry heavy gallons anymore."*

**Follower, 27 years old**

#### Medium-term outcomes

**MTO1:** Increase in time saved by women and girls in water collection/purification.

**MTO2:** Reduction in the incidence of waterborne diseases due to the consumption of unclean drinking water among members of the household.

- **Time saved in water collection:** Women in the household spent hours on purchasing water, waiting for delivery of the gallons, boiling the water for everyday use, and maintaining the gallons. On an average, women reported saving up to 2-3 hours per day after adopting the water filter.

*"When compared to boiling water, it's clearly very different. It is very helpful. Before we have to take out the gallons and the pot for boiling water and 8 liters takes a long time to boil. Now we don't need to do that."*

**Researcher, 30 years old**

- **Improved health:** Almost all customers have experienced notable improvements in their overall health and that of their families after adopting improved water filter solutions. With access to clean drinking water, the incidences of dehydration, dry lips, and waterborne infections have significantly reduced. According to some, the Nazava water filter stands out in the market, as it effectively filters out chemicals<sup>51</sup>, metals, and microplastics<sup>52</sup>, ensuring the provision of the healthiest form of water. Additionally, the installation of the Nazava filter in their homes has alleviated various physical discomforts such as back pains, body aches, joint and hand pains. It has also eliminated the risks associated with carrying heavy water gallons, removing cumbersome gallon covers, and accidents during the boiling process.

*"I haven't had diarrhea in a long time. In the past by consuming the water from the previous water filter I had frequent diarrhea. So now I use gallons of water, but I filter it again using Nazava".*

**Upgrader, 27 years old**

*"I don't feel thirsty anymore as I drink enough water since clean water is available (in my home). Lack of clean water made me dehydrated, and I had dry throat and lips".*

**Follower, 23 years old**

#### Short-term outcomes

**SO1:** Increase in adoption of water filters by low-income households.

**SO2:** Increase in regular usage of water filters by households.

- **Regular usage:** The Nazava water filter has become an essential part of the daily routines for all women interviewed. It has seamlessly integrated into various aspects of their lives, serving them and their families in multiple ways. They rely on it for drinking, cleaning, washing, food preparation, face and skin care, and even supporting their small businesses. By eliminating the need to purchase gallons of water and boil it regularly, the filter has reduced their efforts and saved them valuable time. Due to this several women reported shifting to adopting a water filter into their daily routines. An overwhelming majority reported no disadvantages in using the product.

*“Actually, the use of gallons of water and Nazava is the same. This gallon of water is for drinking, for cooking, and sometimes for drinking as well”.*

**First Mover, 49 years old**

■ **Product perception:**

- Customers have compared the Nazava water filter to other water filter brands in the market and have found it to be more cost-effective, affordable, durable, and compact. Some also reported that the product comes in different color options, is minimalistic, and can easily fit into any space within the home, making it a convenient and aesthetic product to have within their homes.
- Customers noted that previously the purchase of gallons and use of gas to boil water would lead to monthly expenses of IDR15,000 (US\$1) which has reduced to just the one-time installation cost of the product, which is IDR250,000 (US\$17).
- Those who use gallons of water reported it being a tiring, effortful, and uncomfortable process. Women reported feeling uncomfortable having men deliver the gallons to their home, that it would take time and they could not engage in any other activity while the gallons were being delivered and placed or water was being boiled.

*“Previously, I used a different filter because the groundwater at home at that time happened to be not good enough. Therefore, for the need to drink or eat there had to be an additional process. Until 2021 it’s hard to find this product in the market, until finally the filter I had at home was broken. It was hard to buy a new one in the market. I was looking for another product. I found Nazava which is more similar in function and practicality. But in terms of the initial ingredient in this case the water has better quality”.*

**Upgrader, 43 years old**

*“That’s very helpful. In the past anyone who found that we ran out of water then that person had to boil water. Now there’s no such thing anymore. It is me myself because the product can answer the anxiety of me consuming the available drinking water at that time”.*

**Researcher, 30 years old**

- **Product satisfaction:** The Nazava water filter received a satisfaction score of 2.67 out of 3, with the majority respondents expressing high satisfaction with the product. Notably, no respondents reported any dissatisfaction, while the remainder felt neutral about their satisfaction. The primary reasons for high satisfaction among most women were the significant reduction in time spent on water procurement and boiling, as well as the improved access to clean drinking water and associated health benefits. The affordability of the product also emerged as a motivating factor for many. However, a few women reported challenges related to filter cleaning and the filtration time compared to other water filters in the market. Nevertheless, the overwhelming positive satisfaction score indicates that the Nazava filter has been well-received by its customers.

*“I am very satisfied because it’s just what my expectations are. This product is interesting. It has an affordable cost. Many influencers have used it.”*

**Follower, 35 years old**

*“Because I can save more money by using it. And I get the benefit from consuming clean water. It saves time, and it’s more practical”.*

**Researcher, 23 years old**

- **Redistribution:** According to the customers, the water filter has been praised for its user-friendly nature and

accessibility to different family members, including girls, young children, and the elderly. Women mentioned instances where they could easily assign water-related tasks to younger family members, taking advantage of the filter's ease of use. This delegation of tasks has resulted in time savings for women, enabling them to focus on other responsibilities. The filter not only provides clean water but also aids in efficient task allocation within the household.

*"(The filter benefits) all of the family members because it is more efficient. No need to buy gallons anymore. And it's more practical because there is no need to carry gallons. And I have more space because there is no need for a place to keep the gallons."*

**Researcher, 28 years old**

## Outputs

**O1:** Increased availability of the water filters to low-income households through multiple delivery channels and payment options.

**O2:** Increased affordability of water filters for low-income communities.

**O3:** Increased awareness of clean water solutions in communities.

- **Affordability:** Almost all respondents appreciated the affordable nature of the product compared to traditional methods of accessing water and other water filters in the market. Most women recognized that the upfront payment was a one-time cost that would yield long-term economic benefits and financial savings. No women reported any recurring fees or additional charges associated with using the filter. This suggests Nazava's understanding of its customers' financial backgrounds and needs. To capitalize on this, it would be advantageous for Nazava to effectively communicate the long-term value of adopting their filter and offer diverse payment options to cater to the needs of potential customers.
- **Accessibility:** A small number of women highlighted the availability of installment payments and the opportunity to participate in Nazava social gatherings as favorable options. Those who could not afford the full upfront costs expressed enthusiasm for Nazava's flexible payment solutions. The long-term cost reduction associated with the filter made it a worthwhile investment, prompting women to explore various payment methods to make the purchase. Additionally, the majority of women reported using their own savings to independently decide on and pay for the water filter. This further underscores Nazava's ability to reach a broader audience and enhance accessibility to their product, particularly in the last mile.
- **Society's perception of the household after Nazava purchase:** Customers report that there is a prevalent positive social perception associated with owning a water filter. Others in the community express curiosity and interest in the water filters used by Nazava customers, specifically about the economic and health benefits they offer. A few women mentioned that owning a Nazava filter not only signifies financial efficiency but also reflects a sense of environmental consciousness.

*"People who come to my house always ask about it, and I recommend it. They just ask what the impact and benefits are."*

**Follower, 37 years old**

- **Installation and maintenance:**
  - The installation process was straightforward for most women, with many able to complete it within 1-2 hours. In some cases, women sought support from their husbands to do the same. The user manual received positive feedback, as it was deemed user-friendly, easy to understand, and easy to follow.
  - Customers do not report spending any money on product maintenance. Most women clean and maintain the water filter themselves. While a few women mentioned purchasing cleaning tools and finding spare parts

easily, these instances were rare. Only a small number of women reported requesting assistance from Nazava for product-related support.

*"I searched videos on YouTube about how to install a water filter because the water couldn't flow from it. I contacted the seller. I was assisted with instructions on how to use the water filter."*

**Follower, 37 years old**

- **Ease of use:** All customers unanimously reported that the product was easy to install and use. Women, on average, spend between 30 minutes to 1 hour of time to familiarize themselves with the product and its features. They found the product to be user friendly and not at all complicated, even for younger children and elderly family members.

*"Because the delivery is from Bandung, if I'm not mistaken, it takes 2-3 days. After we unbox it, we assemble it, wash it, and fill it with water. Assembling it might take about 30 minutes because there is already a tutorial, and it's easy to understand too."*

**Upgrader, 35 years old**

- **Value addition of the product:**

- All customers reported increased and easy access to clean drinking water, resulting in significant time savings on purchasing, delivery, and boiling water. The value of the Nazava filter is evident in multiple aspects, including improved hygiene and health, economic empowerment of women, and peace of mind through alleviation of stress associated with water procurement and boiling. Most customers emphasized the ease of purchasing the water filter compared to traditional methods of water storage and filtration.
- The product was not just valuable in terms of health benefits and accessibility to clean drinking water, several women used water from the filter for commercial purposes to increase their incomes by supporting their small businesses. For example, women used filtered water to water plants to sell or to make water-based drinks.

*"I don't have to call the shop anymore. And if the water runs out, I just need to fill it up again. I don't have to wait for the delivery of gallons to drink water. It is fresher and clearer. It has a slight taste, but not a chemical like taste."*

**Upgrader, 34 years old**

## 5 - LOOK FORWARD

### 5.1 Growth and sustainability plans

To sustain and scale, Nazava Water Filters will maintain the existing business model and focus on the following pathways:



Expand sales in  
Indonesia and  
Kenya

By 2030, the enterprise plans to provide 10 million people with access to safe drinking water from half a million in 2022. Nazava Water Filters plans to use a mix of channels to increase sales in both countries.

#### Sales through MFI partners

Nazava Water Filters aims to expand the number of MFI partners in both Indonesia and Kenya. With additional MFI partners, the enterprise will be able to cover 80% of the Indonesian market. Similarly, Nazava Water Filters has partnered with 5 MFIs in Kenya and plans to establish partnerships with at least 3 other MFIs in the country.

#### Sales through direct sales agents

The enterprise aims to expand its direct sales agents in Indonesia and Kenya. In Indonesia, the enterprise plans to increase the number of direct sales agents and the number of sales per direct sales agent. It plans to increase the number of sales agents from 7 to 50 direct sales agents. It also aims to increase sales per direct sales agents from 30 sales per month to 80 sales per month. The enterprise also intends to build a network of at least 200 direct-consumer sales agents in Kenya.

#### Sales through last mile distributors

The enterprise aims to establish partnerships with existing last mile distributors to sell its products in rural areas of Kenya. As part of this model, the last mile distributors purchase the water filters and sell them to end customers. The customers pay for the water filter in installment payments. As Nazava Water Filters receives upfront payment for the water filters, it is able to mitigate possible credit risk associated with this channel. The enterprise is already in discussion with last mile distributors such as Greenlight Planet and BURN Manufacturing.



Expand  
provision of  
safe drinking  
water to  
schools

The enterprise aims to expand the provision of drinking water in schools. By 2027, it intends to reach at least 50,000 schools in Indonesia and East Africa, from 600 in 2022. In the past, the enterprise has collaborated with corporations to provide water filters to schools. The enterprise has commenced discussions with government agencies, UNICEF, and other corporations to increase the number of schools served. It has recently received funding from Danone to increase the number of schools that are provided with water filters. The enterprise has observed that provision of water filters in schools also enables the enterprise to increase awareness of affordable point of use water filter solutions in the community (households that send children to that school). It contributes to increasing uptake of Nazava Water Filters in the community.



Expand export  
sales to other  
countries

The enterprise aims to expand its export sales to countries in East Africa, West Africa, and Latin America. Nazava Water Filters has established an export sales team to lead this initiative from Indonesia. The export sales team aims to sell water filters to distributors in countries other than Indonesia and Kenya. The enterprise has already commenced discussions with distributors that would provide the product to customers in Burkina Faso, Mali, Rwanda, Tanzania, and Uganda. It is already in discussion with a distributor to sell its water filters in Latin American countries.



Expand  
production  
capacity

The enterprise aims to increase its production capacity by establishing a local production facility in Kenya by 2023, for which it would require US\$100,000 in funds. Currently, the enterprise's production facility is based in Indonesia, and the water filters are shipped to Kenya and exported to other African countries. A local production facility will enable the enterprise to further reduce the price paid by customers to purchase Nazava water filters in Kenya and exports to other countries in Africa. The production capacity of Nazava Water Filter's Indonesia facility is 10,000 water filters per month.

To support its growth plans, the enterprise aims to onboard an HR Manager and a Finance Manager in order to have more staff members in middle management positions.

## 5.2 Ask of investors and stakeholders

### Financial needs:

#### Funding to support expansion in Kenya:

The enterprise seeks a loan of US\$1.5 million to scale the business in Kenya. The funds will be used to establish a local manufacturing facility and enhance its marketing and sales. Some funding will also be used to establish processes for issuance of carbon credits. The enterprise has already raised US\$650,000 and needs to raise the remaining US\$900,000.

#### Funding to support expansion in Indonesia:

The enterprise seeks grant and equity funding to expand its operations in Indonesia. Over the next 5 years, it seeks a grant of US\$12 million to subsidize the cost of providing water filters to schools in Indonesia. The funding will be used to reach 7.5 million children across 50,000 schools in the next 5 years. Nazava Water Filters also intends to expand its production facility and its marketing and sales in the country. To support this expansion, the enterprise envisages that it

will need to commence equity fundraising activities in 2025.

### Non-financial needs:

**Human resources:** The enterprise needs support to build and manage a team of at least 50 direct sales agents in Indonesia and 200 direct sales agents in Kenya. In addition to building its sales teams, Nazava Water Filters seeks personnel with expertise in production and data analytics. Personnel with production expertise will enable the enterprise to enhance its production capacity. It seeks personnel with data analytics expertise to review and improve its operations. The enterprise also seeks external support to develop its enterprise resource planning (ERP) system, training for staff development and data analysis. It seeks pro-bono support from external experts and corporate volunteering programs.

**Marketing:** The enterprise needs support to enhance its marketing efforts, especially in Indonesia, where significant effort is required to gain customer trust

and convince customers to purchase its products. The enterprise needs assistance to develop marketing collaterals (videos, pamphlets, infographics) that can reduce the time taken for customer acquisition for both Nazava Water Filters and its resellers. The enterprise also needs support to enhance marketing collateral in Kenya.

**Partnership development:** The enterprise is seeking partners (government agencies,

MFIs, distribution networks) to increase its reach to customers in Indonesia, Kenya, and other countries.

**Production capacity:** The enterprise seeks mentorship support to enhance its production capacity in Indonesia and establish a production facility in Kenya. Mentorship support is required for various areas such as HR, production, financial and management.

### 5.3 Lessons learned

Nazava's business model demonstrates that it is highly effective in improving the quality of life for all Indonesians- especially women and girls who bear the brunt of water collection and purification and other care tasks- and is scalable to other countries. The founders' experience indicates that it is critical to continue innovating and refining the product and payment options to achieve business growth and scale. Based on feedback from customers, the enterprise enhanced the product design and launched a filter with a slimmer design compared to a previous bulky design. This ensured that the water filter was not only a functional product but also aesthetically appealing to its target customers. To increase product uptake, the enterprise also developed partnerships that enable customers to purchase the water filters and pay via installments.

Nazava's journey shows that collaboration with other stakeholders can play a significant role in boosting business growth and enhancing operations. The enterprise has partnered with MFIs for product sales in Indonesia and replicated this partnership model with MFIs in Kenya. Nazava has also collaborated with Kiva<sup>53</sup> to improve product access in Indonesia. Kiva provides interest-free loans to small resellers in Indonesia. These loans enable purchases of larger product consignments and help resellers to also save on shipping costs. Collaborations with MFIs and resellers have enabled the business to lower customer acquisition costs and increase product sales. The enterprise has partnered with universities to support activities such as increasing sales through resellers, enhancing product design, and conducting impact studies. Furthermore, the enterprise has been open to partnering with other stakeholders such as incubators, accelerators, corporates, government agencies, and foundations to increase its reach to customers and enhance its operations. In the past, the founders have participated in incubation and acceleration programs to enhance their skills.

Nazava's model also highlights the need for deeper-level evidence, beyond just enterprise reach, to assess how labor-saving technologies reduce the care workload of women and girls.

These insights will further shed light on the role of labor-saving technologies in the overall lives of women.



*In the design of our products, we involved our future customers in a Human Centered Design approach. This was crucial to ensure quality. It is important that the product you sell is not just functional, but also attractive and aspirational, something that lower-income households really want to invest in.*



Lieselotte Heederik, Co-founder & Director Nazava Water Filters

## 5.4 Recommendations for policymakers, investors, and entrepreneurs

 <p>Policymakers</p>	<p><b>Enhance existing campaigns to create behavior change related to drinking water practices.</b> These campaigns should also include information on private sector solutions such as locally available water filters and other methods for water purification. This will increase uptake of filtration solutions amongst the intended communities. For example, the Ministry of Health in Indonesia advocates the need for treating drinking water in households. However, this initiative does not include information on locally available/affordable solutions that households can use to purify the water at home. Including such information will not only enhance uptake of household water treatment solutions but also reduce carbon emissions associated with water purification through boiling.</p>
 <p>Investors</p>	<p><b>Deploy capital to address challenges faced by underserved customers.</b> Despite investor interest in the sector, there have been a limited number of investments in the sector. Other than pure financial returns, investors should take a holistic view and consider factors such as impact on women and their lives.</p>
 <p>Entrepreneurs</p>	<p><b>Make enterprises more responsive to customer needs.</b> Entrepreneurs must establish relationships with customers and/or end users and put in place processes that seek feedback to improve their products. The co-founders also urge entrepreneurs to participate in incubation and business acceleration programs. In their experience, these opportunities can help the founders enhance their skills and improve business processes. The co-founders suggest that entrepreneurs should seek out pro-bono services from required experts.</p>

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<sup>38</sup> More information on cost comparison calculations can be found [here](#).

<sup>39</sup> 2X criteria can be found [here](#). We drew on the leadership, entrepreneurship, employment and consumption criteria in our assessment

<sup>40</sup> We assessed businesses that worked in the sectors of energy and emissions or water and sanitation against 4 climate and gender justice criteria related to: environment and land use; health, safety and security; education and training; and time use.

<sup>41</sup> Businesses were assessed on a 21 point scale, with scores of 0-7 being gender unintentional, scores of 8-14 being gender intentional, and 15-21 being gender transformative.

<sup>42</sup> Businesses were assessed on a 12 point scale where 0-4 is gender unintentional, 5-8 is gender unintentional and 9-12 is gender transformative.

<sup>43</sup> Nazava Water Filters. Social Impact Assessment. <https://scholarcommons.scu.edu/cgi/viewcontent.cgi?article=1071&context=gsbf>

<sup>44</sup> The research team conducted 12 in-depth interviews with customers of Nazava water filters. Nazava shared a list of customers who fulfilled the following criteria: female customers, have been a customer of the water filter for a minimum of 3 months and a maximum of 6 months. The customers for interview were selected through purposive sampling to ensure diversity in age, occupation, and socio-economic status. An interview guide was used to ensure consistency in the questions asked, although some follow-up questions were added as necessary to explore topics in more detail. The interviews were conducted in Indonesian (Bahasa), audio-recorded, and transcribed verbatim for analysis. The data collected from these interviews was analyzed thematically in NVivo to identify key themes and patterns in participants' responses. Given the small sample size and purposive sampling, one of the limitations of our analysis is that it might not be representative of the different socio-demographics of all Nazava customers.

<sup>45</sup> Despite efforts to reach a diverse customer base, the study relied solely on remote phone interviews and was limited to customers who were both available and willing to participate. Consequently, the customers we were able to engage for this research predominantly belonged to middle income households. As a result, the insights obtained from these interviews might not capture the experiences of low-income households, a critical segment that benefits from Nazava. The participants in this study thus represent an atypical group, and their purchasing experiences and the impacts they experienced may not be indicative of the typical customer's experience with Nazava. This limitation could significantly impact the generalizability of the findings, and readers are urged to consider this context when interpreting the results.

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<sup>46</sup> US\$1 = IDR14,884.05. Retrieved from: <https://www.bi.go.id/en/statistik/informasi-kurs/transaksi-bi/Default.aspx>

<sup>47</sup> The sample's average income is approximately 2.14 times higher than the national average, a direct result of the oversampling of customers from middle income brackets, as previously detailed. This figure might not accurately portray a typical Nazava customer; therefore, readers are requested to bear this context in mind when interpreting the results.

<sup>48</sup> Atrika's behavior is influenced by others, a concept known as social proof in behavioral science. Social Proof is a psychological phenomenon where people look to the actions and behaviors of others in a particular situation to guide their own actions and decisions

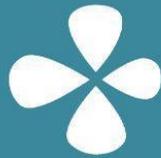
<sup>49</sup> The customers within this category "the follower" can also exhibit lack of confidence in their purchasing decisions because they are more susceptible to the opinions and recommendations of others. They may rely heavily on the opinions of people they trust, such as family and friends, rather than their own judgements. This can lead to uncertainty and hesitation when it comes to recommending the product to others, as they may not feel confident in their own knowledge and experience with the product.

<sup>50</sup> It is important to note that online purchase does not represent the typical Nazava customer. As stated earlier, an average customer usually purchases the filter through resellers or MFIs. Considering that our sample primarily consists of middle-income consumers from urban localities, their purchasing habits might deviate from those belonging to low-income households or residing in rural areas

<sup>51</sup> An overview of all the contamination that can be removed through Nazava water filters can be reviewed [here](#). Laboratory tests have been conducted to test chemicals in water that has been filtered by Nazava water filters. Details of these laboratory results can be viewed [here](#).

<sup>52</sup> The ceramic water filter candle used by Nazava has pores of 0.4 micron which prevent microplastics from passing into the water. See [here](#) and [here](#).

<sup>53</sup> Kiva is an international nonprofit organization, which extends financial access to help underserved communities. It does this by providing crowdfunding loans, microfinance with flexible terms, supporting community-wide projects, and lowering costs to borrowers. Kiva is active in more than 70 countries across 5 continents. <https://www.kiva.org/>



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