

Research Paper

Reusable Pads industry in Africa

About Noru Capital

Noru Capital is a venture capital and advisory firm that invests in innovative companies from idea to series A in francophone sub-Saharan Africa.

Leveraging its knowledge of African entrepreneurial ecosystems and its solid expertise in advisory across many industries, Noru Capital advises international and local organizations on ecosystem building, capacity building, innovation, and entrepreneurship acceleration initiatives in Africa.

As a key partner of Next Health Accelerator, Noru Capital brought end-to-end support to the program and shared in this report the essence of its reflections on menstrual hygiene in Africa.

About Next Health Accelerator

Next Health Accelerator empowers and supports entrepreneurs and startups that are inventing the future of health in Africa.

It is a unique acceleration program that offers six months of opportunity assessment, product development, acquisition marketing, network access, and expert mentoring for selected startups, focusing on regional expansion and product adoption and integration in existing value chains.

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Introduction

Africa counts around 350 million girls and women of reproductive age who live with less than \$1.90 a day. For women and girls in that population, period poverty is still a significant issue, with comprehensive daily implications. They are unable to afford costly menstrual hygiene products leading to unhealthy period management practices, such as use of rags, feathers, and leaves. They also face strong cultural stigmas and biases relating to menses, which may even result in social exclusion.

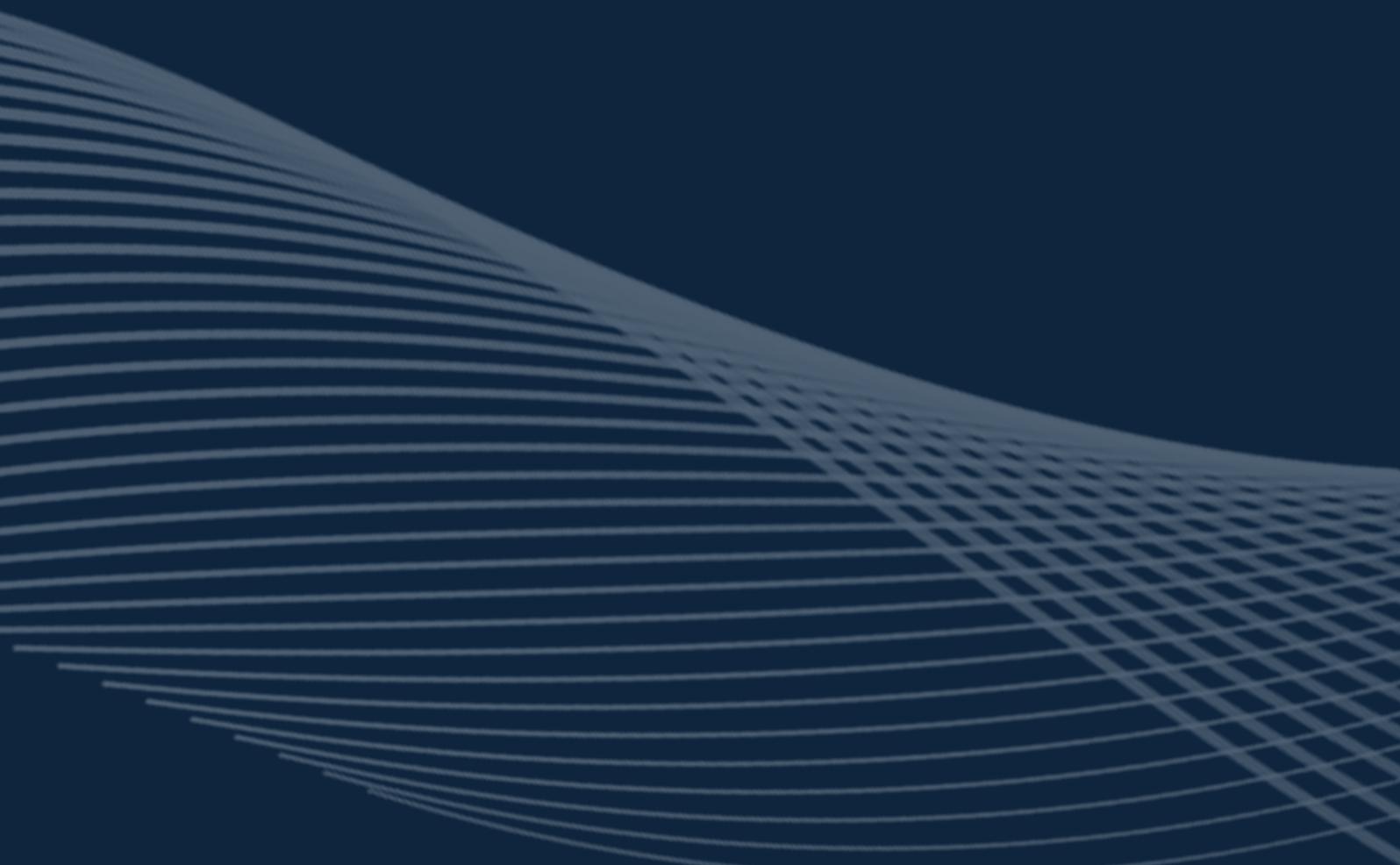
Over the past decades, many stakeholders have worked to provide practical solutions to this situation, including governments, international organizations (UNFPA, Unicef, UNHCR, etc.), Non-Governmental Organizations (Bill & Melinda Gates Foundation, Buffett Foundation, etc.), and private companies. Among the large array of privileged solutions, reusable pads appear as a remarkable innovation, representing a healthy and affordable alternative for the millions of women who cannot afford the more traditional disposable sanitary products.

The theme of reusable pads has been widely covered over the past years, through academic research papers, press articles, reports, and analyses. However, these endeavors have mostly focused on the social impact potential of the reusable pads. In contrast, Next Health Accelerator and Noru Capital have elected to approach the topic through business-oriented lenses, broadening the scope and understanding of the subject. As a result, the current research paper intends to complement the existing knowledge body with a business analysis, shedding new light to a widely discussed topic, and providing novel data to analyze, to the ecosystem of stakeholders.

This paper is subdivided into three chapters, each focusing on a specific facet of the reusable pads business in Africa. The first chapter emphasizes on market dynamics (for both disposable and reusable products) and covers sanitary pads market sizing in Africa, business models, and a few success stories on that industry. The second chapter explores the quality standards of reusable pads on the continent and product certification strategies. Finally, the third chapter discusses growth levers and growth strategies for reusable pads manufacturers in Africa.

Chapter 1

**MARKET DYNAMICS ON THE HYGIENIC
PADS MARKET IN AFRICA**





Introduction

This chapter aims to present an overview of the complete sanitary pads business, covering characteristics of both disposable and reusable products markets. Its main purpose is equipping the reader with a general understanding of the sanitary pads business, along with identifying characteristics unique to reusable products segment. The chapter is subdivided in four (4) main sections as follows:

- **Buyer and end-user profiled**
- **Market sizing**
- **Overview of business model in the reusable pads industry**
- **Overview of key market players**

1- One market, three realities

Sanitary pads manufacturers in Africa interact with three segments of clients:

- **Individual buyers of reusable pads**
- **Individual buyers of disposable pads**
- **Organization buyers of reusable or disposable pads**

It is essential to differentiate buyers from end-users, in the document. While individual buyers may also be end-users (e.g. a young woman buying products for herself), it is not uncommon for a family member (e.g. a husband, a dad, or a mom) to purchase products for their female relatives.

In contrast, organization buyers are never end-users, as they donate or sell heavily discounted products to their beneficiaries, who are the real end-users.

1-1/ The typical profile of an individual buyer of disposable pads

The characteristics of a typical individual buyer of **disposable** pads are as follows:

- **Daily income: \$15 or more ¹**
- **Professional situation: owns a job or an economic activity that generates regular revenues.**
- **Social background: educated or exposed to the way of life in developed countries and western influences**
- **Continental mapping: 67% of people in this category live in five countries (Egypt, Nigeria, South Africa, Morocco, Algeria).**
- **Location: lives in African capitals and big cities**
- **Knowledge of menstrual health management practices: good command of risks, dos and don't**

Within this category, customers with the highest income generally seek world-known brands of reusable pads like Always or Vania. They are perceived as more innovative, more modern, and safer than regional or local brands. However, given the high prices of those products, a significant share of this segment also relies on low-cost disposable pads imported mainly from Asian countries.

¹Appendix 1 : Market sizing methodology

1-2/ The typical profile of an individual buyer of reusable pads

The characteristics of a typical individual buyer of reusable pads are as follows:

- **Daily income: between \$5.5 and \$15²**
- **Professional situation: owns an informal job or a small economic activity that generates irregular revenues.**
- **Social background: poorly educated with low exposition to the way of life in developed countries and western influences**
- **Continental mapping: this category is present in all African countries and represents a share of the population ranging from 20 to 70% depending on the country .**
- **Location: lives in African capitals in poorer neighborhoods and suburbs.**
- **Knowledge of health Central management practices: a general understanding of risks, dos and don't**

This category of customers understands the importance of handling their menses with appropriate products, and the associated risks. However, due to the unaffordability of disposable pads, reusable pads are great alternatives. Most women and girls purchase products from local manufacturers, and shops importing mostly from Asian countries.

1-3/ The typical profile of an end-user served by an organization buyer of reusable or disposable pads

In Africa, a population counting 350 million women and girls of reproductive age live with less than \$1.90 a day. Unfortunately, this population cannot afford healthy sanitary pads of any kind. For most of them, the only access to such indispensable manufactured goods is through donations from NGOs, local public authorities, and impact-oriented private organizations (foundations, CSR programs, etc.). These organizations can be state-owned, private-owned, or para-public, operate in one or multiple countries globally, and their headquarters are usually based in Africa, Europe, or America.

There is an increasing attention from organizations towards reusable pads. Over a year, such pads are typically up to 50% less expensive than their disposable counterparts, hence representing sizably more sustainable and cost-effective solutions for low-income population segments.

¹ Appendix 1 : Market sizing methodology

² World Bank Open Database

The typical profile of an individual beneficiary of disposable pads donated or discounted by an organization is as follows:

- **Daily income: less than \$5.50**
- **Professional situation: agriculture and other primary sector activities**
- **Social background: no or limited education**
- **Continental mapping: +40% of the population**
- **Location: lives in rural areas**
- **Knowledge of healthy menstrual management practices: poor knowledge**

2- Market size

Limited data is available on the size of the sanitary pads market in Africa. Unfortunately, the few reports on this critical topic are rarely open-sourced. The market sizing hereby presented is an effort to fill this information gap. Its results are based on:

- **A three-fold segmentation model**
- **Economic data on income provided by the World Bank**
- **Prices of reusable pads and disposable pads based on the average prices observed in 9 African countries**

The **sanitary pads market in Africa** is estimated, including both disposable and reusable segments, at **\$772 million** in 2021. The market is expected to grow at a yearly rate of 2.7%, as the demographic growth rate until 2025. The global market is distributed among the segments as follows:

- **\$263 million for the disposable pads purchased by individual buyers**
- **\$290 million for the reusable pads purchased by individual buyers**
- **\$219 million for the reusable and disposable pads purchased by organizations**

3- Overview of business model pillars in the reusable pads industry

For this paragraph, business strategy from 10 distinct companies² manufacturing reusable pads in Africa, has been reviewed. While each company has its own particularities and idiosyncrasies, four structuring patterns have been identified. Each manufacturer constructs its business model around variations of these general patterns.

Table 1 summarizes the business model elements used by the manufacturers to bring innovation to the reusable pad industry and address market needs.

²See list of companies in Appendix 2

Table 1: Business Model Pillars

	Product Differentiation	Manufacturing Strategy	Targeted Buyers	Targeted End-users
#1	Safety and health protection	Societal impacts: low-income women empowerment through formal employment	Non-Governmental Organizations	Low-income population in Africa
#2	Convenience	Eco-friendly sourcing and manufacturing	Sponsors	Middle and high-income population in Africa: Offer a more affordable alternative to disposable pads users
#3	Affordability		End-users	Middle and high-income population in western countries: Offer an alternative to chemical disposable pads and address ecological awareness

3-1/ Product differentiation

The criteria that influence the decision of customers to buy reusable pads can be formalized around 3 aspects:

- **Safety consideration:** Women's skepticism about reusable pads safety pushes manufacturers to bridge the reassurance gap by using innovative raw materials increasing safety level. Many innovations have been introduced to address this issue, illustrated with the following three approaches:

1. The use of chemical-free treatments leaving positively charged electrons on fabrics to attract and kill negatively charged microbes.
2. The use of organic cotton ensuring the absence of pesticide residue in the product.
3. Companies are also starting to get their products certified to reassure consumers. Certifications are performed on the actual reusable pads or in the materials used to manufacture the product

- **Convenience consideration:** Ease of use and maintenance concerns are significant constraints for reusable pads attractiveness. On one hand, access to water has always been an issue in rural areas, wherein most households do not have safe and piped water. On the other hand, for women accustomed to disposable products, maintenance of reusable pads may be perceived as prohibitive. Manufacturers are innovating to make product care more convenient. For example, a company has developed a pad that can be pulled using two tabs to become a pouch. This mechanism prevents from touching soiled pads. Another company has developed an innovative tool designed to wash, dry, and carry reusable pads using a string to wring out the pads and drastically reduce drying time.

- **Affordability consideration:** Affordability is the single steepest barrier thwarting access to menstrual products, particularly for low-income population. In Kenya for example, 65% of women cannot afford menstrual products according to a study published by menstrual health day⁵. Turning reusable pads affordable hands, a sustainable solution to menstrual problems faced by rural and low-income women in Africa. In Nigeria for example, the average monthly cost of living is roughly 111 U.S dollars, representing 3.7 U. S dollars per day, according to Statista⁶. A company is offering pads kits for at 2.07 U. S dollars, which is less than the average daily cost of living, making it accessible to a larger share of population.

3-2/ Manufacturing strategy

The criteria that influence the decision of customers to buy reusable pads can be Manufacturing is part of the industry's promise to bring quality products to consumers. The processes and their associated characteristics may be leveraged as key differentiators in the marketplace.

- **Focus on societal impacts – Empowering low-income women through formal employment:** Unemployment and lack of job security are endemic in many countries located in sub-Saharan area. According to the International Labor Organization, underemployment for women runs as high as 40 to 50 percent of the total female workforce in the region. Most companies operating in the reusable pads field understand the need to empower women and improve their livelihood. Many of them choose to offer a holistic approach, combining formal employment with access to menstrual products. They give these women the opportunity to receive a professional training and benefit from an employment, which generates a reliable income. Those revenues help these women have a stronger contribution to the local economy and consume a larger range of products, which creates a virtuous cycle.

⁵ World bank, world development indicator. (2021). *A Holistic Approach to Better Menstrual Health and Hygiene: Entrepreneurs in Action*. <https://www.worldbank.org/en/news/feature/2021/05/24/a-holistic-approach-to-better-menstrual-health-and-hygiene-entrepreneurs-in-action>
APA Reference style

⁶ Statista: *Monthly living wage for individuals and families in Nigeria 2020*
Statista. (2021 September).

⁷ PadUp kit price

- **Focus on environment:** There is a rising concern about materials used in the manufacturing cycle of reusable pads. While the fabric may look like cotton, many conventional pads are made with synthetic fiber such as rayon, made from natural sources of regenerated cellulose. Many menstrual products also use polyester and other chemical substances, such as dioxins and furans, or pesticide residue to improve their capacity to hold large volumes of menstrual fluid. These materials are not only harmful to the environment, but also to the user's health.

Additionally, manufacturers are increasingly reducing product waste to minimize their environmental footprint. For example, a Ugandan company manufacturing reusable pads has designed its manufacturing plant to be eco-friendly and collect the rainwater to not rely solely on piped water.

3-3/ Targeted buyers

Manufacturers sell reusable pads to different profiles that can be classified in three categories:

- **NGOs:** NGOs are essential clients for a majority of companies operating in the sector. To address issues relating to menstrual hygiene management, NGOs purchase and redistribute reusable pads to the subset of population, unable to buy these products. Their underlying strategy is sourcing reusable pads through partnership with local or regional manufacturers, before redistributing to disadvantaged population. The distribution is usually paired with workshops, which are opportunities to educate school-aged girls and younger women, on menstrual health management and reusable pads care. These workshops are particularly efficient in eliminating a top dropout reason for young girls.

- **Sponsors:** Sponsors are mostly large corporations or foundations which contribute to empower millions of women and girls through their donations. Sponsorship aims generally at buying and distributing reusable pads to low-income women or girls in school. Sponsors may choose to donate directly menstrual products or finance the construction of sanitary facilities.

- **End-users:** Companies sell their products directly to the consumers through online or physical channels. Online channels, using a website or social media, are far-reaching and can help target a vast number of consumers, regardless of geographical location, through a seamless and simplified shopping experience. However, it mainly addresses a connected and digital literate user base, limiting its applicability in regions with restricted connectivity. Physical channels encompass owned points of sale, partner shops, supermarkets, pharmacies, and corner shops. They are useful to reach end-users in their neighbourhood and increase their turnover.

3-4/ Targeted end-users

End-user base may be segmented, in three main categories, respectfully to income, geography and ecological values.

- **Low-income women and period poverty in Africa:** For low-income population, reusable pad is a necessary product because most of them cannot afford other menstrual products. According to BBC, a pack of sanitary pads can cost up to a whole day's pay in Malawi. Reusable pads allow low-income women and girls to manage their menstrual health properly. Thus, avoiding the risk of infection when using inappropriate products.
- **Women seeking an affordable alternative to disposable pads in Africa:** For middle-income population, the concern is more about cost and access. They may not be aware of environmental impacts but are looking for a cost-effective and sustainable alternative to traditional sanitary pads.
- **Women seeking an alternative to chemical disposable pads in western countries:** These women are generally addressing both their ecological awareness and their need for more natural hygiene products. Higher-income women are usually more concerned with convenience and their adoption of reusable pads is usually associated to an ecological awareness and the subsequent desire to minimize environmental footprint of hygiene products. This environmental conscience originates from personal, familial, or career backgrounds. Many of this target population have switched to reusable products, after learning more about the potential effects of traditional products, both on their environment and on their health.

4- Overview of key market players in Africa

This section offers an understanding of the market dynamics at play between disposable and reusable pads in Africa. It also presents the business of a few selected players in the market.

4-1/ Market dynamics

The current pads industry is dominated by imported disposable pads, manufactured by international giants offering highly renowned brands such as Vania and Always. Alongside these premium products, a number of low-cost brands originating from Asia, have also found their ways to the market.

Conversely, reusable pads market is filled with promises which remain largely underexploited. The industry growth will hinge on a durable effort to educate target users. This education is instrumental to either acquire new users or convert disposable pad users.

More and more African entrepreneurs are penetrating reusable pad market mostly considering a low to entry. Upfront costs are estimated to 250 \$ for reusable pad business whereas disposable pad business is more challenging with entry costs totaling more than 5000 \$, due to cost of machinery, raw materials and other production requirements. Despite these challenges a few African companies are conquering the market and winning significant shares.

4-2/ How some African companies are winning the market

The case studies highlight how AfriPads and Api-Afrique, two manufacturers are leveraging the four business model pillars to bring their products to the market with distinctive approaches which are instrumental to their success.

4-2-1/ AFRIPADS CASE STUDY

AFRIPads is a leading social enterprise located in Uganda. It has integrated many menstrual poverty issues in its mission and has designed its business to bring unique solutions to these problems. AFRIPads delivers its reusable pads mainly through NGOs to low-income population. In 2020, it expanded its retail strategy, resulting in sales tripling as compared to previous three (3) years.

Table 2 summaries its approach to the four (4) business model pillars.

Table 2: AFRIpads' approach to the four business model pillars

	Product Differentiation	Manufacturing Strategy	Targeted Buyers	Targeted End-users
#1	Safety and health protection: high performance textile with effective protective for 12+ months	Societal impacts: <ul style="list-style-type: none"> • Providing formal jobs and good work conditions to low-income women • 7.5\$ is donated for each kit bought to the foundation. 	Non-Governmental Organizations: to help NGOs in their mission, AFRIpads has developed an extensive toolkit: 10 step-guide to plan and execute Mensual Health and Hygiene, Baseline survey, Endline Survey, Sample Focus Group Discussion Guide, Sample Consent Forms	Low-income population in Africa
#2	Convenience: N/A	Environmental impacts: <ul style="list-style-type: none"> • Eco-friendly kits • Low-environmental footprint architectural design to limit energy needs • Usage of collected rainwater to limited reliance on piped water 	Sponsors: N/A	Middle and high-income population in Africa: N/A
#3	Affordability: Pricing catering to low-income population		End-users Personal story-based marketing to expand access to retail outlets.	Middle and high-income population in western countries: N/A

4-2-2/ API-AFRIQUE CASE STUDY

API-Afrique is a Franco-Senegalese social business. It manufactures its products in Senegal and caters to end-users mostly located in France. Its societal impacts are mostly located in Africa where it provides good working conditions to women. It also advocates for waste reduction through conversion from wasteful baby and sanitary pads to reusable products.

By positioning its business across two continents, API-Afrique has found an innovative way to cater directly to higher income end users capable of buying its products in Europe (and marginally to middle class customers in Africa), while delivering tangible societal impacts working with women in Africa. **Table 3** showcases API-Afrique's approach to the 4 business model pillars.

Table 3: API-Afrique's approach to the four business model pillars

	Product Differentiation	Manufacturing Strategy	Targeted Buyers	Targeted End-users
#1	Safety and health protection: Organic certified cotton (GOTS - Global Organic Textile Standard and PUL - Oeko-tex)	Societal impacts: <ul style="list-style-type: none"> • Safe, legal, and good working conditions for women • 2% of revenues to charitable organizations 	Non-Governmental Organizations: Api-Afrique does sell to NGOs, however these organizations do not represent its main focus	Low-income population in Africa: N/A NGOs beneficiaries (less than 20% of the end-users base)
#2	Convenience: N/A	Eco-friendly sourcing and manufacturing <ul style="list-style-type: none"> • Reducing waste 	Sponsors: N/A	Middle and high-income population in Africa: Some direct sales in Africa
#3	Affordability : N/A		End-users N/A	Middle and high-income population in western countries: 80% of turnover in France

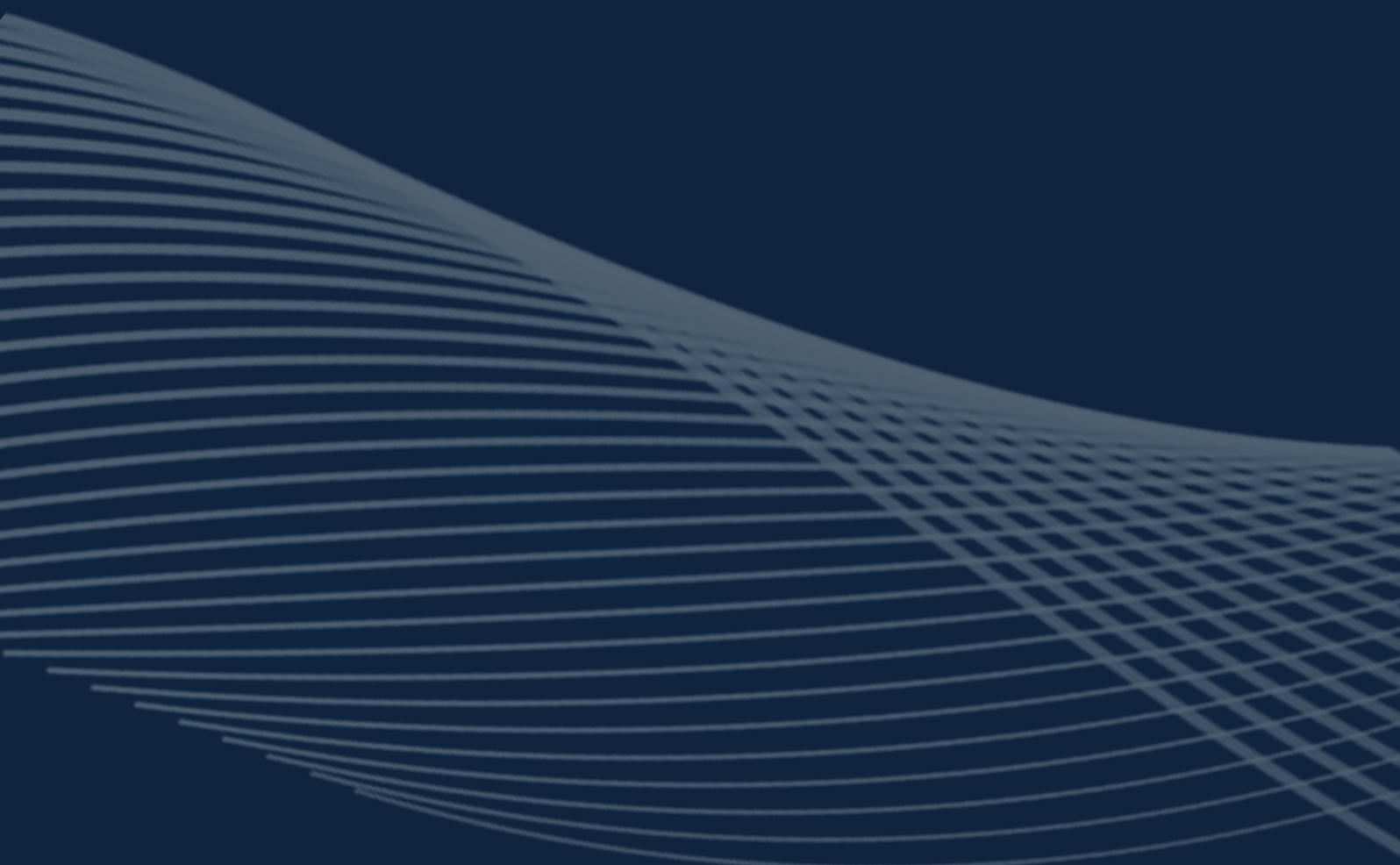
4-3/ Conclusion

Pads industry is still a developing market in Africa, considering the largely unmet needs of a sizable share of the market. Despite their current limitations, reusable pads are improving rapidly under the creative leadership of entrepreneurs, dedicating considerable efforts to adapt to market requirements. Reusable pads are striving to gap the major issues faced by disposable products, namely affordability and eco-friendliness. This market segment represents a unique business opportunity for innovative entrepreneurs and should be recognized as such by all actors.

Non-Governmental and Public sector Organizations, which are primary buyers of sanitary products must acknowledge the potential of the market and act accordingly. By favouring, whenever applicable, reusable products, mostly manufactured by local small or mid-sized companies, these organizations may not only alleviate the sanitary distress of impoverished women, but also support the growth of a nascent industry, which employs these same women. Such a tactical shift will help provide additional resources to local communities and improve the socio-economic conditions of many low-income women. The development of this industry offers the opportunity of sustainable social and economic impacts, which should be accounted in the strategic decisions of all stakeholders.

Chapter 2

**UNDERSTANDING QUALITY STANDARDS ON THE
HYGIENIC PADS MARKET IN AFRICA**





Introduction

The reusable pads industry is attracting more and more entrepreneurs. However, compounding traditional entrepreneurial risks, the absence of largely adopted and publicized standards brings operational challenges in the manufacturing of their products and in the acceptance of the end products by the reluctant consumers, rightly worried with safety, health, and convenience concerns. The issue stems from the ignorance of the few existing standards by entrepreneurs and the limited number of regional, national, or independent bodies capable of certifying compliance to the existing standards and building trust between concerned consumers and manufacturers.

This chapter is an effort to shed light on the existing reusable pad standards and certification processes. It also presents missing gaps to the wider vulgarization and adoption of the standards to reassure and widen the market.

1/ Major existing regional and national standards

A few major regional and national standards have been identified mostly in Eastern and South Africa. Table 4 lists the major ones.

Table 4: List of major existing regional and national reusable Pads standards

Standards	Publisher	Country / Region	Number of criteria
East African Standard	EAC (East African Community)	East Africa (Regional)	15
Ethiopian Standard	(ESA) Ethiopian Standards Agency	Ethiopia	16
Reproductive Health Supplies Coalition, UNHCR, UNFPA, UNICEF: Technical Specifications for Reusable Menstrual Pads	Reproductive Health Supplies Coalition, UNHCR, UNFPA, UNICEF	International	15
Tanzania Standard Draft	Tanzania Bureau of standards	Tanzania	16
Standard Product Catalogue	IFRC (International Federation of Red Cross and Red Crescent societies)	International	6
South African National standard: The manufacture of washable, reusable sanitary towels	SABS Standards Division	South Africa	15

2/ Comparative analysis of the standards

The comparative analysis intends to highlight similarities and differences among the standards, hence helping entrepreneurs better decide and design features to possibly comply with a maximum number of standards.

Eastern African Community (EAC) quality standard, in addition to being the most detailed and exhaustive benchmark, is also the only one adopted by a regional organisation, covering six (6) countries: Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda. For these reasons, EAC standard was selected as the reference benchmark, from which common and missing criteria, along with differences in qualification levels, are driven, in the five (5) other standards.

Table 5: Summary of comparative analysis findings

Common criteria	Missing criteria in the EAC standard	Common criteria with different qualification levels
<p>VISUAL APPEARANCE</p> <ul style="list-style-type: none"> • The product shall be visibly clean • Free from obvious defects, lumps wrinkles or, without loose stitching • Even wings 	<p>Color Color fastness</p>	<p>Size The requirement targets are different from one reference to another.</p>
<p>MICROBIOLOGICAL REQUIREMENT</p> <ul style="list-style-type: none"> • The total viable bacterial count shall not exceed 1000 per gram of the sanitary (ISO 7218) • The product shall be free from some specific bacteria (ISO 7218) 	<p>Safety requirement</p>	<p>pH level</p> <ul style="list-style-type: none"> • The requirement targets are different from one reference from another. • Overall, the pH level goes from 6 to 8.5
<p>SAMPLING METHOD</p> <ul style="list-style-type: none"> • Lots • scale of sampling • Number of tests. 	<p>Wearing time</p>	<p>Durability</p> <p>EAC standard is the only that suggest repeated use of 60 times of wearing and washing for the pad to be qualified as durable</p>
	<p>Marking License No, address, Date, month and year of manufacture, expiry, Number of pads</p>	<p>Absorbency requirement</p> <ul style="list-style-type: none"> • Average absorbency capacity: 4- 30ml • Average absorbency rate: 2 -8 ml per min
	<p>User and instruction care Multilingual instruction, QR code or by pictograms, Safety warnings, recommendation on wear time</p>	

The following tables (6.1 to 6.8) present a detailed review of the findings, each table focusing on specific features, as listed below:

- **Table 6.1: Absorbency, visual appearance and washing fastness**
- **Table 6.2: Materials**
- **Table 6.3: Size, Color, Color fastness**
- **Table 6.4: Safety, wearing time and pH**
- **Table 6.5: Drying time, odor, durability, user, and care instructions**
- **Table 6.6: Microbiological requirements and packaging**
- **Table 6.7: Marking**
- **Table 6.8: Sampling**

As demonstrated by the comparison tables, a few benchmarks, notably EAC, are very thorough and could help improve overall quality in the industry. However, too many barriers are still impeding their large diffusion and adoption preventing the qualitative development of the market.



Table 6.1: Detailed standard comparative analysis – absorbency, visual appearance and washing fastness criteria

Criteria	EAC Criteria Description			Similarities and differences with other benchmarks
DESCRIPTION IN ACCORDANCE WITH ABSORBENCY CAPACITY AND RATE	Name	Total Volume required to be Absorbed	Volume required to be absorbed /minute	<p>Absorbency capacity: between 4 –16 ml Absorbency rate: between 2 – 8 ml per minute</p> <p>In accordance with Tanzania National Standard</p> <p>Absorbency capacity: between 15 to 30 ml Absorbency rate: > 10 per Sec</p> <p>In accordance with Ethiopian Standard</p>
	ULTRA-LIGHT FLOW	2 ml	1 ml	
	LIGHT FLOW	4 ml	2 ml	
	REGULAR / NORMAL FOR NORMAL FLOW	8 ml	4 ml	
	SUPER OR HEAVY FLOW	16 ml	8 ml	
	EXTRA HEAVY FLOW	30 ml	15 ml	
VISUAL APPEARANCE	Shall be visibly clean and free from obvious defects, lumps or wrinkles			Common to all criteria
	No loose stitching			Common to all criteria
	Wings shall be even			Common to all criteria
WASHING FASTNESS	Shall release soil and stain quickly when washing by hand and shall dry even in the absence of sunlight.			<ul style="list-style-type: none"> • Shall withstand a minimum of 10 washes at washing temperatures of 40 degrees minimum in accordance with the IFRC
	The color/ fabric dye of the materials shall not come out during washing.			<ul style="list-style-type: none"> • shall be capable of being soaked and washed thoroughly in water up to 60 deg C using soap/laundry detergent in accordance with UNHCR

Table 6.2: Detailed standard comparative analysis – materials criteria

Criteria	EAC Criteria Description	Similarities and differences with other benchmarks
M A T E R I A L S	<p>Top sheet (the layer which contacts skin):</p> <p>absorbent, soft and no harmful for the skin</p>	<p>Shall be made of organic topped cotton or bamboo velour, hemp fleece, cotton flannel, cotton jersey and cotton fleece poly jersey in accordance with Ethiopian standards</p>
	<p>Inside absorbent part :</p> <p>criteria not present in the EAC document</p>	<p>At least 2 absorbent layers of Micro fleece of 80% polyester and 20% polyamide, or at least 2 additional layers of 100% cotton</p> <p>In accordance with the IFRC standards</p>
	<p>Bottom (Protective barrier):</p> <p>prevent leakage</p>	<p>Waterproof layer of Polyurethane Laminate (PUL)</p> <p>Certificate of material conformity to be provided by supplier for each Purchase order</p> <p>According to the IFRC standards</p>
	<p>Fastening mechanism:</p> <p>Shall not be made of a ferrous metal that could rust and cause harm to skin</p>	<p>The following shall be used as securing mechanisms in accordance with Ethiopian standards: Sewing thread, Snap Button or press-stud (size less than 20 mm diameter, Flexible Velcro, the snap and Velcro shall be made from a type of plastic called polyacetal resin, shall be strong and more durable than other types of plastic, and snap and are BPA-free</p>

Table 6.3: Detailed standard comparative analysis – size, color, and color fastness criteria

Criteria	EAC Criteria Description	Similarities and differences with other benchmarks
SIZE	Shall be declared. (Not specified)	<p>Average length and width Light flow: 180 – 260 mm Regular: length 180 – 270 mm Large: length 220 – 300 mm Extra-large: length above 260 mm Width: 60 – 110mm</p> <p>In accordance with Ethiopian standard and UNHCR</p>
COLOR	Criteria not present in the EAC document	<p>Plain homogeneous fabric color: dark blue, black, purple or brown in accordance with the Redcross Standard and UNHCR</p> <p>The product shall ban, harmful and toxic dyes shall not be used. Manufacturers should refrain from using dark colors for example, black, grey, blue and shades of red for the upper layer (the layer which contacts the skin in accordance with South African National Standard</p>
COLOR FASTNESS TEST	Criteria not present in the EAC document	<p>Shall have a color fastness of 4 and above in accordance with UNHCR and Tanzania national Standard</p> <p>The color dye of the materials shall be colourfast to washing when tested in accordance with SANS 105-C10 with a grey-scale rating of 4 and colourfast to rubbing when tested in accordance with SANS 105-X12 with a grey-scale rating of 4 when dry and 3-4 when wet in accordance with South African National standard</p>

Table 6.4: Detailed standard comparative analysis – Safety, wearing time and pH criteria

Criteria	EAC Criteria Description	Similarities and differences with other benchmarks
SAFETY	Criteria not present in the EAC document	<p>In accordance with UNHCR</p> <ul style="list-style-type: none"> • The product shall be free from heavy metals, chlorine, azo dyes and phthalates as per REACH regulations • Product must comply with following standards: <p>-ISO 10993 – 5&10 Intracutaneous irritation and skin sensitization test (G.pig maximization test).</p> <p>-ISO 6887-1:2017 Microbiology of the food chain — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination or equivalent</p> <p>- ISO 6888-1:1999/AMD 2:2018 Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) or equivalent</p> <p>-ISO 105-C10:2006 - Textiles — Tests for colour fastness</p>
WEARING TIME	Criteria not present in the EAC document	4 to 6 hours usage
PH	6 - 8 ISO 3071	<ul style="list-style-type: none"> • 6 – 8.5 in accordance with Ethiopian standard • 6.5 to 7.5 in accordance with Tanzania National Standard

Table 6.5: Detailed standard comparative analysis – Drying time, odor, durability, user, and care instructions

Criteria	EAC Criteria Description	Similarities and differences with other benchmarks
DRYING TIME	< 6 hours when hang in direct sunlight	Common to all benchmark
ODOR	Shall not contain any odor, either when dry or wet with clean water.	Common to all benchmark
DURABILITY	Shall endure repeated use of 60 times of wearing and washing	Shall have dimensional stability with good tensile strength and seam strength in accordance with UNHCR
USER AND CARE INSTRUCTIONS	<p>There shall be user and care instructions in every packet of the sanitary towels</p> <p>The user and care instructions shall be outlined in similar instructions as below to ensure proper use and care by the consumer:</p> <p>a) before first use, wash with soap and clean water and allow to dry completely</p> <p>b) place pad in the knickers with the absorbent side facing up (Must be worn in properly fitting knickers)</p> <p>c) close the fastening mechanism and wear. Ensure to check and change pads as needed throughout the day</p> <p>d) after use, rinse/soak in water. Pour away dirty water</p> <p>e) in clean water, wash clean with soap. Rub thoroughly; ensuring the absorbent layer has been sufficiently scrubbed clean</p> <p>f) rinse the pad again</p> <p>g) squeeze all the water out of the pad</p> <p>h) hang to dry outdoors. Must be completely dry before re-use</p> <p>i) store in a clean, dry place</p> <p>j) do not bleach</p> <p>k) do not share.</p>	<p>Instruction and care instruction should include in accordance with UNHCR</p> <ul style="list-style-type: none"> • Must be multilingual: English, French, Arabic and Spanish • QR code or by pictograms. • Safety warnings • Recommendation on wear time

Table 6.6: Detailed standard comparative analysis – Drying time, odor, durability, user and care instructions

Criteria	EAC Criteria Description	Similarities and differences with other benchmarks
MICROBIOLOGICAL REQUIREMENTS	Total viable bacterial count shall not exceed 1000 per gram of the sanitary in accordance with ISO 7218	Common to all benchmark
	Shall be free from Enterobacteriaceae, Staphylococcus aureus, and Pseudomonas aeruginosa respectively in accordance with ISO 7218	
PACKAGING	Made of suitable materials which are sealed so as to protect them from moisture, soiling and contamination during storage and transportation	<ul style="list-style-type: none"> • The sanitary pads shall be packed in water resistant material which does not affect human health in accordance with the IFRC standards • The supplier shall be capable of meeting the packaging options: One pack shall have 3 –6 units of (Regular, Maxi and Super maxi) in durable packaging in accordance with UNHCR
	Same batch number shall be packed together	
	Shall be manufactured, packed, and stored under hygienic conditions	

Table 6.7: Detailed standard comparative analysis – Marking

Criteria	EAC Criteria Description	Similarities and differences with other benchmarks
MARKING	<p>The following information shall appear legibly and indelibly on the outside of each package:</p> <ul style="list-style-type: none"> • The manufacturer's name and/or registered trademark; • the words "reusable sanitary towels/sanitary napkins/ pads/ panty liners"; • number of sanitary towels in a package; • size of the product; • absorbency (panty liner/light/normal/heavy flow); • use and care instructions, including warning to wash before first use; • storage instructions; • batch identification number; • country of manufacture; and • date of manufacture 	<ul style="list-style-type: none"> • Marking should include in accordance with UNHCR: • license No • address, • Date, month and year of manufacture • Expiry • Number of pads • Marking shall also be marked with TBS certification Mark of Quality in accordance with Tanzania National Standard

Table 6.8: Detailed standard comparative analysis – Sampling

Criteria	EAC Criteria Description			Similarities and differences with other benchmarks	
SAMPLING	Lot	Scale of Sampling		Number of tests	
	All packages belonging to one batch of manufacture or supply shall constitute a lot.	<ul style="list-style-type: none"> • shall be tested from each lot ascertaining its conformity to the requirements of this specification. • The bulk packages and packages shall be selected at random. • The number of packages to be selected from a lot shall be in accordance with the following table: 		<ul style="list-style-type: none"> • Each package selected as per Scale of sampling Table shall be inspected for packaging and marking requirements • Sanitary towels selected as per Scale of sampling Table shall be examined for requirements 	
		Number of packages in a lot	Number of packages to be selected		
		Up to 250	6		
		251-500	8		
		501-1000	11		
		1001-2500	15		
		2501-5000	20		
		5001 and above	30		
	Common to all benchmark				

3/ Certification strategies

The approach to certification may hinge on certifying actual pads or used fabric. As an example, **Table 7** demonstrates the very different certification strategies adopted by the market leaders, AFRIpads and API-Afrique.

In any case, both strategies are arduous and costly, in the absence of quality standards or certification bodies in most countries, along with lack of guidance to get approved products to market. These uncertainties are preventing many large buyers, such as Non-Governmental Organizations to adopt reusable products from local or regional manufacturers, with sufficient trust reassurance about the product quality. As a result, imported disposable goods from known brands are still largely dominant in the market, despite some valuable reusable alternatives.

Table 7: Certification strategies and implications

	Standards	Certification challenges
GET THE REUSABLE PADS CERTIFIED	National, regional, and international quality standards	<ul style="list-style-type: none"> • Inexistence of quality standard in many countries
	AFRIpads Afripads products are certified by the Uganda National Bureau of Standards Certification (UNBS)	<ul style="list-style-type: none"> • Absence of national or independent agencies able to deliver certifications • High costs
GET THE FABRIC USED ON THE REUSABLE PAD CERTIFIED	<ul style="list-style-type: none"> • OEKO-TEX (a globally uniform testing and certification system for textile raw materials, intermediate and end products at all stages of production) • GOTS (Global organic Textile Standard) 	<ul style="list-style-type: none"> • Absence of national agencies able to deliver these types of certifications • High costs
	Api-Afrique Api Afrique products are certified by OEKO-TEX and GOTS	

4/ Certification Process Examples

Only a handful countries and independent bodies offer a certification process. For reference purposes, **Table 8** describes the certification processes from Tanzania, Uganda and PUL OEKO-TEX.

Table 8: Examples of certification processes

	Application and Inspection	Licensing
TANZANIA BUREAU OF STANDARDS (TBS) CERTIFICATION	<ul style="list-style-type: none"> • Application Electronic submission via https://portal.tbs.go.tz <p>Initial inspection Performed by TBS inspector who issues a report with a checklist of issues for the laboratory</p> <p>Testing</p> <ul style="list-style-type: none"> • Following the initial inspection. • A report is sent to the produce 	<p>Standard Mark License</p> <ul style="list-style-type: none"> • Dependent on outcomes of inspector and testing • License is issue if there is no issues in factory and production system. Otherwise adjustments are mandate • License is valid a year and renewable Subsidy for Micro, Small and Medium Enterprises (MSMEs) • MSMEs need to send an introduction letter needs to Small Industries Development Organization (SIDO) for access to subsidy
UGANDA NATIONAL BUREAU OF STANDARDS CERTIFICATION (USED BY AFRIPADS)	<p>Application Application via form CERT/BAT/F01 (see www.unbs.go.ug) and submission via certification@unbs.go.ug Application review and billing An officer undertakes the process to validate completeness and adequacy and issues bill which is paid on www.ura.go.ug</p> <p>Inspection The assigned officer(s) conduct a physical assessment of the batch under consideration and obtain a sample(s) from the batch guided by the relevant standard</p> <p>Product testing The batch sample(s) obtained is/are submitted to the UNBS laboratory for testing Product testing may be done at UNBS or any UNBS recognized laboratory.</p> <p>Reporting he batch inspected shall demonstrate conformance to the requirements of the applicable standard(s)</p>	<p>Certificate approval and issuance</p> <ul style="list-style-type: none"> • If passing test reports are obtained for the samples picked and the inspection report is satisfactory, a certificate of conformity is issued upon payment of applicable fees. – • The certificate issued is only valid for the batch assessed. The certificate shall be readily availed to staff of regulatory authorities of importing countries upon request
PUL OEKO-TEX CERTIFICATION (USED BY APIAAFRIQUE)	<ol style="list-style-type: none"> 1. Complete the application form. 2. The selected OEKO-TEX® institute will get in touch. 3. After examining your documents, we define the scope of the audit and success parameters. We then test your articles according to STANDARD 100. 4. An OEKO-TEX® expert visits your site in order to confirm all the details. They may be either before or shortly after certification. 	<p>If your product has successfully passed the laboratory test, you receive the STANDARD 100 certificate together with a detailed test report from your OEKO-TEX® institute.</p>

Conclusion

The certification process is unevenly available across the continent. This issue is thwarting the wide introduction of stringent quality benchmarks in the market, participating to the poor perception of quality of end products by women. An emphasis on standardization will greatly catalyze the growth of the market and reassure all market stakeholders notably end users and bulk buyers, including non-governmental and public organizations.

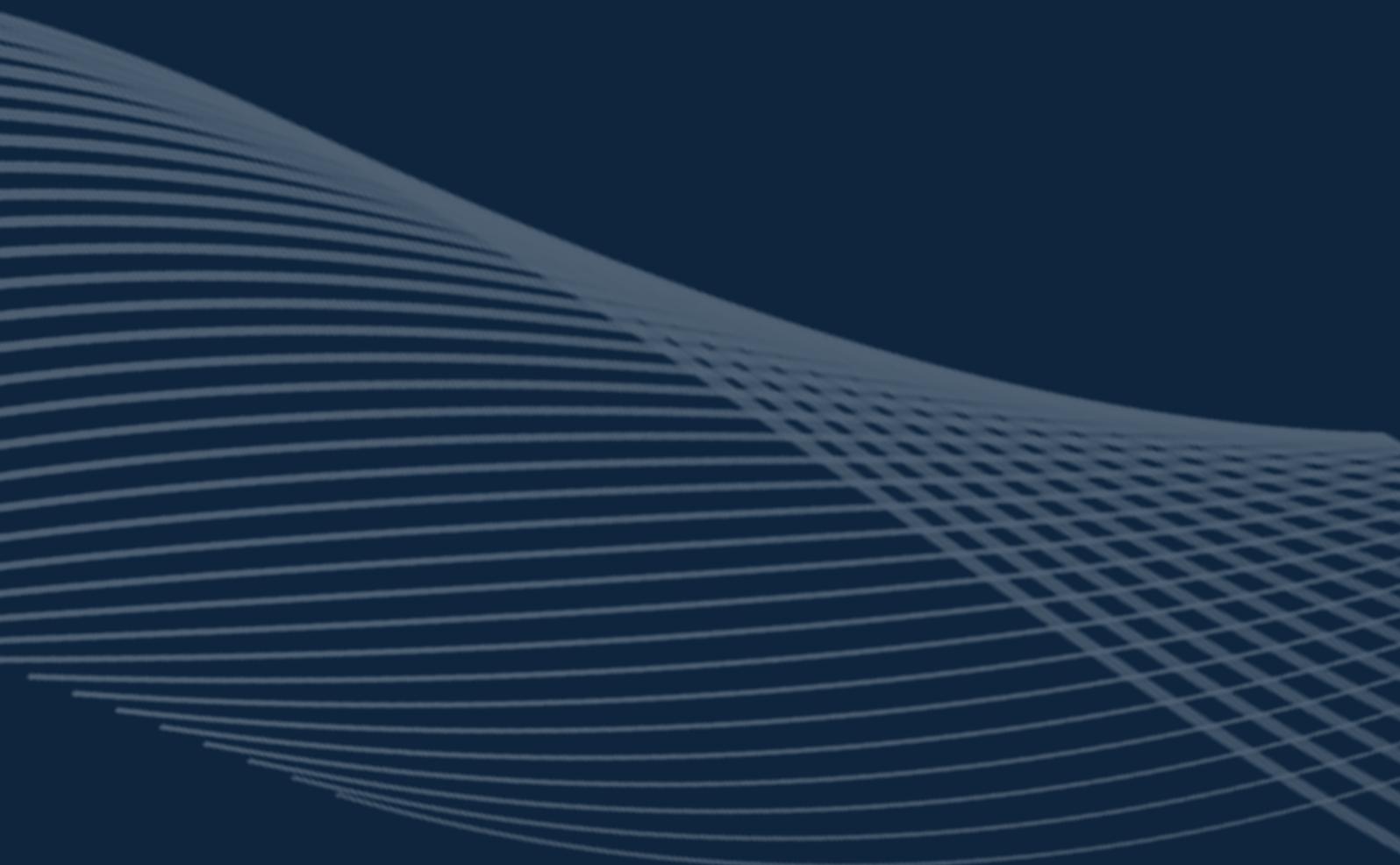
The sheer size of the market and the vast needs unmet by disposable alternatives strongly advocate for swift investments in standardization regulations and certification facilities. Such efforts will instill necessary trust to help promote reusable pads industry. Given the public interest in the women health, the burden of the investments should be fully included in the large governmental or not-governmental sector programs and not be let solely to private local businesses, which mostly lack means to undertake such considerable endeavours.

These public investments will allow mid-sized and small local enterprises in the sector to focus their effort in developing their products and marketing to users.



Chapter 3

**DEVELOPING THE REUSABLE PADS INDUSTRY:
RECOMMENDATIONS FOR UNBOUND SUSTAINED
GROWTH**





Considering the unmet needs of a considerable target population and despite its intrinsic strengths, reusable pads industry has not benefited from the growth that may be fittingly expected. The wide adoption of these products is still obstructed by many prominent issues, which need to be addressed to catalyze industry growth. The most concerning restraints include mistrust in the pads hygiene features, lack of education and information particularly among low-income users, and maintenance inconvenience, when it comes to cleaning and drying used pads. The recommendations in the following paragraphs are intended to equip entrepreneurs, policy makers and large governmental and non-governmental organizations alike, with actionable insights to deliver sustained growth in the reusable pads industry.

1/ Growth Levers

To turn the industry around and accelerate its development, entrepreneurs and other invested parties need to draw a concerted strategy, which may build on the five levers listed below.

1.1/ Building trust and reinforcing selling arguments: Simplify certification processes and secure long-term deals with NGOs

Trust is such a far-reaching concern that sustained growth may only be induced by adopting industry-wide measures. The most straightforward solution goes through setting regional certification facilities and helping these shared infrastructures gain public notoriety. Although this path requires significant upfront cost, along with a high level of coordination and policy advocacy, it may lay the foundation for dynamic African champions, with the consequential side effects of strengthening local economies and providing jobs to impoverished populations.

Clear and transparent certification processes will reassure large buyers, including NGOs and sponsors, so they can accelerate their transition to reusable pads. As a result, these stakeholders are expected to dedicate a larger share of their allocated budgets to products that can also improve local economic fabric.

1.2/ Improving sanitary products: Innovate to enhance convenience throughout reusable pads lifecycle aspect of the product: usage, storage post-usage, cleaning, drying

To keep pads functional and hygienic during their lifetime, recurring efforts must be dedicated cleaning, drying, and storing. On one hand, these maintenance tasks still appear as unpleasant chores, preventing otherwise willing women from adopting reusable pads. On the other hand, access to clean water is still a challenge in many African rural and peri-urban regions, thwarting mostly low-income women of affordable sanitary products.

Innovative designs have recently flourished to tackle these considerations but obviously, more capital and creativity need to be invested to minimize inconvenience and water accessibility issues which are limiting adoption from both high and low-income female population.

1.3/ Setting effective user acquisition strategies: Leverage Sexual Reproductive Health education program as a loss leader to build brand and product awareness with the targeted population

In low-income population, poor education and sexual health information deficiency are steep barriers to product adoption. Coupling sexual reproductive health education with product distribution and sale has proven an effective strategy for user acquisition, which should be promoted by more industry stakeholders.

Education can help the targeted female population improve their sexual and reproductive routines and can also be leveraged to tackle strong cultural biases, alienating many women. Manufacturers and other stakeholders must blend educative health programs in any ambitious growth plan to reach desired goals.

1.4/ Master the distribution: Innovate in terms of distribution approach to make the products accessible in rural areas

Large distribution channels such as malls and pharmacies are rare or inexistent in rural areas. For this reason, manufacturers must find unique relays for their products to reach targeted users in these areas. They must identify novel wholesalers, points of sale and women groups, in addition to propose adapted business deals to reach the targeted population.

Moreover, these new points of sale may even help raise awareness on the products and play a critical role in community and user education. Obviously, there will be some gender considerations in this distribution strategy, as women may be, for example, reluctant to discuss intimacy subjects with male shop owners. However, when managed right, this approach offers, through its capillarity, an opportunity to reach communities who have so far eluded, all commercial efforts.

1.5/ Make the product affordable: Design flexible payment models to lower the economic barriers preventing low-income people from buying the product

In general, a multifaceted strategy is required to usher low-income population in a new market. In this case, on top of finding innovative distribution channels, entrepreneurs must adapt pricing, to the economic power of targeted population. For a durable impact, it is not sufficient to only improve accessibility to promote growth in remote areas, affordable pricing is just critical to sell to the desired targets.

Although their lifetime pricing is much lower than that of disposable counterparts, the unitary upfront cost of reusable pads may still represent a considerable share of the monthly revenues of an average user. Additionally, products are usually sold in packages of multiple units, despite the limited means of many individual buyers.

Selling single unit packages paired with proposing extended payment plans can significantly decrease economic barriers for low-income users and help them acquire the much-needed basic goods.

2/ Conclusion

Period poverty is an issue with immense impacts on African girls and women. Its economic and social consequences are heavily weighing on populations, already facing many other challenges.

On top of their ecological merits, reusable pads represent economically sound alternatives to their disposable competitors. However, the reusable pads industry faces numerous issues that are still limiting its growth.

This research paper elaborated by **Intrepid Entrepreneur's Next Health Accelerator** and **Noru Capital** has reviewed the industry intricacies and proposed recommendations, which implementation may substantially change the business landscape. We hope that this document will be a steppingstone for a renewed approach to an industry that can help empower women across the continent.



Appendix 1: Market segmentation and sizing methodology

The segmentation of the sanitary pads market has been based on the purchasing power of end-users. Market segments buyers and end-users' profiles and economic weight are assessed based on the four (4) steps listed below.

Step 1: First, we started by calculating the share of the sanitary pads' budget in the income of a person living in a developed country, where data is available. To this end, we consider the daily minimum wages in France, Germany, and the USA, divided by the average price of sanitary pads found among the distribution leaders in each of these countries (Leclerc, Edeka, Walmart). These calculations provide three country ratios, which were subsequently averaged. The end results show that, on average, the yearly budget dedicated to sanitary pads is 1.25 times the daily wage in these countries.

Step 2: In Africa, given the absence of local manufacturers, most manufactured goods are imported and turn out much more expensive than in developed countries, for similar quality. In addition, interviews with manufacturers and distributors of sanitary pads from 4 African countries (Kosmotive - Rwanda, Girls' Pride - the Gambia, The Grace Cup - Kenya, Pad-Up Creations - Nigeria) helped define a psychological price point, customers are willing to pay. Combining these two approaches, the maximal amount an African woman can dedicate to her sanitary pads over a year, is evaluated to approximately 2.5 times her daily income.

Step 3: The average budget allocated to sanitary pads by women in Africa, is assessed based on prices from leading e-commerce sites in 6 countries: Jumia (Algeria, Ivory Coast, Morocco, Senegal) and Kasha (Rwanda, Kenya). The presumptive annual budget is estimated of \$ 37.5 for disposable pad users and \$ 13.75 for reusable pad users.

Step 4: Based on the estimated allocated budget, which should be less than 2.5 times the daily salary of a woman, market size is inferred from income data published by the World Bank, as follows,

- Disposable pads market (direct sales to end-users) is essentially made up of women whose daily income is at least US \$15 (1.5% of the continent's population)
- Reusable pads market (direct sales to end-users) essentially attracts women whose daily income is between \$5 and \$15 people (4.5% of the population of the continent)
- Disposable and reusable pads markets addressed by NGOs comprise target population earning less than \$5 per day (85% of the continent's population). It is assumed that about only 1 in 25 women will be able to benefit from assistance from NGOs

Appendix 2 : List of companies studied for the business model design

Company	Country	Website
Api-Afrique	Sénégal	https://apiafrique.com/
Afripads	Uganda	https://www.palesapads.com/
Pad-Up Creations	Nigeria	https://www.padupcreations.com/
Kosmotive	Rwanda	https://kosmotive.rw/
Palobdé	Burkina-Faso	http://www.palobdeservices.com/
Palesa Pads	South Africa	https://www.palesapads.com/
Mariam Seba products Factory	Ethiopia	http://mariamseba.com/
Pride Pads	Cameroun	https://pridepads.org/
Subz pads	Zambia	http://mariamseba.com/
She for She Pads	Uganda	https://www.sheforshepads.com/



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