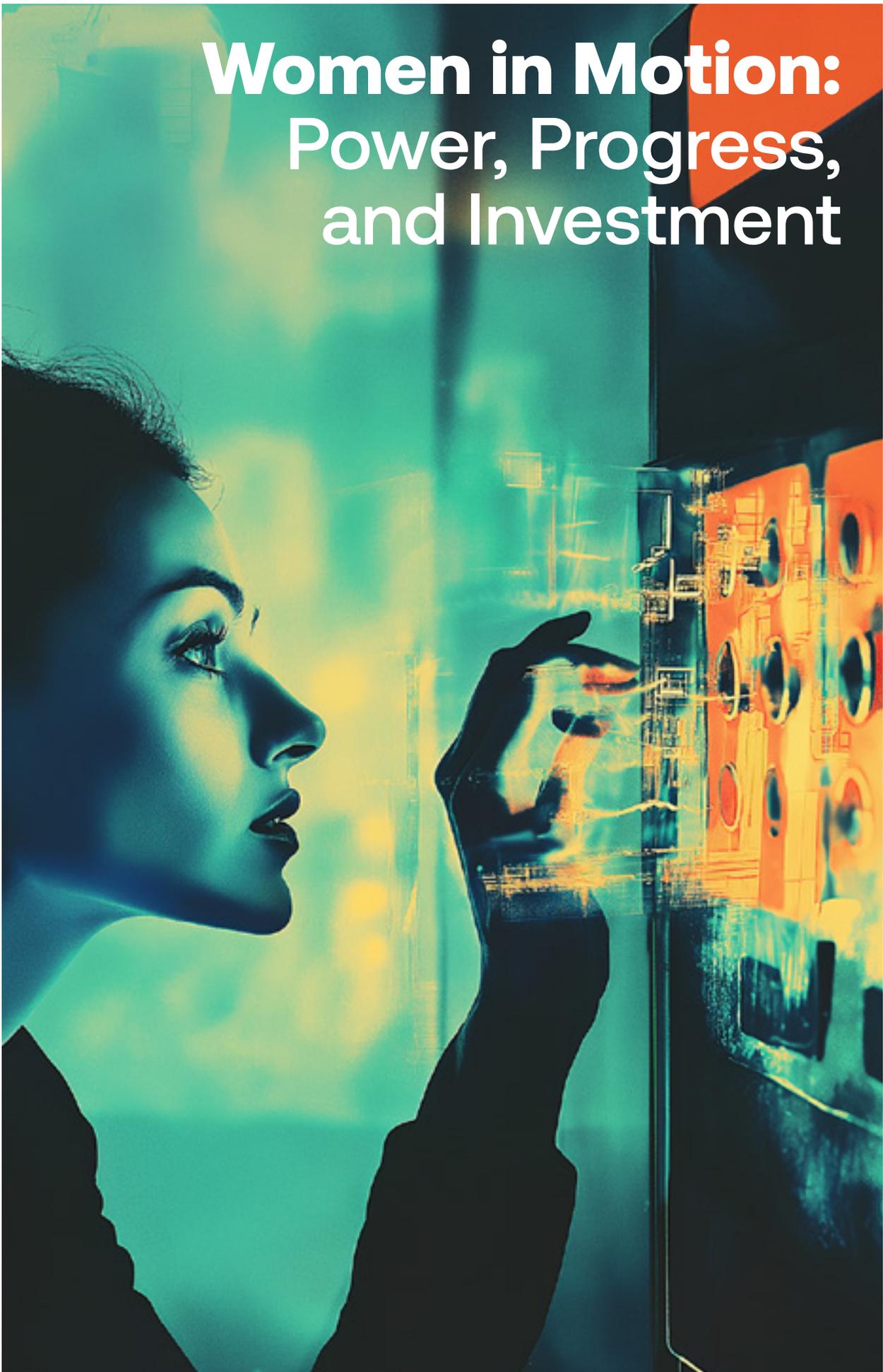


CrossBoundary **QUARTERLY**

Women in Motion: Power, Progress, and Investment



CrossBoundary recognized in ImpactAssets 50 2025 lineup of leading impact investors

Now in its fourteenth year, the ImpactAssets 50™ is the most recognized free database of impact investment fund managers. This annually updated list is a gateway into the world of impact investing for investors, financial advisors, and philanthropists.

The IA 50 offers an easy way to identify experienced and emerging impact fund managers and is intended to illustrate the breadth of impact fund managers operating today. Fund managers selected for the IA 50 demonstrate a wide range of impact investing activities across geographies, sectors, and asset classes.

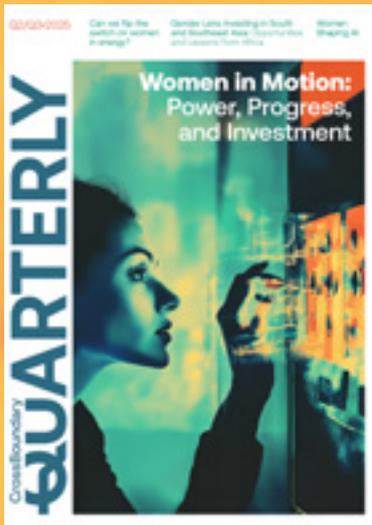
“We’re honored to be recognized alongside other leading organizations who share our vision of using investment as a force for positive change. Private capital, when strategically deployed, is a powerful catalyst for solving critical challenges across emerging markets while generating both financial and social returns.” – Matt Tilleard, Managing Partner, CrossBoundary Group

The composition of the IA 50 2025 reveals key trends shaping impact investing today:

- Growing manager assets under management (AUMs): A total of 24 IA 50 managers have reached institutional scale, with \$1 billion or more in AUM, a 33% increase over the two previous years
- Financial returns and impact work in tandem: 46% of managers on the list target market-rate returns, while 28% pursue above-market returns. The core IA 50 list is predominantly market-rate (36%) and above-market (28%) managers
- Climate and social impact priorities: 50% of listed managers primarily focus on social themes such as financial inclusion and community development, while 33% prioritize climate-related investments, including clean tech, alternative energy, and decarbonization
- Beneficiaries of impact capital: The majority of IA 50 managers focus on supporting small businesses, rural communities, low income and disadvantaged communities
- Third-party impact verification on the rise: 28% of core IA 50 managers and 24% of Emeritus managers have impact reports verified by third-party assessors, marking a steady progression in impact transparency

[View CrossBoundary’s profile on the IA 50 2025 list](#)





**CROSSBOUNDARY
QUARTERLY**
Q2/Q3 2025

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About the CrossBoundary Group

CrossBoundary Group is a mission driven investment and advisory firm that unlocks the power of capital for sustainable growth and strong returns in underserved markets. CrossBoundary Advisory has advised on over US\$12 billion of closed transactions in impactful sectors, such as agriculture, health, education, manufacturing, ICT, infrastructure, and clean power. CrossBoundary Group also directly deploys capital through its investment platforms, such as CrossBoundary Energy, CrossBoundary Access, CrossBoundary Real Estate, and The Fund for Nature. CrossBoundary Group has a global presence in more than 25 locations and over 200 professional staff. For additional information, visit www.crossboundary.com.

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Introduction



Women in Motion: Power, Progress, and Investment

Kimberly Bays

*Director of Global Communications,
CrossBoundary Group*

Women represent the largest emerging market in the world—an immense, untapped force of economic potential. But they also face the steepest barriers to opportunity. Globally, just 2% of venture capital funding goes to women-led businesses. In Africa, the World Bank estimates the finance gap for women entrepreneurs at over \$42 billion, due to limited access to credit, collateral constraints, and systemic gender bias in investment decisions.

The consequence? A missed opportunity for growth, innovation, and shared prosperity.

The data tells a clear story: unlocking the economic power of women isn't just a moral imperative—it's an investment thesis. McKinsey Global Institute estimates that advancing gender equality could add \$12 trillion to global GDP by 2025. In underserved markets where CrossBoundary works, the effect is even more profound. Women reinvest up to 90% of their income into their families and communities—compared to just 30–40% for men—amplifying the multiplier effect of every dollar earned or invested in them.

And yet, persistent inequities remain. Women-led enterprises struggle to scale. Female founders are often judged on performance; men, on potential. In energy, finance, and agriculture—sectors central to our work—the leadership bench is still overwhelmingly male. And even in sectors like Artificial Intelligence and machine learning, where the future is still being written, women’s contributions too often go underrecognized.

This issue of CrossBoundary Quarterly, *Women in Motion: Power, Progress, and Investment*, is a challenge to that status quo.

We begin with a standout piece, written by Kate Pallett of CrossBoundary Energy—with contributions from feminist economist Lerato Shai and CrossBoundary Energy’s Head of ESG Ifeoma Dike—which asks: can we flip the switch for women in energy?

Then, we travel to Northern Nigeria, where our team convened a roundtable with women entrepreneurs, tackling the real financing obstacles that keep female-led MSMEs from scaling. From South and Southeast Asia, CrossBoundary Advisory Associate Aditi Mehta offers a cross-regional lens on gender lens investing—and what Africa can teach Asia about doing it right.

In Ghana, where our team is working on Mastercard’s BRIDGE-In Agriculture program, we ask what gender impact looks like in a sector ripe for renewal.

We have also spotlighted women building the future of AI—challenging the narrative that innovation is the exclusive domain of Silicon Valley’s male elite. And closer to home, reflected on our own practices and how to support women at CrossBoundary navigating leadership and parenthood.

Where are the deals backing women-led enterprises?

Where are the gender-informed infrastructure investments?

What internal systems must we redesign to ensure equity at every level?

Our hope is that this issue provokes new thinking—and new commitments.

Because the world doesn’t just need more women in motion. It needs the systems around them to move too. 



Can we flip the switch for women in energy?



Written by:
Kate Pallett,
Senior Marketing &
Communications Manager,
CrossBoundary Energy





MBOLA HSE

Rio Tinto



The gender parity gap is well-documented, and we know that the smaller the gap, the more economies and society benefit¹. According to the World Bank's Global Gender Gap Report 2024, at the current rate of progress, we will achieve gender parity in 134 years². This data includes all industries, but the picture in the energy sector is even bleaker. According to the International Energy Agency, women in energy account for only 16% of the workforce – less than half of the global average³. This disparity disadvantages the energy sector, which stands to benefit significantly from the diversity of thought, approaches to problem-solving, and economic outcomes of including more women.

There is particular relevance to the energy sector and all engineering fields to address this gap. In her book, “Invisible Women: Data Bias in a World Designed for Men”, Caroline Criado Perez highlights a less obvious ramification of gender disparity: how it affects data, science, and design⁴. This poses interesting questions in the engineering sector, where data is treated as fact despite its inherent (if unconscious) bias. This bias has real consequences: more women die in car accidents because crash-test dummies assume male forms⁵. What could the energy sector be missing from a lack of diversity in thought and design?

There are other benefits, too. Including women in the formal economy results in a disproportionate benefit to society as women tend to spend more of their income on family, social ties, and local economies⁶. As women start to participate in engineering and STEM fields, their presence also becomes less stigmatized, and it is easier to organize policies and structures that benefit women, like childcare and safety measures.

1 <https://www.worldbank.org/en/topic/gender/overview>

2 <https://www.weforum.org/publications/global-gender-gap-report-2024/digest/>

3 <https://www.iea.org/topics/energy-and-gender>

4 <https://www.goodreads.com/book/show/41104077-invisible-women>

5 <https://www.theguardian.com/lifeandstyle/2019/feb/23/truth-world-built-for-men-car-crashes>

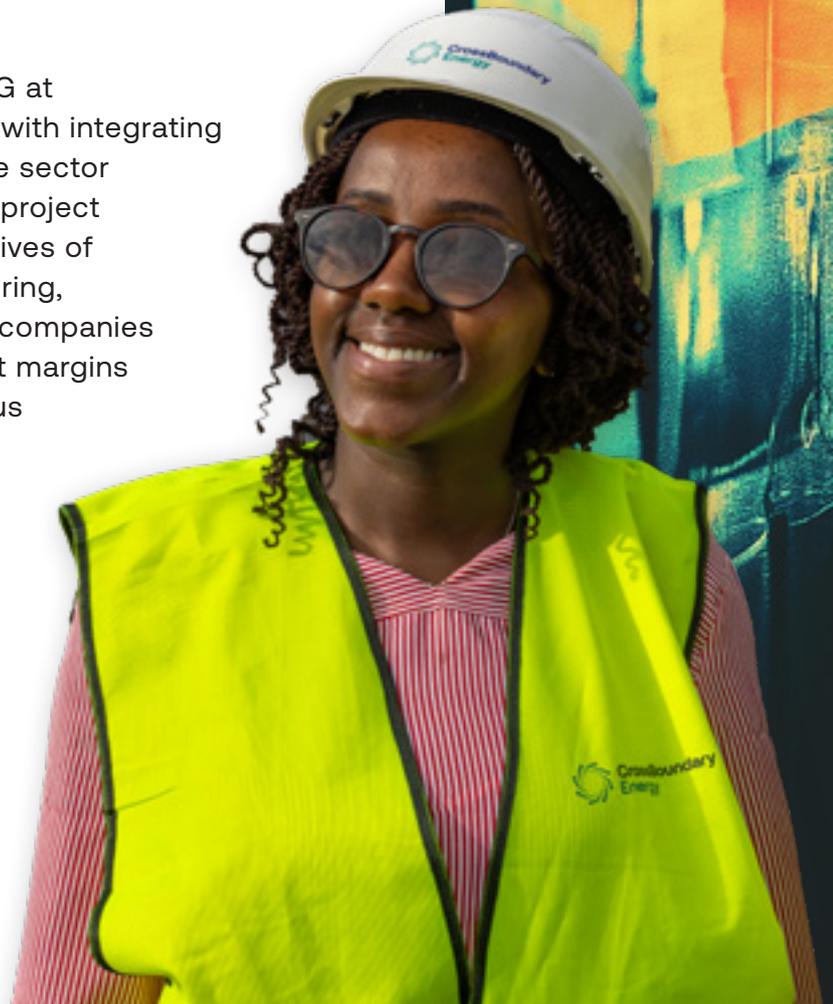
6 <https://www.unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures>

While there have been various interventions to organizational gender empowerment, there are some pitfalls to the approaches that have slowed progress. The most common approach for organizations and companies is a “just add women” approach: setting targets and quotas for women in the workforce. While this is an important starting point to work towards better representation of women, research shows that, typically, one kind of woman tends to benefit from such programs: those that already have access to education, connections, and capital⁷.

To achieve gender equality in energy, a robust and multifaceted approach is needed. Companies that want to address it must understand the intersecting issues and how to counteract them – from social impact programs to women’s employment and ownership. Lerato Shai, a feminist labor economist, mentions that looking at the purpose of gender empowerment programs and following up with a holistic set of measurements is important. Shai says that the first step for organizations is to understand the structures hindering gender equality in the relevant sectors, business units, and operational environments. This helps to identify who is excluded and what the barriers to entry are, enabling a clear-eyed view of the status quo before defining the objectives and desired outcomes of gender-equity projects.

According to Ifeoma Dike, Head of ESG at CrossBoundary Energy, the challenge with integrating holistic empowerment programs in the sector is often due to the nature of different project stages, as well as the business objectives of multiple players. For example, engineering, procurement, and construction (EPC) companies typically have strict timelines and tight margins when building energy projects and thus place women empowerment at the bottom of the list of priorities. As such, short-term interventions tend to be favored, such as supporting local craft-making businesses,

⁷ Boston University Global Development Policy Centre
<https://www.bu.edu/gdp/2022/07/27/do-quotas-in-two-dimensions-improve-social-equality-intersectional-representations-and-group-relations/>



donations to existing organizations focused on empowerment, and similar. While these interventions still provide value, they don't holistically address the systemic issues of women's inclusion in the energy economy.

There are compounding issues to these struggles. According to Dike, societal norms and cultural practices in the African context often inhibit the involvement of women⁸. This is stark in energy, where engineering or construction jobs are perceived as work for men rather than women. Dike also added that the remote nature of renewable energy sites poses challenges for safety measures and family responsibilities, further impacting women's involvement. It becomes a vicious cycle of fewer women represented and, thus, fewer women pursuing such jobs and careers.

Approaches to effective gender empowerment programs in renewable energy

For renewable energy projects, it's helpful to think about how more women could be involved in—and benefit from—different stages of projects. Development, power purchase agreements and legal matters, financing, ESG assessments, technical design, procurement, construction, commissioning, operation, and billing are all distinct functions in actualizing large energy projects. Looked at holistically, each project provides vast opportunities for impact at different levels and across sectors.

During the initial design and construction phase, engaging with women from the community, and women engineers, can identify some of the vulnerabilities that might affect their workers and local communities. Including women at various levels could enable adaptations for plant design that avoid areas known

⁸ Commission for Gender Equality, "Women in the South African Economy 2024"





by the community to be dangerous, ensure adequate ablution and childcare facilities, and create procedures and grievance mechanisms that protect women on site.

Since energy assets have long-term lifetimes, programs can have a sustained impact once a plant is built and commissioned. From ownership stakes for local women to ensuring equality in maintenance staffing and supplying women-owned businesses with energy, there are myriad opportunities for inclusion. At the moment, these opportunities are underutilized.

We are acutely aware of the need for gender empowerment in the energy sector. Yet, given the low margins, sector-wide policies and compacts can create a level playing field for businesses to kick-start their programs. As sector- and market-wide standards like the UN Global Compact and the Global Reporting Initiative have normalized reporting on social and environmental indicators, so too could an energy-specific set of gender empowerment guidelines create a baseline for programmes. Shai believes that these policies are not a “solve-all,” but they can be a catalyst in sectors desperate for a push.

Rethinking how we measure ROI for social outcomes will be a longer-term, more profound intervention. Currently, with ROI and



success measurements bound to short-term outcomes and profits, gender empowerment is often placed at the bottom of the spending agenda. If measurements could adequately quantify the real-term impacts of these programs over time, businesses would be much more likely to prioritize the interventions that work rather than completing a check-box exercise.

Achieving gender equality in the energy sector will benefit society, businesses, and the sector as a whole. However, progressing from the current status quo requires a comprehensive and nuanced approach that goes beyond setting targets and quotas for women. Sector-wide policies and compacts can catalyze spending on these programs and ensure that no businesses are disadvantaged at the start, but a deeper understanding of the structural barriers and societal norms that inhibit women's participation is crucial. By involving women at all stages of energy projects and addressing their specific needs, companies can have impacts on society and meaningfully push the energy sector forward. 

Thank you to **Lerato Shai**, feminist labor economist, and **Ifeoma Dike**, Head of ESG at CrossBoundary Energy, for their contributions to this article.

Bridging the Gender Gap in Entrepreneurship: Financing Models to Scale Entrepreneurship Among Young Women in Northern Nigeria

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Written by:

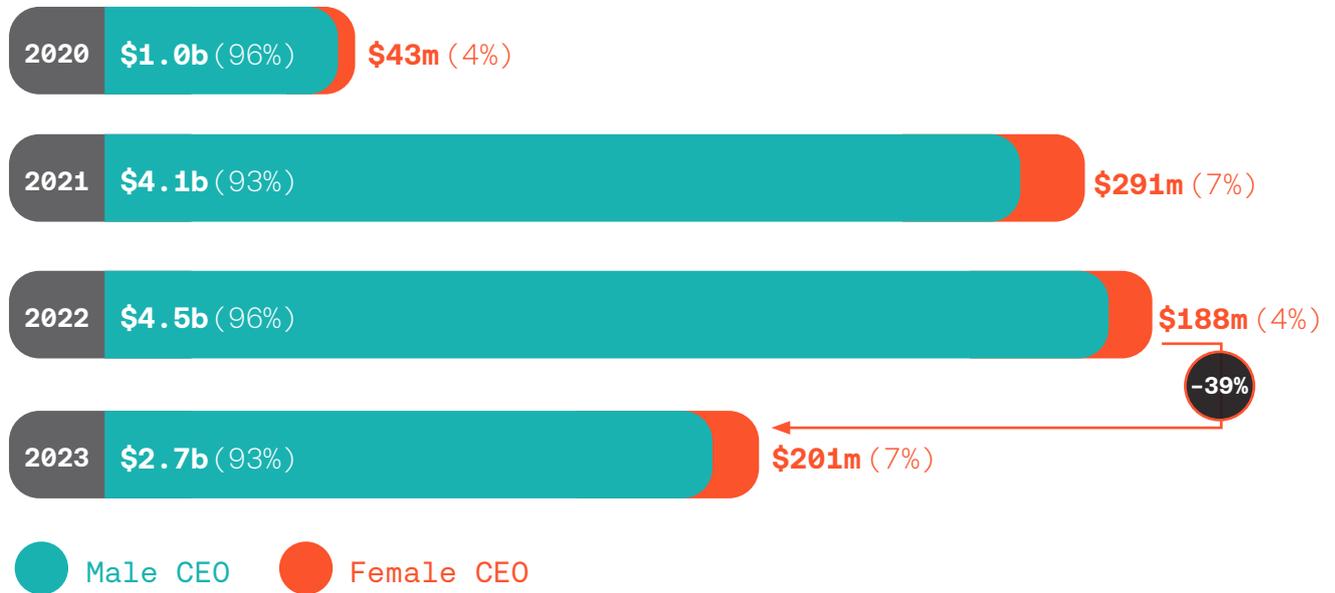
Efe Braimah, Managing Director, Aishat Raji, Principal, Christine Chinwuba, Analyst, with contributions from Surayyah Ahmad, General Partner at Sabou Capital



A cursory search of the internet reveals that women across Africa consistently receive significantly less funding than their male counterparts. According to [Africa: The Big Deal](#), in 2023, women-led ventures in Africa raised just above \$200 million, reflecting a commendable year-on-year growth of 7%. This is particularly notable considering that overall funding in Africa shrank by 39% during the same period. However, in absolute terms, the disparity remains staggering—male-led ventures raised \$2.7 billion, 13 times greater than their women-led counterparts. In 2023, Nigeria maintained its leading position in venture capital deal activity across African countries for the third year in a row, capturing 19% of the total deal volume, according to [the African Private Capital Association](#). Despite this, the capital inflows are unevenly distributed, with Lagos and Abuja securing a lion's share due to their more developed infrastructure, robust business ecosystems, and proximity to investor networks. In contrast, Northern states have significantly lagged, with pronounced funding gaps driven by historically low development indicators that have disincentivized investment in formal and informal startup ecosystems. As a result, Northern Nigerian women entrepreneurs face a dual burden of financial insecurity and systemic neglect.

Figure 1: Funding raised by startups in Africa, by CEO Gender

Source: Africa: The Big Deal's proprietary database



Despite these challenges, women in Northern Nigeria are increasingly turning to entrepreneurship as a form of empowerment to redefine traditional roles and assert economic agency. However, access to critical resources like capital, skills, market, mentorship, and professional networks remains fragmented and often inaccessible. The structural barriers and gender biases amplify the difficulties they face.

In line with a mission to unlock capital in global underserved markets, CrossBoundary partnered with TTLABS, Startup Kano and the Northern Founders Community to convene a roundtable focused on garnering insights from women operating in Micro, Small, and Medium Enterprises (MSMEs) to address gender-nuanced financial challenges for women entrepreneurs in Northern Nigeria. This event explored access to finance challenges that women-led MSMEs face in Northern Nigeria and identified solutions to enhance their agency and access to resources. It provided a platform for women entrepreneurs to build connections, share insights, and collaborate on strategies to overcome financial barriers and drive economic empowerment.

The Gates Foundation Conceptual Framework¹ for Women's Empowerment is a model developed to systematically analyze

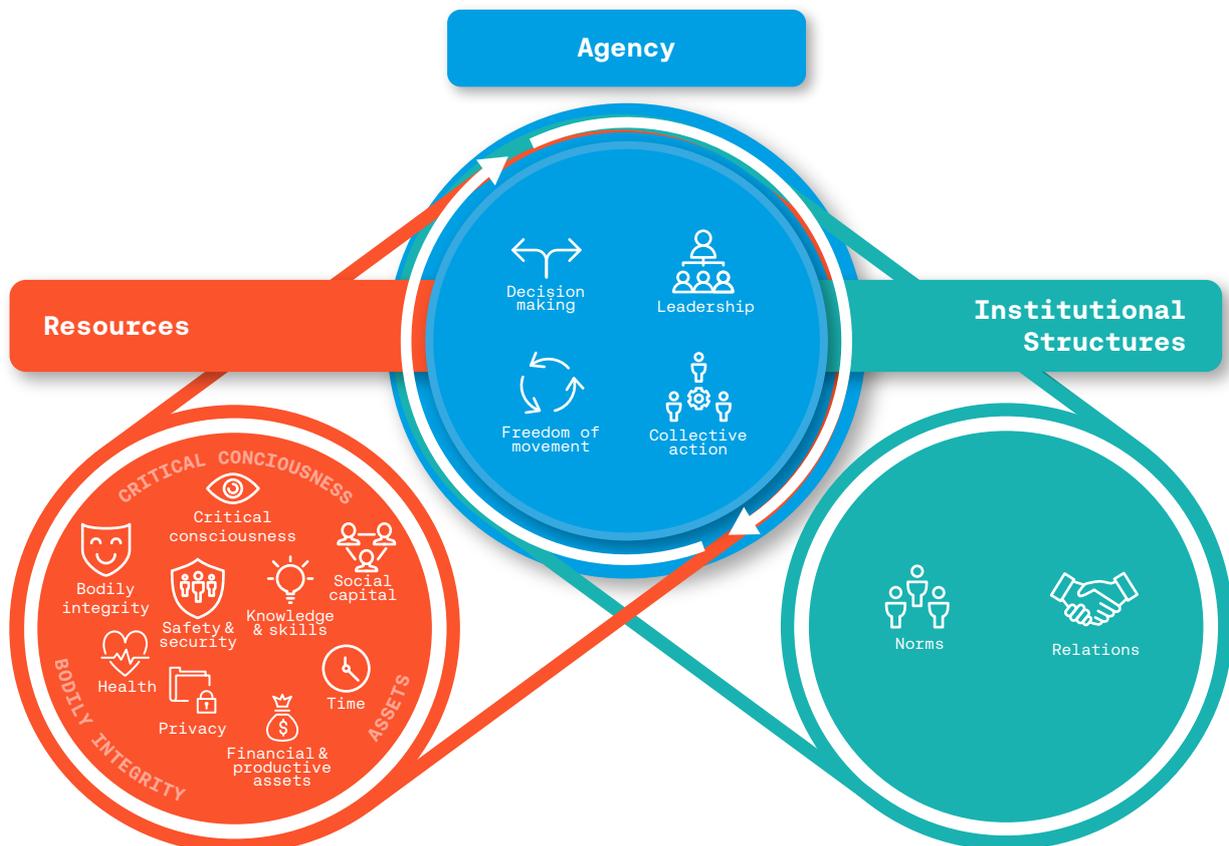
¹ https://docs.gatesfoundation.org/Documents/BMGF_EmpowermentModel.pdf

and address gender inequalities while promoting women's empowerment. It serves as a foundation for developing programs, policies, and interventions that enable women to achieve equitable opportunities, agency, and access to resources. The framework focuses on three interconnected dimensions of women's empowerment:

- **Agency:** The ability of women to make decisions, act upon them, and control their own lives
- **Resources:** The assets, capabilities, and opportunities women need to exercise agency effectively. These primarily include financial assets, skills, and social capital (network)
- **Institutional structures:** The formal and informal systems, norms, and policies that shape women's empowerment

Figure 2: The Gates Foundation Conceptual Framework for Women's Empowerment

Source: The Gates Foundation



The **agency** and access to critical **resources** for Nigerian women are increasingly being eroded due to deep-rooted socio-cultural norms, economic inequality, and systemic barriers. Despite their historical roles in trade, agriculture, and community leadership, prevailing gender norms often restrict their decision-making power, mobility, and access to education and economic opportunities. Structural challenges, such as early marriages, limited access to health services, and exclusion from leadership and political participation, further diminish their capacity to exercise agency. Beyond agency, access to essential **resources**—including financial assets, knowledge & skills and markets & network—is also diminishing. Many women entrepreneurs face significant financing gaps, as traditional lending systems often require collateral they may not have, and informal financial networks offer only limited, short-term funding.

Entrepreneurial skills and financial literacy remain out of reach for many women, restricting their ability to scale their businesses. Additionally, socio-cultural and religious restrictions often confine women to small-scale, subsistence-level businesses, limiting their market access and economic opportunities. Institutional barriers, including policies that fail to accommodate the realities of women-led businesses, further exacerbate these challenges, reinforcing a cycle of financial exclusion and economic marginalization.

This report examines the key challenges restricting women’s agency and access to resources (primarily capital) in Northern Nigeria, drawing on insights from the roundtable discussion. It also explores innovative financing solutions that are helping to overcome these barriers.



Attendees of the “Roundtable Discussion with Female Entrepreneurs in Northern Nigeria”

Access to funding remains a persistent struggle for northern Nigerian women entrepreneurs due to socio-cultural, religious, and institutional barriers

Funding continues to be a major obstacle for women entrepreneurs in Northern Nigeria, as evidenced by the roundtable data. Similar to Africa-wide data, over 70% of roundtable participants rely on personal savings and family and friends to finance their businesses, reflecting the widespread exclusion of women from formal financial systems. This dependency stems from systemic barriers such as limited financial literacy, lack of collateral—often tied to male family members—and the informal nature of many women-led businesses. For instance, only one participant reported successfully securing a loan, while just 22% had accessed grants, including those from notable programs like **SMEDAN** (₦3 million) and Brave Women (\$10,000). The knowledge gap is stark—over 80% of participants lacked awareness of critical financial concepts like credit scoring, equity financing, and crowdfunding. The report highlights socio-cultural, religious, and institutional barriers as three core factors limiting women entrepreneurs' ability to access funding required for their businesses.



CrossBoundary partnered with TTLABS, Startup Kano and the Northern Founders Community to convene a roundtable focused on garnering insights from women operating in Micro, Small, and Medium Enterprises (MSMEs)

Figure 3: Sources of financing used by MSMEs (%)

Source: Kano Roundtable Demographics



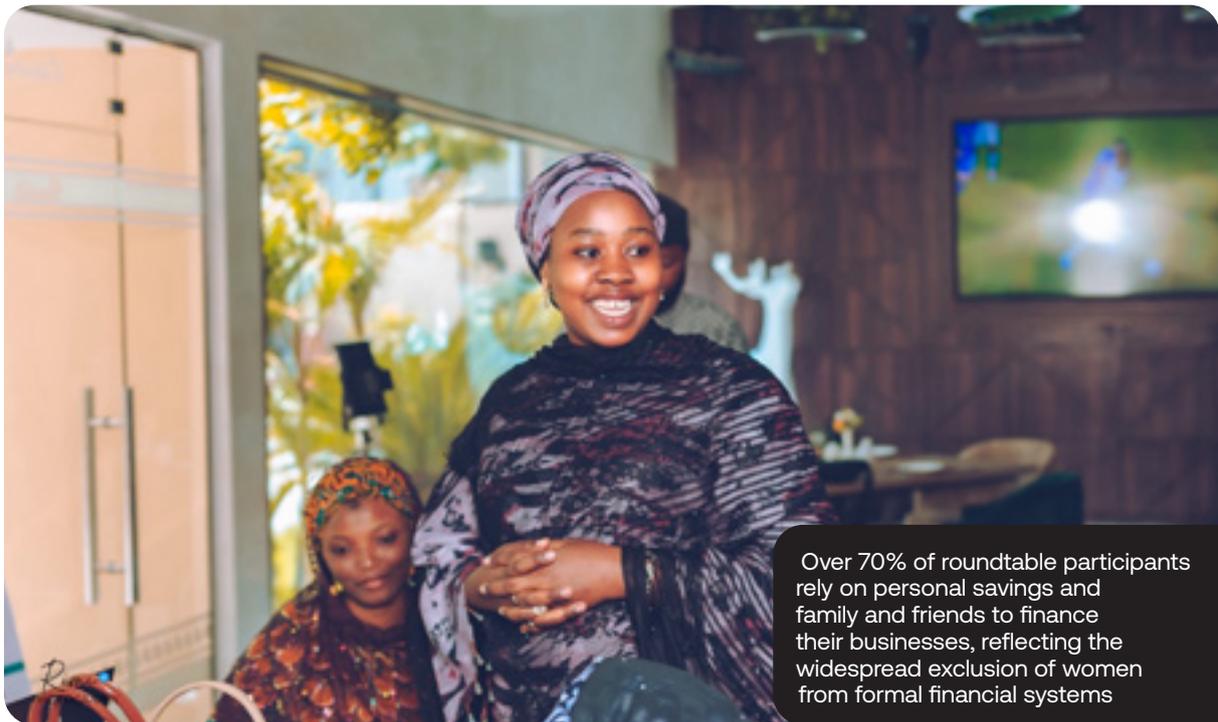
Finding

01

Socio-cultural norms restrict agency and access to funding for Northern women entrepreneurs in traditional sectors

Deep-rooted socio-cultural norms in Northern Nigeria significantly limit women's economic agency and access to critical financial and business resources. Prevailing gender norms confine many women to small-scale businesses and subsistence-level entrepreneurship, reinforcing societal expectations that prioritize domestic responsibilities over economic participation. These constraints restrict women's mobility and decision-making power, making it difficult for them to secure loans or other formal financing. Many women are also excluded from financial decision-making within households and communities, further diminishing their economic agency.

Despite their historical roles in trade and agriculture, most women-led businesses in Northern Nigeria operate within the informal economy, particularly in agriculture, food processing, small-scale



food services, textiles, and petty trade. These sectors align with cultural expectations, allowing women to contribute economically within familiar settings. However, these traditional sectors historically often have lower access to funding, exacerbating the financial challenges faced by women entrepreneurs. Our participant data supports this, showing that 27% of female entrepreneurs operate in the agriculture and textile industries, yet none successfully raised external capital. Many of these businesses in traditional sectors, e.g., agriculture, which contributes predominantly to the employment and GDP of the North, lack formal registration, credit history, or the collateral required by lenders. Specifically, land—often the primary form of collateral for loans—is typically owned by men due to socio-cultural norms, further restricting women’s access to financing. This challenge is particularly acute in rural regions, where land ownership is governed by inheritance laws and generational transfers. Programs such as the [Central Bank of Nigeria’s Anchor Borrowers Scheme](#), designed to connect smallholder farmers with agribusinesses, have attempted to bridge these financial gaps. However, inefficiencies and corruption have hindered their effectiveness, making access to resources even more challenging for women entrepreneurs. Investors and financial institutions tend to prioritize high-margin sectors with strong asset bases, such as technology, infrastructure, and large-scale manufacturing, leaving women-owned businesses in traditional sectors at a disadvantage.

Finding

02

Religious factors reduce the pool of financing available to female entrepreneurs in the North

Traditional financial institutions often fail to serve this demographic as many financial products are seen as incompatible with the cultural and religious values of the predominantly Muslim Northern population, where interest-based financing (riba) is widely rejected. Many women entrepreneurs prefer to avoid conventional loans, fearing non-compliance with religious norms. This religious sensitivity further exacerbates financial exclusion, as limited alternatives exist within the mainstream banking sector.

Additionally, knowledge gaps regarding Shari'ah-compliant financing options persist. Many women entrepreneurs are unaware of Islamic financing instruments such as Murabaha (cost-plus financing) and Musharaka (equity partnerships), limiting their ability to leverage ethical financial services tailored to their needs. Without accessible Shari'ah-compliant financial products, women-led businesses continue to rely on informal networks, which often provide only short-term and insufficient funding solutions.

Finding

03

Institutional factors restrict the availability of financing instruments applicable for female-led MSMEs, leading to a missed opportunity to support the growing entrepreneurial base of Northern women

Due to some of the socio-cultural described above and historical biases prevalent to this day, financial institutions frequently categorize women-led businesses in traditional sectors as high-risk, leading to lower approval rates for funding applications. Only 4% of the female entrepreneurs surveyed have been able to access external financing (excluding grants).

Despite these challenges, emerging opportunities in renewable energy and value-added agro-processing offer significant growth potential for women entrepreneurs, leading to greater financial



inclusion and economic empowerment. The roundtable participants represented a diverse range of industries, including agriculture, catering services, fashion, content creation, and technology, indicating a shift where women are exploring higher-value sectors that could attract more investment, provided the right financial instruments and policy interventions are implemented.

The data from the roundtable suggests that age and marital status, influenced by socio-cultural norms, shape women's entrepreneurial opportunities in Northern Nigeria. Insights reveal a strong presence of young women engaged in entrepreneurship, particularly in the 18-25 and 26-30 age groups, with over 67% being single. This significant "single" representation suggests that entrepreneurship (as opposed to familial obligations) is increasingly seen as an attractive path for young women seeking financial independence, personal growth, and professional development. This aligns with the broader trend of a growing entrepreneurial base among young women in the North, highlighting the need for targeted interventions to economically empower this group, particularly as they move beyond traditional sectors.

Innovative financial instruments are needed to overcome socio-cultural, religious, and institutional barriers, expanding access to financing for female entrepreneurs in Northern Nigeria

As detailed in the earlier section, accessing financing as a woman in northern Nigeria has many nuances underscored by the intersection of cultural and religious constraints, institutional inadequacies, and limited financial inclusion initiatives. To address these systemic barriers, innovative financing models must be tailored to align with the socio-cultural, religious, and institutional context. The next section of this report explores three promising solutions—Savings and Credit Cooperatives (SACCOs), Shari'ah-Compliant Financing, and Results-Based Financing (RBF) instruments—that can be scaled up to bridge the gender finance gap in Northern Nigeria.



Innovative financial instruments are needed to overcome socio-cultural, religious, and institutional barriers, expanding access to financing for female entrepreneurs in Northern Nigeria



SACCOs can enhance financial security and business sustainability for women, addressing socio-cultural barriers that often limit access to formal financing in Northern Nigeria

Savings and Credit Cooperatives (SACCOs) offer a practical and effective solution for women facing socio-cultural restrictions on formal financial access. These member-owned financial groups operate on principles of collective savings and lending, allowing women to pool resources and access loans without traditional collateral requirements and limited bias to traditional sectors with high women involvement. In Northern Nigeria, a culturally rooted version of SACCOs exists in the form of Adashe, which are like the Yoruba community's Ajo and the Igbo equivalent Isusu. Adashe is a communal savings system where members contribute funds regularly and take turns accessing the pooled money. It is a culturally grounded solution to collateral challenges in Northern Nigeria, providing access to capital in contexts where formal financial institutions fall short.

To better understand the role of Adashe in empowering women financially, we conducted interviews with five Adashe heads across Northern Nigeria to gain insights into the motivations, structure, challenges, and impact of these informal savings groups.

The motivations behind establishing Adashe groups are deeply rooted in communal support and financial empowerment, enabled by group accountability. As one Adashe head from Kano State explained "I started so that we can help each other. Because people have issues with financial discipline and cannot keep money. Adashe gives people bulk payment like 2-4m to start businesses." By pooling resources, Adashe enables members to access funds that would otherwise be unattainable through traditional banking systems (which often request huge collateral to back stop loans) and promotes financial discipline by encouraging women to save consistently to increase their disposable income for business and household financial management.

Integral to the success of Adashe is selecting members with trust and integrity. Adashe heads prioritize recruiting individuals with stable incomes and reputable standing in their communities. Most groups rely on personal networks and social connections to maintain

Adashe systems have played a crucial role in helping women start and expand businesses, and during the roundtable participant shared their experiences



accountability and ensure consistent contributions. “We do not deal with people that we do not know. We as leaders of Adashe are also trusted by the group to not take their money away”, mentioned an Adashe leader from Abuja.

The most prevalent challenge cited by Adashe groups is the issue of late or missed payments, which disrupts the payout cycle and overall group operations. Some members often struggle to make timely contributions due to various reasons, including personal financial constraints, family emergencies, or systemic delays such



as salary disbursement issues from employers or banking problems. Nevertheless, most Adashe heads emphasized that the default rate is very low, and even when members are late, they eventually fulfill their payment obligations.

Adashe systems have played a crucial role in helping women start and expand businesses, particularly those in traditional sectors like agriculture and informal trade, by providing access to lump-sum funds—an opportunity that might otherwise be out of reach due to limited access to formal financial institutions. Roundtable participants shared how they used Adashe payouts to launch ventures such as clothing businesses, liquid soap brands, and kitchenware sales, turning small savings into meaningful entrepreneurial ventures. In addition to supporting business growth, the Adashe system also helps women manage personal expenses more effectively. Many women rely on its funds to cover essential needs like rent and household upgrades, which can be difficult to manage with irregular income streams.

Strengthening and formalizing SACCOs (Savings and Credit Cooperatives) could enhance their impact, providing greater financial security and business sustainability for women entrepreneurs who are often underserved by formal banking institutions. The Adashe system is particularly well-suited to the North as it addresses key socio-cultural barriers, such as collateral requirements, gender bias, and sector bias, which typically hinder women in the region from accessing capital.

Shari’ah-compliant financing instruments, particularly Murabaha and Musharaka provide funding alternatives that can be accessed by Northern female entrepreneurs

In Northern Nigeria, where Islamic values strongly influence financial preferences, the lack of Shari’ah-compliant financing options limits financial inclusion. Shari’ah-compliant financing aligns with Islamic law, emphasizing ethical, fair, and socially responsible practices. Its principles prohibit interest (riba), speculative behavior (maysir), and uncertainty (gharar), requiring asset-backed transactions and excluding investments in harmful industries like gambling, alcohol, and tobacco.

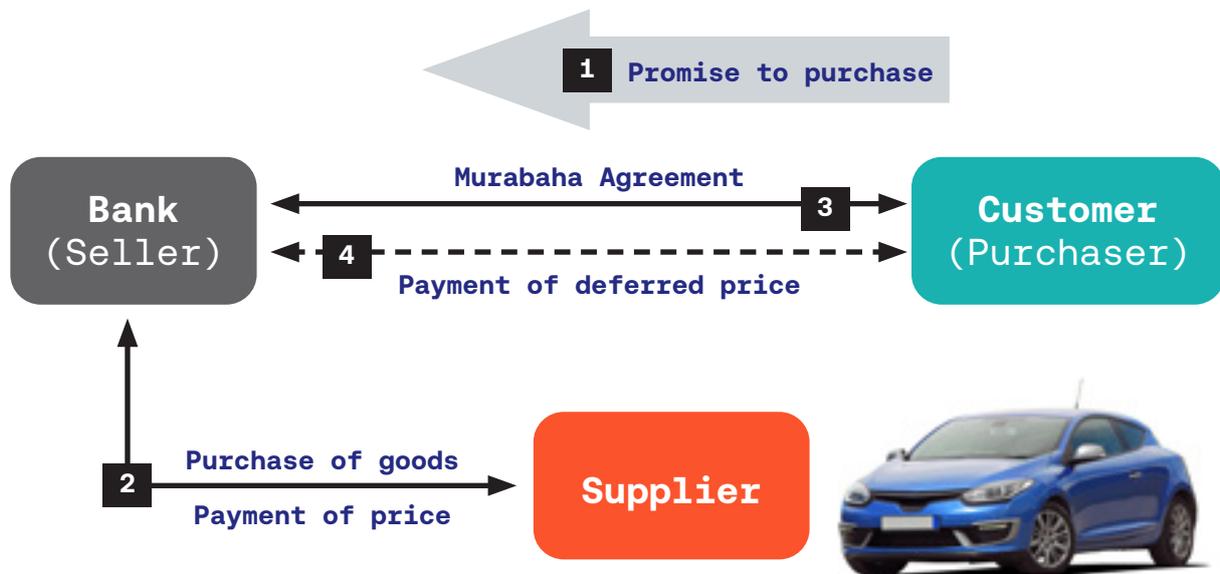
Islamic financing models offer culturally appropriate financial solutions that align with the ethical and religious values of women in Northern Nigeria. Two key Islamic financing instruments, Murabaha and Musharaka, provide viable alternatives to conventional loans:

- **Murabaha (Cost-Plus Financing):** Enables women entrepreneurs to purchase business assets through a structured payment plan without engaging in interest-based transactions. This model is particularly useful for inventory financing in agricultural and trade-based businesses. Murabaha is a trade-based contract where a financial institution purchases goods or assets on behalf of a client and resells them at a pre-agreed markup. The process begins with the entrepreneur committing to purchase specific goods through the financial institution. The bank then procures the goods from a supplier, taking legal ownership and possession. These goods are sold to the entrepreneur under a Murabaha agreement, which includes a pre-determined profit margin. The client repays the total Murabaha price, including the profit margin, in installments as per the agreed terms, offering repayment flexibility.

Key features of *Murabaha* include a fixed return for the financial institution, transparent disclosure of costs, off-take agreement, and delivery of goods only after the agreement is finalized. It is widely regarded as one of the most accessible and preferred financing models by banks, especially for short-term needs in sectors such as trade, imports, and real estate. Female-led MSMEs in select value chains like cocoa farming, leather and hides, and other export-oriented commodities can access Murabaha financing through their banks. However, challenges still exist with Murabaha, such as pricing inconsistencies caused by varying vendor prices, which make it difficult to determine fair and uniform purchase costs. Additionally, Murabaha may be less suitable for MSMEs with small-scale, diversified inventory needs or those without secured off-takers, limiting its applicability for certain types of businesses. Finally, Murabaha funds can only be used for its intended inventory purchase, so the applicability is limited for MSMEs, which typically have diversified uses of capital, including capital and operational expenditure.

Figure 4: Graphical representation of Murabaha financing structure

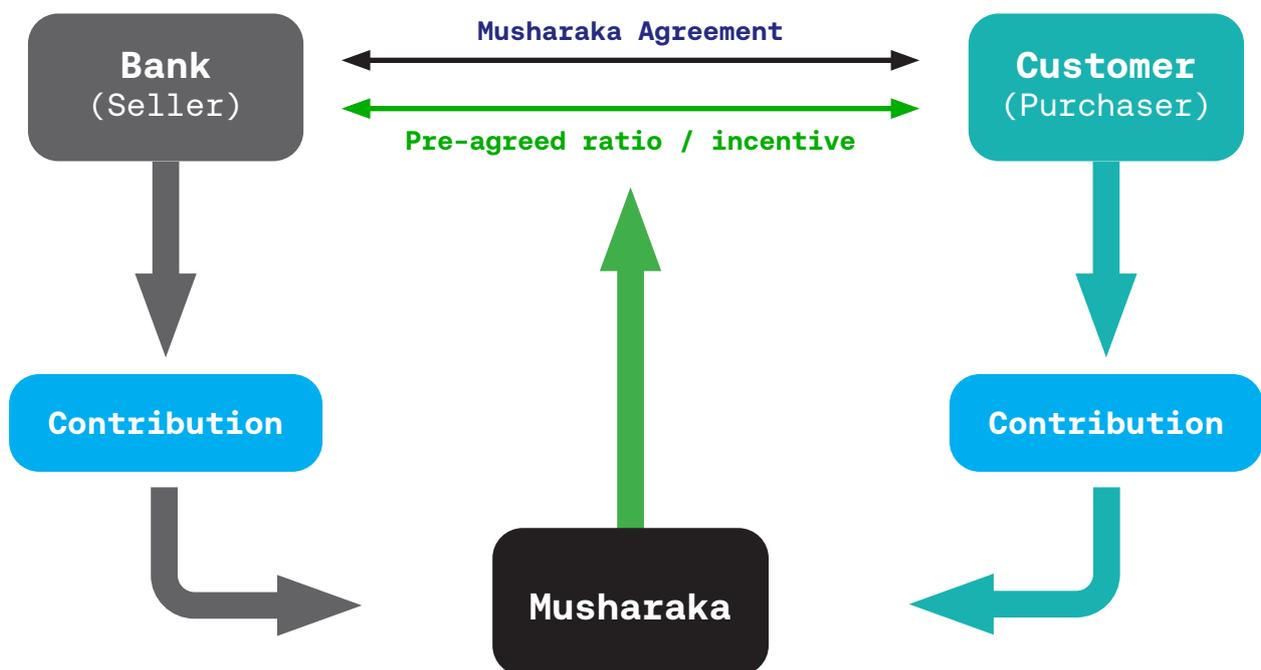
Exchange contracts - Murabaha (Cost profit sale)



- **Musharaka (Equity Partnership):** Facilitates investment partnerships where financial institutions and entrepreneurs share profits and risks. This model is well-suited for growth-stage businesses seeking larger capital investments without traditional debt obligations. Musharaka, or joint venture, operates as an equity-based contract where both the financial institution and the customer contribute capital to a business or project, sharing profits and losses in proportion based on a pre-agreed ratio. Unlike Murabaha, which ties financing to specific assets, Musharaka provides women with the flexibility to decide how to use the capital, making it particularly suitable for MSMEs with diverse funding needs. This structure allows entrepreneurs to allocate funds toward workforce expansion, capital investments, or other strategic priorities. However, Musharaka is less accessible to small and medium enterprises due to the higher levels of oversight and risk involved.

To address this gap, there is an increasing need for small fund managers to provide equity financing to SMEs in Northern Nigeria. Notably, Sabou Capital (formerly Aduna Capital), a firm specializing in equity financing for SMEs in the region, is now leading fundraising efforts after acquiring TTLabs, an accelerator supporting early-stage founders in Africa, particularly female entrepreneurs in Northern Nigeria. This focus is critical because Musharaka, one of the most widely used forms of Islamic financing, closely mirrors equity financing. Its structure makes it an effective tool for promoting financial inclusion and driving entrepreneurial growth in Northern Nigeria.

Figure 5: Graphical representation of Musharaka financing structure



Although Islamic finance accounts for only 3% of the global financial market, despite Muslims making up over 20% of the global population, the sector is valued at nearly \$4 trillion and is expected to grow at a 10% CAGR. Globally, countries like the UK have



embraced Islamic finance, issuing sukuk bonds to promote financial inclusivity. In Nigeria, sukuk issuance has focused on infrastructure development, with limited impact on SMEs, leaving entrepreneurs underserved. Expanding access to these Shari'ah-compliant financial products can significantly enhance financial inclusion for women, enabling them to grow their businesses while adhering to religious principles.

Results-Based Financing (RBF) offers a performance-linked financing model that can be tailored to expand funding access for women-focused sectors and value chains

Results-Based Financing (RBF) is an emerging model that links financial support to measurable business outcomes, making funding more accessible to female entrepreneurs who lack collateral or credit history and who are in traditionally women-centric industries. Under RBF schemes, entrepreneurs receive funding based on achieving specific milestones, such as revenue growth, job creation, or production targets. This shift from traditional collateral-based lending to performance-based financing benefits women who operate in informal or semi-formal sectors.

RBF mechanisms can attract a mix of donors and private-sector participants, with funds being deployed either as Shari'ah-compliant instruments and/or through grant mechanisms. Additionally, RBF incentivizes entrepreneurs to operate with clear impact objectives, as their ability to access funding is directly tied to delivering measurable impact outcomes. This alignment of financing with outcomes promotes disciplined business practices while also building the confidence of financial stakeholders.

In agriculture, where women represent a significant proportion of the workforce in Northern Nigeria, RBF can play a transformative role. For instance, funding could be tied to measurable outcomes like increased crop yields, the adoption of sustainable farming practices, or the creation of export-ready value chains. Donors and investors are more likely to engage in these arrangements as the outcome-based structure minimizes risk and ensures accountability. Donors are already trialing this structure, notably the Shell Foundation program which provides RBF to appliance distributors to incentivize



Article contributor and General Partner at Sabou Capital Surayyah Ahmad speaks during the roundtable

the uptake and usage of productive-use appliances by female-led MSMEs, such as clean cooking stoves. While RBF is currently being applied in energy, it has broader potential, especially for sectors and value chains where women are disproportionately involved. This flexible and scalable model makes it suitable for emerging sectors such as tech, AI, and content creation. It helps keep pace with the evolving entrepreneurship landscape and the expanding base of female-led MSMEs in Nigeria, providing them with sustainable funding pathways that are directly tied to measurable economic impact.



Addressing the financial challenges faced by women entrepreneurs in Northern Nigeria requires a multi-pronged approach that integrates culturally sensitive, religiously compliant, and institutionally inclusive financial solutions. SACCOs empower women within their socio-cultural networks, Shari'ah-compliant financing aligns with religious values, and Results-Based Financing offers performance-driven funding alternatives. By scaling these innovative financing models, the economic potential of women entrepreneurs in Northern Nigeria can be unlocked, fostering inclusive growth and creating pathways to sustainable development.

About TTLabs

TTLabs is a venture studio that helps founders at the pre-idea stage build to grow innovative startups. Their mission is to provide aspiring entrepreneurs with the resources and support they need to turn their startup dreams into a reality.

About Startup Kano

Startup Kano promotes and advocates technology, entrepreneurship, agribusiness and self-employment. They incubate and accelerate startups and train them on strategies to secure funding from venture capitalists, angel investors and government grants, as well as, providing guidance on bootstrapping strategies for startup growth strategies and expansion.

About Northern Founders Community (NFC)

NFC serves as the confluence point for the Northern tech ecosystem to ensure local and global opportunities and useful information is easily passed to the ecosystem. The mission of the Northern Founders community (NFC) is to foster collaboration, knowledge sharing, and growth within the Northern Tech Ecosystem by providing a unified platform for communication, networking, and event hosting. 



CrossBoundary
Energy

Navigating eligibility criteria for distributed energy resources in Africa

African utilities face the challenge of balancing financial sustainability with extending electricity access and play a crucial role in defining regulations that can block or accelerate private access to Distributed Energy Resources. What does this mean for Africa?



“When they work well, eligibility criteria are well-planned, clearly communicated, and fairly implemented,” writes Nichola Ciera, Energy Policy Officer at CrossBoundary Energy.

- As industrial operations turn to clean, reliable, and distributed onsite energy, eligibility criteria for Distributed Energy Resources (DERs) become crucial for safe integration with national grids and energy planning
- These criteria, when well-planned and fairly implemented, can help transition Africa’s energy markets toward a decentralized future that benefits both utilities and private consumers of power
- However, they should not be used to block innovation. Policymakers must set fair qualifications, enforce clear criteria, and regularly review them to ensure they support DER adoption.



Learn more about the journey ahead at www.crossboundaryenergy.com

A woman with dark hair and glasses is shown from the chest up, wearing a dark, long-sleeved button-down shirt. She has her arms crossed. The image is split vertically by a semi-transparent purple and red overlay. On the left side of the overlay, there are faint floral patterns and a red bird. On the right side, there are faint purple floral patterns. The background is white.

The Value of Gender Lens Investing in South and Southeast Asia: Opportunities and Lessons from Africa



Written by:
Aditi Mehta, Associate,
CrossBoundary Advisory

Gender Lens Investing (GLI) has emerged as a vital approach to addressing gender disparities while creating sustainable business outcomes. Studies have shown that in emerging markets, gender-diverse funds had a 20% higher net internal rate of return relative to the median¹ and that investors in companies with robust gender diversity strategies see compounded annual returns that are 3.5% higher on average². Moreover, startups led by women delivered a return of 78 cents for every dollar of funding, significantly outperforming male-founded startups, which generated only 31 cents per dollar³.

Globally, GLI has gained significant traction, and gender lens investing in private markets has expanded by over 30% in the past two years, with the total market size now estimated at a minimum of US\$7.9 billion, up from US\$6 billion in 2021⁴. Yet, despite the rise of GLI as a strategy to address funding inequities, South and Southeast Asia continue to lag behind regions like Sub-Saharan Africa and Latin American and the Caribbean in adopting GLI at scale⁵.

1 IFC

2 World Bank Group

3 Boston Consulting Group

4 2X Global

5 Project Sage 4.0





In theory, South and Southeast Asia has many of the ingredients needed for GLI success - a growing entrepreneurial ecosystem, significant unmet demand for capital among women entrepreneurs, and an expanding impact investment landscape. Notably, the e-commerce sector has seen significant growth, driven by women entrepreneurs leveraging online platforms. Between 2015 and 2020, the e-commerce market in Southeast Asia tripled in size, and closing gender gaps in online sales could add \$280 billion in value by 2030⁶. FinTech is another emerging sector for women in the region, which attracted almost a third of the investment into Indian women-led start-ups in 2024⁷.

⁶ IFC

⁷ Inc42



Yet systemic barriers and structural biases within investment frameworks persist, keeping gender lens investment in South Asia from growing at the same pace as other geographies. South and Southeast Asia have immense untapped potential to leverage GLI for economic growth. According to McKinsey, eliminating gender inequity in Southeast Asia could add \$370 billion to the region's GDP by 2025. Women's economic participation is crucial for unlocking this potential, as they represent a significant proportion of entrepreneurs and workers in key sectors

Asia's entrepreneurial ecosystem, though thriving, remains male-dominated. Many women entrepreneurs face challenges in accessing formal networks, mentoring, and scalable opportunities. This is further compounded by systemic biases within the investment community that view women-led ventures as riskier or less capable of achieving high returns.

The representation of women in leadership roles within funds is a critical factor in GLI's success. Research indicates that women fund managers are twice as likely to invest in female-led businesses. However, in South Asia, the number of women in senior roles within private equity and venture capital remains minimal. As of 2022, women made up less than 15% of partners and less than 10% of investment committee members at PE / VC firms in India⁸. Male-dominated networks and decision-making structures within funds often lead to the perpetuation of bias and a lack of prioritization for gender-focused strategies.

Bias, both conscious and unconscious, plays a significant role in the underfunding of women-led businesses. Male-dominated investment teams often underestimate the potential of female entrepreneurs, perpetuating the cycle of underrepresentation.

Even when women entrepreneurs succeed in early-stage funding, they often struggle to raise follow-on capital because of entrenched perceptions about their ability to scale. This



results in a cycle where female entrepreneurs are constrained to small-ticket investments, limiting their ability to expand and compete. Moreover, according to invest2innovate, a Pakistani female-led fund, female-founded startups tend to assign lower valuations, resulting in smaller funding rounds.

While female fund managers are more likely to support women-led businesses, their relative scarcity in South Asia limits the scope of such investments. This bias is not limited to South Asia but is amplified by cultural norms that prioritize male leadership and undervalue women's contributions to economic activities.

What needs to be done

- **Increase Female Representation in Funds:** To address investor bias, increasing the representation of women in leadership roles within investment firms is crucial. Sub-Saharan Africa has seen the emergence of gender-focused funds such as **Alitheia IDF**, which is not only female founded and female-led, but also has 54% female board representation. The fund focuses on integrating women-led businesses into its investment strategy.

- **Shift Risk Perception Narrative:** The perception that women-led businesses are riskier investments must change. Studies have shown that companies with greater gender diversity often outperform financially. Amplifying success stories and data-driven evidence of women-led businesses delivering superior returns can help shift this narrative. There are multiple studies from
- **Provide Targeted Technical Assistance (TA):** Technical assistance programs should focus on equipping women entrepreneurs with the skills and networks needed to scale their businesses. This includes mentorship, leadership training, and access to market insights. Additionally, increasing the presence of women in leadership roles within large businesses in emerging markets can create a trickle-down effect, encouraging more women to enter the entrepreneurial ecosystem. For instance, **Kuramo Capital Management**, an investment management firm in Africa, has set-up the Moremi Accelerator Program that provides comprehensive support and training to early-stage fund managers, with a strategic focus on gender-smart funds.

Investing in women-led businesses has the power to transform economies and societies. Sub-Saharan Africa's success in leveraging GLI offers valuable lessons for Asia. By increasing female representation in funds, shifting narratives around risk, and aligning capital with the sectors women entrepreneurs thrive in, Asia can unlock the untapped potential of its women-led businesses. 





CrossBoundary
Group



Investing in Frontier Economies: What Can Public-Private Collaboration Achieve?

CrossBoundary featured on ODI Global's Think Change Podcast

CrossBoundary Group Co-founder and Managing Partner Jake Cusack joins global leaders to discuss how blended finance, investment facilitation, and cross-sector partnerships are reshaping what's possible in complex markets.

Jake draws on CrossBoundary's experience deploying investment capital in over 100 fragile and frontier contexts—from scaling renewable energy to mobilizing capital and delivering investment facilitation programs across Africa, Asia, and underserved U.S. markets.

Hosted by ODI Global ahead of the World Economic Forum Annual Meeting in Davos, this episode unpacks what meaningful collaboration between public and private sectors can achieve—and why it's urgently needed now.

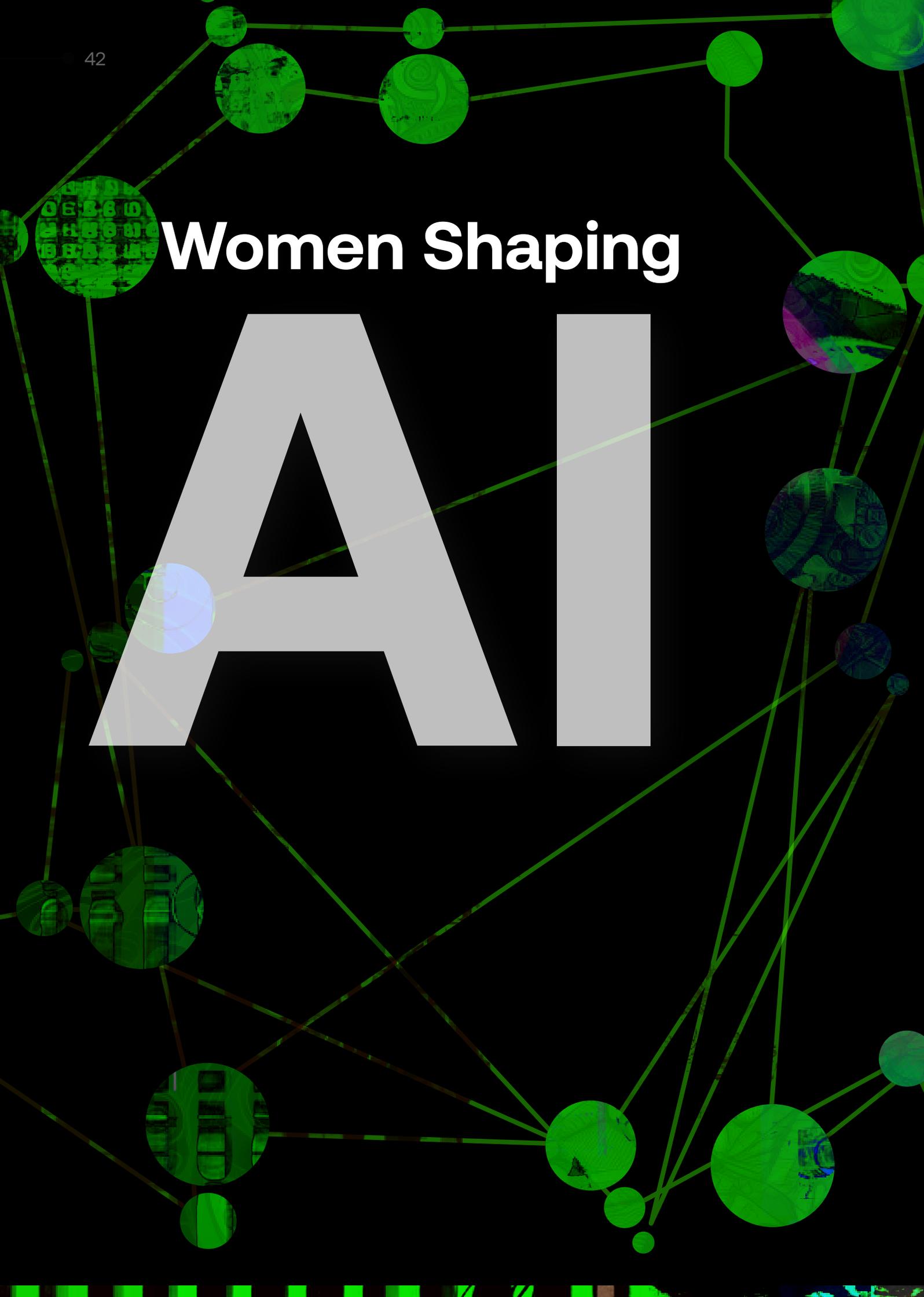


Listen here



Women Shaping

AI



This article was developed using AI to enhance research, with the author's thoughts, editing, and fact-checking included. The author also wanted to see where the models fell short and where biases/information gaps persisted.

(designer Dave also used prompts created by ChatGPT to speak to Midjourney to create some of the imagery)



Written by:
Kimberly Bays,
Director of Global
Communications,
CrossBoundary Group

“We believe it’s necessary to consider new systems and new structures for the 21st century.”

Feminist AI Research Network of the <A+> Alliance



Learn More



Men's voices have long dominated the narrative around artificial intelligence (AI), even though women have played critical roles in its invention, research, development, and ethical oversight. Although female pioneers in AI receive acknowledgment in academic and industry circles, their names seldom reach the same mainstream recognition as their male counterparts.

But the conversation is evolving. In March 2025, the first-ever Responsible AI Forum was held in Chicago, hosted by AnitaB.org, an organization born from the Systers online network, co-founded by computer scientist Dr. Anita Borg. The event underscored the urgent need for diverse voices in the AI industry.

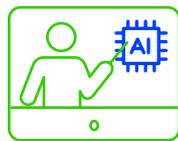
“With AI policies evolving at an unprecedented pace—from the EU AI Act to emerging U.S. regulations—women must play a central role in shaping the future of AI.” - Brenda Darden Wilkerson, President and CEO, AnitaB.org

Around the world, women and non-binary scientists, engineers, entrepreneurs, and policymakers are influencing the direction of AI. These trailblazers are pushing the boundaries of technological advancement and ensuring that AI serves humanity equitably.

Gender Gap in the Global AI Workforce



Women constitute approximately **22% of AI professionals worldwide** (World Economic Forum) and hold less than 10% of senior leadership roles within AI companies (Manufacturing Today)



22%

Women account for **22% of AI faculty positions** in academia



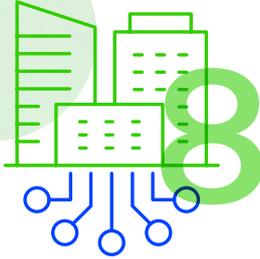
<3%

Women-led AI startups receive less than **3% of venture capital funding** and secure six times less per deal than their male counterparts (AIM Research)

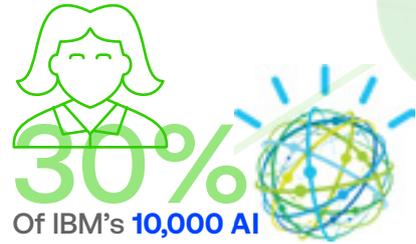


A 2024 UNESCO report found that generative AI often **associates women with domestic roles** and men with leadership and technical expertise (UNESCO)

Gender Gap in the Global AI Workforce



At eight big tech companies, Bloomberg found that only **20%** of technical roles are held by women, in addition:



Of IBM's **10,000 AI** professionals, about **3,000 are women** (30%), standing out from the industry average

“Women are as capable as anybody else to contribute to the technical development of AI, and they also care deeply about the impact of AI on people and society. This combination is exactly what we need now, to design and build a future with purpose, where technology supports human values rather than the opposite. An increased presence of women in AI will also make it fairer and more inclusive. A multi-disciplinary approach to AI education is fundamental to help women understand that this is a great match for their talent and passion.” – **Francesca Rossi, IBM Fellow, AI Ethics Global Leader, IBM Research**



28%

Microsoft has achieved **28% female representation in AI** roles. With an AI workforce of 12,000, approximately **3,360** of those positions are held by women



26%

Google has reported that **26% of their AI workforce consists of women**. Out of Google's 15,000 AI professionals, about **3,900 are women**



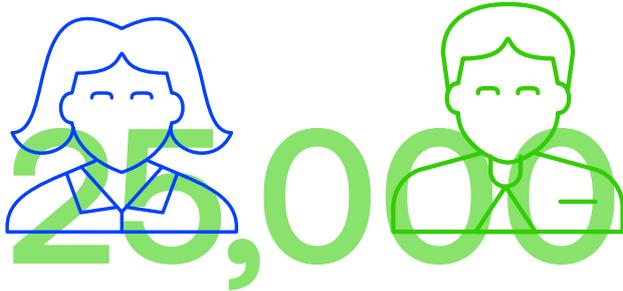
28%

Meta (formerly Facebook) fills **23%** of its AI positions with women. With an AI team of 8,000, which means approximately **1,840 are women**



26%

As of January 2024, Nvidia's global workforce was **19.7% female**. Women make up about **15%** of technical roles, **18%** of managers, and **40%** of executive officers. (Business Insider) Women made up **23%** of new hires globally in FY24. (Nvidia Corporate Sustainability Report 2024)



Gender gap in the global AI workforce, from the Oliver Wyman Forum survey of **25,000** working adults (2024)

51%

51% of women aged 18-65 around the world say they use generative AI tools at least once a week, compared to **59%** of male workers

59%

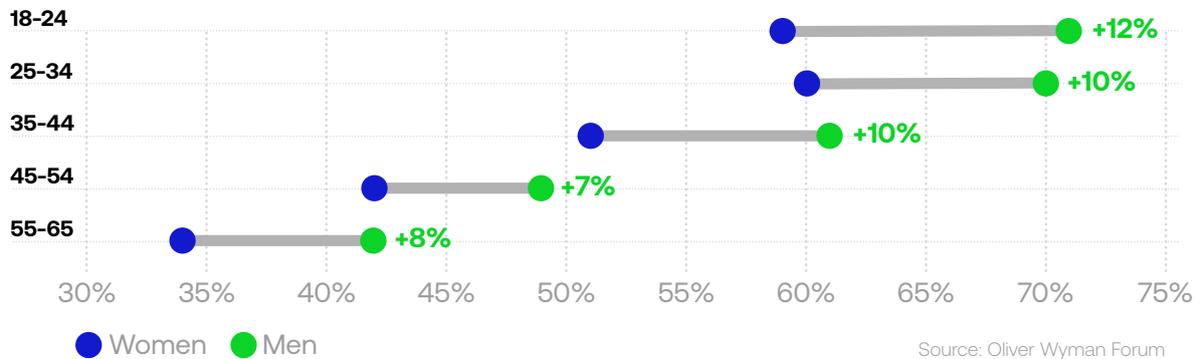
71% of men ages 18-24 say they use generative AI weekly, compared with **59%** of women

98%

98% of those surveyed said they need to be upskilled over the next five years due to AI disruption. Most employees — **77%** of white-collar workers, **74%** of blue collars and **71%** of pink collars — say employer support would make them feel more comfortable using AI at work

Mind the gap

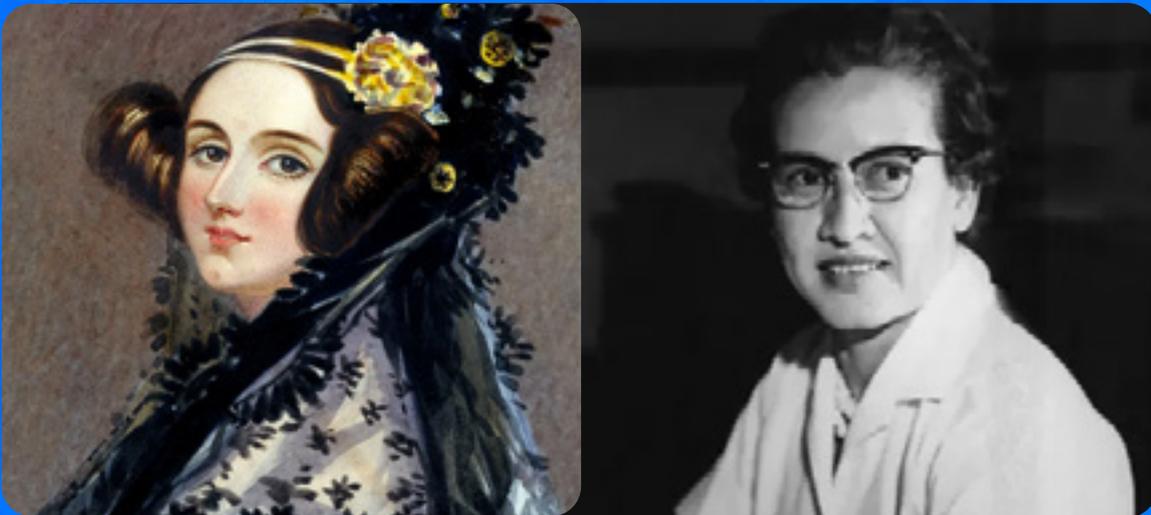
Percentages of global workers by age and gender who say they use gerative AI at least once per week



The Matilda Effect

The underrepresentation of women in AI and technology is not due to a lack of contribution but rather a historical pattern of erasure and undervaluing women's achievements—a phenomenon known as the Matilda Effect. Coined by historian Margaret Rossiter, the Matilda Effect describes the tendency for women scientists' and inventors' work to be overlooked or attributed to their male counterparts. This bias has persisted across history, ensuring that the most recognized figures in technological advancement are often men, while equally significant contributions from women remain in the shadows.

For example, while names like Thomas Edison and Nikola Tesla are synonymous with electricity, few people recognize Edith Clarke, an electrical engineer who revolutionized power grid analysis. In computing, we celebrate Alan Turing's work but often fail to mention Ada Lovelace, who developed the first algorithm intended for execution by a machine. Even in space exploration, Neil Armstrong and John Glenn are American household names, but many are unaware that mathematicians like Katherine Johnson performed the complex calculations that made the Apollo missions possible.



This is changing – the movie *Hidden Figures*, for example, highlighted Katherine Johnson and her colleagues, Mary Jackson, and Dorothy Vaughan. However, the systemic bias against the achievements of women continues to shape how innovation is funded and recognized today.

Contributions from Women Around the World

(organized by regional origins)

Asia: Advancing World-leading AI

Image: World Economic Forum



Zhang Linghan, Ph.D., serves as a professor at the Institute of Data Law, oversees doctoral students at the China University of Political Science and Law, and is a visiting scholar at Cornell University. Her research extensively covers cyberspace law and algorithmic governance, and she is a member of the UN High-Level Advisory Body on AI. For several years, she has engaged in legislative advisory efforts concerning laws related to algorithm regulation, platform governance, data security, and artificial intelligence governance China.

Image: LinkedIn



Malaysian-born data scientist **Kavita Ganesan, Ph.D.**, has significantly contributed to natural language processing and machine learning. She is the author of *The Business Case for AI*, a guide for organizations on effective AI implementation. Ganesan also founded Opinosis Analytics, which focuses on AI strategies for optimizing business performance.

Image: LinkedIn



Saffron Huang and Divya Siddarth co-founded the Collective Intelligence Project, which, in 2023, worked with Anthropic to run a public input process involving ~1,000 Americans to draft a constitution for an AI system called **Constitutional AI**. The Collective Intelligence Project advocates for harnessing AI to enhance collective intelligence and improve cooperative efforts, ensuring that transformative technologies serve the public interest. In 2024, Siddarth delivered a TED talk on how AI and democracy can fix each other.

Image: TED





Image: AMD

As the CEO of Advanced Micro Devices (AMD), **Dr. Lisa Su** has spearheaded a remarkable company turnaround, establishing it as a significant player in the semiconductor industry. An American businesswoman born in Taiwan, she has overseen substantial technological advancements and financial growth at AMD, especially in AI and specialized chips. In 2024, she was named Time's CEO of the Year.

In a conversation with the Harvard Business Review, Su said: "We're consistently trying to drive more gender diversity, as well as overall diversity, and the reason for that, frankly, is we want to build the best business and products. To do that, you need a diversity of experiences and thoughts. The best thing we can do is give people opportunities. So what I'm focused on is giving women more exposure to the industry and then chances to shine and demonstrate their capabilities."

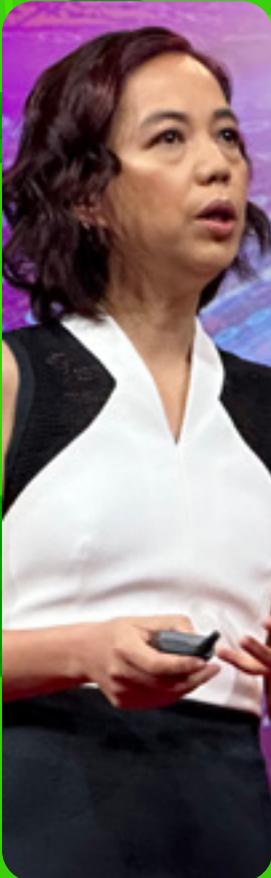
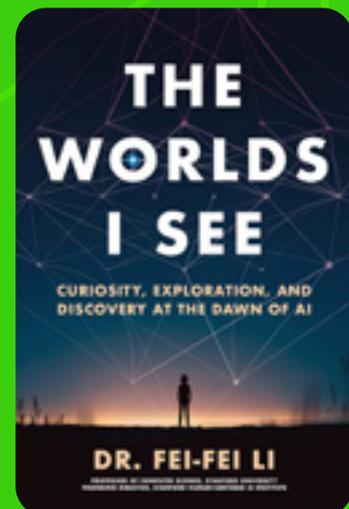


Image: Steve Jervetson

Chinese-American computer scientist **Dr. Fei-Fei Li** is one of the most prominent figures in AI research. As a professor at Stanford and co-director of the Stanford Human-Centered AI Institute, Li's work in computer vision has been foundational in shaping modern AI. Her research has been cited more than 100,000 times, earning her the "godmother of AI" moniker. In September 2024, her research paid off. Her World Labs startup raised \$230 million.

Li champions an interdisciplinary approach to AI development, emphasizing the ethical implications of machine learning. "The way we understand the structure of the world, imagined or real, will fundamentally be a piece of this AI puzzle," she notes, highlighting the need for contextual intelligence in AI systems.

Read Dr. Fei-Fei Li's memoir:
The Worlds I See: Curiosity, Exploration, and Discovery at the Dawn of AI



Europe: The Mathematical Foundations of AI

Image: Donne nella Scienza



A pioneering Italian computer scientist, **Luigia Carlucci Aiello**, has been instrumental in AI research. She founded the Italian Association for Artificial Intelligence (AI*IA) in 1988 and served as its first president, significantly advancing AI research and education in Italy.

Image: TED/ Gene X Hwang/
Orange Photography



Dr. Emilia Gómez is the principal investigator at the European Commission's Joint Research Centre and leads AI Watch, an initiative that tracks AI advancements, implementation, and effects throughout Europe. With a diverse background in music and technology, she adopts a human-centric and ethical perspective on AI development. Gómez's efforts guarantee that AI policies in the European Union are rooted in scientific research and reflect societal needs.

Image: Wikipedia



Sasha Luccioni is a researcher and climate lead at Hugging Face, where she works on AI sustainability. Her work aims to ensure that machine learning models are developed with **environmental impact** in mind. She advocates for responsible AI development that prioritizes reducing carbon footprints while supporting technological progress. Her TED talk *AI is dangerous, but not for the reasons you think* has garnered nearly 2 million views.

Sub-Saharan Africa: Advancing Algorithmic Justice

African women are underrepresented in AI and Data Science academic fields and fare no better than their global counterparts in AI workforce representation. This representation gap means that the lived experiences of African women are omitted from the product development cycle, resulting in AI technologies that are not designed with their needs and desires in mind.

African women also stand to be disproportionately affected by AI bias, as traditional data sets left out women and other marginalized groups. Additionally, African countries lag in collecting gender and sex-disaggregated data, with indicators like digital access and participation ignored.



Image: Paul Morigi

Named by TIME Magazine as one of the world's most influential people in AI in 2024, **Chinasa T. Okolo, Ph.D.**, is a fellow in the Brookings Institution's Center for Technology Innovation. Her research focuses on how African governments can facilitate effective AI and data governance and analyzes African datafication and algorithmic marginalization. She is a consulting expert with the African Union and a drafting member of the Nigerian Federal Government's National AI Strategy.



Image: Mozilla Foundation

Chenai Chair, a Zimbabwean researcher and advocate for digital rights, is another critical voice in AI policy and governance in Africa. She has worked extensively in technology research and gender equity, focusing on how AI affects marginalized communities. Chair emphasizes the importance of locally driven AI solutions, ensuring that AI development in Africa prioritizes ethical considerations and real-world impact.



Image: Joy Buolamwini

Born in Edmonton, Alberta, Canada, to Ghanaian parents, computer scientist Joy Buolamwini has been at the forefront of the fight against AI bias. As the founder of the Algorithmic Justice League, Buolamwini's work has exposed racial and gender biases in widely used facial recognition systems.

In her MIT Thesis, *Gender Shades*, Buolamwini looked at how gender classification systems from leading tech companies performed across a range of skin types and genders: "AI systems performed better on male faces than female faces overall, and all systems performed better on lighter-skinned faces than darker-skinned faces overall. Error rates were as high as 35% for darker-skinned women, 12% for darker-skinned men, 7% for lighter-skinned women, and no more than 1% for lighter-skinned men," she found.

Her research has influenced tech companies, compelling them, in some cases, to revise their facial recognition algorithms to reduce discrimination. She underscores the need for vigilance, saying, "AI systems, like humans, can have biases. We need to be intentional about making them inclusive."

"AI is not neutral, and in an African context, it is crucial that we build our own datasets that reflect our histories and values"

"If AI is to work for Africa, it must be co-created with African voices, not imposed from the outside."

– Participants in an AI Narratives in Sub-Saharan Africa workshop co-hosted by the University of Cambridge and the Human Sciences Research Council as part of the Leverhulme Centre for the Future of Intelligence's project on **Global AI Narratives**.

Middle East and North Africa: Ethical AI and Policy Advocacy



Image: wikipedia

Dr. Rana el Kaliouby, an Egyptian-American computer scientist, co-founded Affectiva, an MIT Media Lab spin-off that pioneered Emotion AI technology. As CEO, she expanded the application of AI that interprets human emotions across industries worldwide. In 2021, Affectiva was acquired by Smart Eye, where she now serves as Deputy CEO, continuing her dedication to advancing ethical AI development and deployment.



Image: lionessesofafrica.com

Dr. Marwa Soudi is using AI to revolutionize education. She has developed AI-driven tutoring systems tailored for under-resourced schools in Upper Egypt. By providing personalized learning experiences, these systems help bridge the educational gap for girls and marginalized communities, proving AI's potential for social impact. In a talk on "Responsible Green AI," she also emphasizes the importance of integrating environmental considerations into artificial intelligence development. "By aligning AI development with environmental sustainability, we can create technologies that benefit both humanity and the Earth," says Dr. Soudi.



Image: kadinveadaletzirvesi.org

Nour Naim, Ph.D., leads AI Minds Academy, which has trained more than 450 young people in AI literacy, coding, and robotics. Her emphasis on the effects of AI on vulnerable populations has established her as an essential voice in international AI governance discussions. "We must ensure AI technologies are developed and used in ways that uphold human dignity and rights," she argues, advocating for stronger AI regulations and ethical frameworks.

Latin America: Pioneering AI for Social Justice



Image: oneyoungworld.com

Laura Velásquez co-founded and chairs Arkangel AI, a Colombian startup that has developed an AI application to detect diseases early. Motivated by personal loss due to late diagnoses, Velásquez’s company seeks to improve healthcare outcomes by leveraging artificial intelligence for timely medical interventions.

“I had to understand not only the core of the business but also the industry, how this world works, and the barriers that exist,” she told **BBVA Spark**. “As a woman, I went through many difficult moments that made me feel insecure: at the beginning, when we were seeking investment, they would say no because I was a woman.”



Image: Jaime Villanueva/El País

Gabriela Salas, who comes from Puerto del Caballo, Hidalgo, Mexico, has made significant contributions to recognizing and preserving Indigenous languages by incorporating Náhuatl, which is spoken by 1.6 million people in Mexico, into Google Translate. “I want Nahuatl speakers to have the same opportunities to access information and communicate in the digital world,” she explained in an interview with **El País**.



Image: Adrián Pérez/ paginat2.com.ar

Paola Ricaurte Quijano, a Mexican-Ecuadorian scholar at the Monterrey Institute of Technology and a faculty associate at Harvard’s Berkman Klein Center, is a leading voice in AI ethics. She studies how AI systems reproduce colonial biases, advocating for decolonized technology that serves marginalized communities. Ricaurte has **warned of the risks posed by unchecked AI deployment**, stating, “The big tech companies are allies of authoritarian governments.”

The Women Who Paved the Way: Historical Figures in AI and Computing



Ada Lovelace (1815–1852): Often considered the world's first computer programmer, Lovelace wrote the first algorithm intended for Charles Babbage's Analytical Engine. She envisioned that machines could manipulate symbols beyond mere calculation, foreshadowing modern computing.



Sofya Kovalevskaya (1850–1891): A Russian mathematician, she was the first woman in 19th-century Europe to receive a doctorate in mathematics and the first to become a university professor in any field.



Grace Hopper (1906–1992): A pioneering computer scientist and U.S. Navy Rear Admiral, Hopper developed the first compiler, which translated human-readable code into machine language. Her work led to the creation of COBOL, a programming language still used today.



Katherine Johnson (1918–2020): A NASA mathematician, Johnson's calculations were crucial to the success of early space missions. Her expertise in orbital mechanics directly influenced advancements in computing and AI used in aerospace.



Hedy Lamarr (1914–2000): Lamarr co-invented frequency-hopping spread spectrum technology, a foundation for modern wireless communication, including Wi-Fi and GPS, which are essential for AI-driven networks.



Xia Peisu (1923–2014): Known as the "Mother of Computer Science in China," Xia Peisu was instrumental in developing China's first general-purpose computer and played a crucial role in advancing computer science education in the country.



Hu Qiheng (b. 1934): A pioneer in artificial intelligence and mode identification in China, Hu Qiheng has led efforts to connect China to the global Internet and helped shape AI research in the country.

Many more, cited, and un-cited!

Women Investing in AI: Closing the Funding Gap

“We are fewer, but even the few that are out there, you know, we have to work twice as hard just to raise the capital.”

– Interviewee from Rwanda, for the Pivots, Perseverances and Pleasures. Paper 3: African Women in Artificial Intelligence report by Pollicy

While women are actively contributing to the research and development of AI, they are not capturing the funding needed to scale their innovations. Female-founded AI startups receive less than 3% of venture capital funding and often secure six times less per deal than their male counterparts (AIM Research). This stark disparity highlights the barriers women in AI face—not only in getting recognition for building groundbreaking technologies but also in securing the resources to drive their impact at scale.

Yet, women investors are stepping up to fund women-led AI startups and challenge the status quo in venture capital. In 2024, women-led VC funds are increasingly backing AI startups that tackle global challenges, ensuring that women’s contributions to AI are recognized and adequately resourced for impact.

- **Melinda French Gates (Pivotal Ventures):** French Gates has committed to closing gender disparities in technology by funding women-led AI startups and investing in diversity-focused venture capital firms
- **Shruti Gandhi (Array Ventures):** A former software engineer turned investor, Gandhi’s Array Ventures funds early-stage AI and deep-tech startups, particularly those led by diverse founders

- **Sarah Guo (Conviction Capital):** Guo founded Conviction Capital to invest in AI-first companies, emphasizing the importance of AI that enhances human decision-making and problem-solving
- **Ann Miura-Ko (Floodgate):** A long-time Silicon Valley investor, Miura-Ko has backed numerous AI companies, advocating for more women founders in the AI ecosystem
- **Deena Shakir (Lux Capital):** Shakir focuses on AI startups in healthcare and life sciences, ensuring that AI is used to solve some of humanity's most pressing medical challenges
- **Renata Quintini (Renegade Partners):** Her investment philosophy—“helping those who build the future without destroying humanity”—reflects her commitment to ensuring AI development aligns with ethical and sustainable principles

These women are changing the AI investment landscape and ensuring that AI's future is shaped by a broader, more diverse group of innovators.

AI and the Future: Diverse Perspectives Needed

Women around the world are not only advancing AI technology but also advocating for fairness, transparency, and inclusivity. Their work underscores the importance of a multidisciplinary approach that integrates technical expertise with ethical considerations.

As AI continues to evolve, supporting and amplifying the contributions of women in the field will be crucial in ensuring that AI serves all of humanity. By recognizing their achievements and integrating best practices, we take a step closer to a more equitable and representative technological future.



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Investing in Africa's Energy Transition: Unlocking Capital for Sustainable Growth

CrossBoundary featured on Inuka Talks podcast

CrossBoundary Group Co-Founder and Managing Partner Matt Tilleard joined Inuka Talks podcast to share insights on how Africa can unlock private capital to drive its energy transition and achieve long-term sustainable growth.

Drawing from CrossBoundary's experience as a leading investor and advisor across the continent, Matt discusses how distributed renewable energy, blended finance, and long-term partnerships are redefining what is possible in energy access and infrastructure.

He also explores the broader opportunity for Africa to build decentralized, clean power solutions that meet the demands of rapidly growing economies.

This episode is a must-listen for anyone focused on climate finance, infrastructure investment, and the future of energy in emerging markets.



Listen here



Redefining gender impact in Ghana's agricultural sector



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Image courtesy of Mastercard Foundation



Building Resilience and Investing in Development and Growth in Entrepreneurs in Agriculture (BRIDGE-In Agriculture), is a 5-year Mastercard Foundation program, demonstrating a pioneering approach to expanding youth and women's participation in Ghana's agricultural sector. Through strategic funding and support, this initiative aims to increase access to resources and opportunities for women farmers and entrepreneurs. The program is not only focused on direct lending to female entrepreneurs—it's reshaping the entire ecosystem by transforming male-led businesses into powerful allies for women's advancement.

CrossBoundary Advisory leads the program implementation alongside a consortium of partners including Access Bank, Fidelity Bank, First National Bank, Africa Skills Hub, Mind Builders Africa, and Peswa.

A two-pronged strategy for lasting change

“While women have traditionally been the backbone of African agriculture - doing most of the tilling, tending, and harvesting - they often lack control over business decisions and resources,” explains Fanta Conde, co-head of CrossBoundary Advisory's West Africa practice.





Image courtesy of Mastercard Foundation



Image courtesy of Mastercard Foundation



“In a sector where commercial operations are largely male-dominated, focusing solely on female-led businesses limits our potential impact. We needed to think differently about how to create meaningful opportunities for women.”

This recognition influenced the program’s distinctive two-pronged strategy for gender impact. While 36% of loans are directed to female-led agribusinesses, BRIDGE-In Agriculture also strategically funds male-led enterprises that demonstrate strong commitment to women’s employment and engagement with women smallholder farmers. This approach effectively doubles the program’s impact on women’s economic participation.

Working with champions for change

Saving Grains, a male-led enterprise that initially focused on maize trading, is an example of how with the support of a loan from BRIDGE-In Agriculture, the company was able to expand their operations into soya trading and transform their business model to empower women smallholder farmers in the Pishigu community.

For female farmers in Pishigu, the essential inputs, training in good agronomic practices, and marketing support, provided by Saving Grains, has created new opportunities.

“The biggest challenge for our farming activities was funding processes such as fertilizer and ploughing,” shares Jamila, a soya farmer.

“It is difficult to access loans in this community, people will listen to your needs without offering any support. If you are not able to finance it yourself, the only option is to reduce your farm size.”

Beyond access: training and market transformation

The program’s impact extends beyond just providing financial support. BRIDGE-In Agriculture has equipped over 13,000 youth - 75% of them female- with crucial knowledge about modern farming practices and market dynamics.

“Previously, the local market controlled pricing”, explains Ayishatu, another soya farmer in Pishigu.

“The training was an eye-opener, now, we know to weigh our crops before we sell them.” This shift to standardized measurement practices has ensured fairer pricing and better returns for women farmers.

The training has also improved farming practices significantly. As Fuseini, a local farmer, notes, “We did not measure the quantity of fertilizer to use on the farm. The training taught us how to apply fertilizer [to crops].” These improved practices have led to dramatic increases in yield.

“Previously I used to harvest 100kg to 300kg from my soy farm. With BRIDGE-In Agriculture’s support, I harvested about 800kg last season,” shares Aminu, highlighting the tangible impact of the program.

Transforming lives beyond the farm

For these women farmers, increased yields and better market access have also contributed to improved family welfare. Faiza, a soya farmer in Pishigu, reveals this broader impact:



“I am able to contribute to the education of my children and afford nutritional food for my family. As a woman, when you are able to provide food, your husband is happy, and there is peace at home.”

Impact of innovative financing

While individual stories like Faiza’s demonstrate the personal impact of the program, the broader numbers reveal its scale. As of December 2024, the program’s strategic loan initiative has supported 42 enterprises in creating or sustaining access to over 41,000 jobs for youth. As one recipient, the owner of Gustav Restaurant, a youth and women-led business, shares:

“The loan has been invaluable for my business. I have expanded my product lines and opened a new snack bar at my Spintex branch where I have hired 3 new employees. I plan to expand production in other branches and employ more people.”

The investments have catalyzed tangible business growth: 36% of loan recipients have invested in essential business equipment, from transport vehicles to storage units, tractors, and processing machines. Another 8% have expanded their operations through new product lines and outlets.

By working through existing market structures while simultaneously pushing for change, the program is creating sustainable pathways for women’s economic empowerment. Women farmers are now active participants in market negotiations, armed with knowledge about fair pricing and modern farming practices. They’re not just producing more, they’re becoming savvy agricultural entrepreneurs.

“What we’re really building here is a new normal,” concludes Bernard Aitey-Adjin, Senior Program Manager, Mastercard Foundation.

“One where women’s economic empowerment isn’t seen as a gender issue, but as a catalyst for broader business and community success.” 

Navigating Parenthood and Leadership: A Gender Equity Perspective



Written by:
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In a world where gender disparities persist across sectors, it's essential for organizations to not only acknowledge these gaps but also actively work to close them. CrossBoundary's efforts to support its employees—especially mothers—are part of a broader, global conversation on how equity can be realized in the workplace and beyond.

According to UN Women, women perform three times as much unpaid care and domestic work as men globally, work that directly affects their ability to engage equally in paid employment. These responsibilities significantly impact women's ability to engage in paid employment and advance professionally.

At CrossBoundary, we believe that equitable workplaces begin with intentional policies, inclusive dialogue, and a commitment to continuous improvement.

Championing parent-friendly policies

CrossBoundary's employee-led women's affinity group recently hosted a discussion exploring the intersection of gender roles, caregiving responsibilities, and career development. Several team members shared personal reflections on how inclusive workplace policies have supported their professional and personal growth.



Debrah Kiwara, People Operations Manager, opened the conversation by showcasing policies that empower women and parents in the workplace. At CrossBoundary these include a 16-week parental leave, fertility benefits, and accommodation for nursing mothers. These policies are not just about supporting our employees through major life transitions, they are integral to retaining strong talent and fostering an environment where both professional success and personal responsibilities are respected.



Diana Njuguna

A Boston Consulting Group study found that inclusive parental leave policies can result in retention rates of over 90% for new parents. As **Diana Njuguna**, an Investment Advisor on

the CrossBoundary Advisory team, shared, “I’m proud to work for a company that is proactive in addressing the needs of working moms. CrossBoundary’s policies reflect an understanding of the challenges women face and a commitment to supporting them at every stage of their parenting journey.”

Gender roles and navigating a fulfilling career path

From the perspective of our team, the journey to balancing career and family is uniquely challenging depending on where one stands in their professional career. Balancing a career and family is not a linear journey—it’s shaped by personal choices, societal expectations, and organizational support. Partner at CrossBoundary Advisory, **Nneka Chime**, shared her experience navigating both motherhood and leadership.

“Success looks different for everyone,” Nneka explained.



Nneka Chime

“For me, it was about leaning into both career and family while being realistic about the trade-offs. Some sacrifices are necessary, but they don’t diminish my aspirations.”

These trade-offs are not only personal; they are systemic. According to McKinsey, 43% of working mothers report feeling burned out, compared to 31% of fathers. A 2019 **Pew Research study** also found that 50% of working mothers in the United States say being a working parent makes it harder for them to advance in their job, compared to 39% of fathers.

Through outcome-oriented performance expectations and a culture of flexibility, CrossBoundary works to alleviate these pressures and enable parents to thrive.

Balancing parenthood with self-care

One of the most pervasive challenges discussed in the panel was “mom guilt”, or the emotional strain many mothers feel as they strive to be fully present at work and at home. While societal narratives often place this burden squarely on women, the panel reframed it: self-care is not a luxury, but a necessity.

“Taking time for myself makes me a better mom and a more effective professional. It’s about finding that balance and remembering that both my well-being and my career matter,” Diana shared.

CrossBoundary’s commitment to policies that encourage a healthy work-life balance is part of its broader vision of gender equity, one where employees are empowered to pursue their careers without sacrificing their mental health or personal lives. As we continue to evaluate and strengthen our policies, it is essential to remain focused on outcomes, not just hours worked. By investing in people and fostering a culture of flexibility and inclusivity, we are taking tangible steps to close the gender gap and build a more equitable future for all.

The impact of gender-lens investing on families and communities

Gender-lens investing, a strategy that aims to address gender inequality by investing in women-led businesses or initiatives that promote gender equity, is gaining momentum worldwide. Research shows that **businesses that prioritize gender inclusivity tend to perform better economically**. At CrossBoundary, we recognize that gender equity is not just about workplace policies, it’s also about the external impact we have through investments and partnerships. By integrating gender-lens investing into our work, we help create a ripple effect that benefits not only our employees but also communities at large.



According to the Global Impact Investing Network (GIIN), 75% of gender investors reported that adopting GII increased their ability to drive meaningful impact. CrossBoundary recognizes that fostering gender equity internally strengthens our ability to create external, systematic change.

Strengthening our CB community and policies for the future

The panel concluded with a collective recognition of the power of community and shared learning. CB Women's affinity group is a driving force behind these conversations—championing the lived experiences of working parents and informing the future of our workplace culture.

Supporting women in the workplace contributes to far-reaching societal gains. The ILO estimates that increasing women's participation in the workforce could boost global GDP by \$5.8 trillion. Furthermore, companies with inclusive leadership pipelines see 21% higher profitability, according to Gallup.

As the number of working mothers at CrossBoundary continues to grow, so too does our responsibility to adapt. Through policy, investment, and internal dialogue, we're committed to building a workplace where all individuals—regardless of caregiving responsibilities—can grow, lead, and succeed. 



CrossBoundary
Energy

Kamoa Copper and CrossBoundary Energy sign agreement for a groundbreaking baseload renewable energy system in the DRC



Kamoa Copper S.A. and **CrossBoundary Energy** signed a power purchase agreement (PPA) to provide baseload renewable energy to the Kamoa-Kakula Copper mining complex, one of the largest copper mines in the world, situated near Kolwezi in the Democratic Republic of the Congo.

This solar project is the first of its kind in Africa and will include a 222 MWp solar PV system and a 123 MVA/526 MWh battery energy storage system (BESS). The plant will provide a 30MW dispatchable renewable baseload energy supply to the mine, offsetting fuel generators and reducing carbon emissions by around 78,750 tons per year. CrossBoundary Energy will own and operate the plant, and Kamoa Copper will pay for the energy it consumes. The plant is expected to produce ~300,000 MWh of clean energy per year.

“ This is a pivotal moment for Kamoa Copper and the Democratic Republic of the Congo. As a company, Kamoa Copper has been setting innovative benchmarks in various domains, and with this partnership on baseload renewable energy, we will continue to do so. We are pleased to have CrossBoundary Energy as our first partner in this endeavor. Their commitment to honesty, integrity, and delivery is exemplary. We anticipate hard work and successful outcomes from this project. From Kamoa Copper’s side, we are committed to providing unwavering support to ensure our suppliers’ success, as we demand excellence in all our collaborations.”

– Annebel Oosthuizen, Managing Director of Kamoa Copper



Read the full announcement on crossboundaryenergy.com



CrossBoundary
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Mini-Grid Innovation Insight: Harmonizing tariffs through smart green subsidies in Sierra Leone

The results are in—lower tariffs boost energy use, especially for low-income customers, without significant revenue loss in local currency.

In December 2022, CrossBoundary's Mini-Grid Innovation Lab, in partnership with the Global Energy Alliance for

People and Planet (GEAPP), launched a nationwide tariff harmonization pilot in Sierra Leone.

Here's a snapshot of the pilot:



8 treatment sites



9 control sites



**\$0.34/
kWh**

Subsidized tariff

3,300+

customers impacted



80%

Minimum expected system uptime



After 12 months, this is what the study shows:

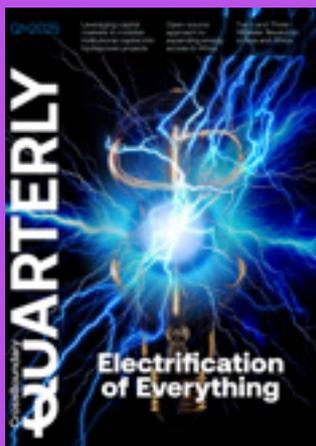
- When electricity tariffs were cut by **41%** over a year, energy use surged by **58%**
- Low-income customers, who made up **63%** of those in the study, benefited the most
- Despite lower tariffs, overall revenue didn't drop as much as expected due to increased usage



How can this be replicated at scale for more affordable electricity access? Click or scan the QR code to read the full report

Our next CrossBoundary Quarterly explores the future of private sector engagement

In our next issue, we examine how the role of the private sector is being redefined in emerging markets. As traditional aid flows shift—amid cuts to international development budgets and evolving priorities from the U.S., UK, and other donors—public-private collaboration is taking center stage. From climate financing to digital infrastructure, the private sector is not just a partner but a driver of sustainable development.



It's not too late!

*Don't miss our previous CrossBoundary Quarterly on **ELECTRIFICATION OF EVERYTHING***

The global energy landscape is undergoing a monumental transformation. Driven by the need to build resilient energy systems, governments, businesses, and individuals are investing in electrification and renewable energy at an unprecedented scale. This shift is reshaping energy and transportation systems and unlocking new opportunities for growth, innovation, and investment.

At CrossBoundary, we are uniquely positioned at the nexus of these changes, leveraging our expertise to drive impactful, market-led solutions that align with the global imperative for a sustainable energy future.

Explore how increasing investment in electrification and renewable energy is reshaping energy and transportation systems and unlocking new opportunities for growth and innovation



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