In Africa, gender equity in construction shapes the workforce of the future

In Africa, by prioritizing gender equity in construction, organizations like Buildit Studio, Build Health International, and MASS Design Group are proving the field is a platform for women's empowerment.

Image courtesy of Build Health International

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November 27, 2023 · 12 min read

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- The global construction community is facing a dire worker shortage—one solution is hiring and training more women.
- Africa is now home to market projects that are demonstrating the benefits of an inclusive construction workforce.
- Buildit Studio, Build Health International, and MASS Design Group are three impact-focused organizations with equitable projects in Africa—following their playbooks could help builders around the world attract and develop female talent.

Construction is men's work. At least, that's what Western culture has always maintained. But traditional gender stereotypes—the belief that men are more suited to physical labor, for example, or that family life requires women to avoid jobs with irregular hours—are neither true nor tenable.

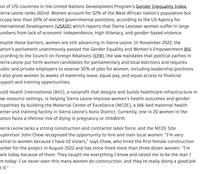
Consider construction's chronic labor shortage. In the United States alone, the construction industry averaged more than 390,000 job openings per month in 2022, according to Associated Builders and Contractors (ABC), which says the construction industry needs to attract an estimated 546,000 additional workers on top of the normal pace of hiring in order to satisfy the demand for labor. The same calculus that exists in the United States exists in construction markets worldwide. From homes, schools, and hospitals to airports, power plants, and parks, global communities need infrastructure in order to grow and prosper. To build it, construction employers need all hands on deck—including both male and female talent. Although encouraging women to construction is easier said than done, best practices are coming into focus thanks to leadership in a dynamic and fast-growing part of the continent: Africa.

While men constitute more than 80% of the construction workforce in Africa, OECD reports, there are meaningful advances in several countries where gender equity often stems from deep-rooted cultural traditions. Case in point: East Africa's Maasai people, a nomadic group of pastoralists whose economic and cultural identity revolves around livestock. In Kenya's counties, the Maasai have lived in mud huts called "bomas," made from cow dung, grass, and sticks. In Maasai tribes, the engineering, construction, repair, and maintenance of bomas falls entirely on women.

"I come from the West of Kenya—Kakamega—and in our community, the women are the ones responsible for construction as well," says engineer Esther Segero, head of construction at Buildit Studio, an architecture, engineering, and construction firm in Nairobi. "They build mud houses and plaster them with cow dung. The Maasai area and culture are the same. Since they are pastoralists, the men tend to the animals and walk for kilometres in search of grazing and water while the women are left at home. Hence, they take over the building work."

Now, companies and nonprofits such as Buildit Studio, Build Health International, and MASS Design Group are remaking the construction workforce in ways that empower women instead of marginalizing them.

BuildX Studio: Building equity in Kenya



A rendering of Nairobi's Zima Homes housing project (image courtesy of BuildX)

Africa is in the midst of a major baby boom, according to the United Nations, which expects the continent's population to double from 1.25 billion people in 2021 to 2.5 billion people in 2050. Because rural communities in many cases don't offer the jobs, health care, infrastructure, and education to support this kind of growth, across Africa there is a massive migration to urban centers. In Kenya, where builders produce less than 50,000 new housing units every year, this has contributed to a dire housing deficit of 2 million units.

Buildit Studio believes that women can help Kenya and other African countries bridge the urgent gap between supply and demand. Presently, fewer than 15% of engineers, architects, city planners, construction managers, and real estate managers in Africa are women, according to Segero. But, the needle is moving.

"Change is imminent," Segero says. "For example, in 2020, female engineers were at 3% and are now at 7.3%. The good news is that through networks, women are now at the heart of leadership of many construction organizations, which I would say is helping the younger female professionals get role models."

Buildit Studio is hiring and training women to fill both frontline and leadership roles across its projects. "Our goal is for all Buildit Studio projects to be inclusively designed and built," Segero says. "We prioritize labor for women and youth within the communities where we work. Our mission is to have, over time, at least 30% women working in at our sites and at least 50% representation in our office across all levels."

According to Segero, Buildit Studio is 50% female-owned and currently boasts a team that is 60% women. "We aim to achieve equal gender representation for all our design project teams through community engagement activities prior to all construction projects and close collaboration with our sister company, Buildtech," she says.

Established by Buildit in 2018, Buildtech is a nonprofit that promotes urban development in Kenya by equipping women with accredited construction and manufacturing skills. This has fostered greater financial prosperity, change male attitudes, and promote gender equality within the construction industry. To date, it has trained nearly 400 women, who typically report a five-fold increase in income after just four months of construction training. Projects like the Zima Homes sustainable and affordable housing development in Nairobi provide women with accredited construction skills to improve their financial prospects and promote gender equality within the construction sector.

BuildX and Buildtech succeed by recognizing the barriers that keep women from construction trades and implementing solutions. For example, BuildX offers separate changing rooms and toilets for men and women on its construction sites and continuously delivers training on sexual harassment.

BuildX believes these and other inclusion efforts are essential to building the construction workforce Kenya needs to support its growing population. "The situation seems to be changing slowly," Segero says. "Women represent a third of students in two public universities offering different industry courses, including architecture, real estate, planning, construction management, quantity surveying, and interior design. However, more needs to be done to sustain this trend—in particular, for women working on construction sites."

Build Health International: Empowering women in Sierra Leone

At BHI, workers learn construction skills with the help of 3D modeling and other technologies. Image courtesy of BHI

Out of 170 countries in the United Nations Development Program's Gender Inequality Index, Sierra Leone ranks 162nd. Women account for 52% of the West African nation's population but occupy less than 20% of elected governmental positions, according to the US Agency for International Development (USAID) which reports that Sierra Leonean women suffer in large numbers from lack of economic independence, high illiteracy, and gender-based violence.

Despite these barriers, women are still advancing in Sierra Leone. In November 2022, the nation's parliament unanimously passed the Gender Equality and Women's Empowerment Bill. According to the Council on Foreign Relations (CFR), the law mandates that political parties in Sierra Leone put forth women candidates for parliamentary and local elections and requires public and private employers to reserve 30% of their top leadership and management positions. It also gives women 14 weeks of maternity leave, equal pay, and equal access to financial support and training opportunities.

Build Health International (BHI), a nonprofit that designs and builds healthcare infrastructure in low-resource settings, is helping Sierra Leone improve women's health outcomes and gender disparities by building the Maternal Center of Excellence (MCOE), a 166-bed maternal health center and training facility in Sierra Leone's Kono District. Currently, one in 20 women in the nation faces a lifetime risk of dying in pregnancy or childbirth.

Sierra Leone lacks a strong construction and contractor labor force, and the MCOE Site Supervisor John Chew recognized the opportunity to hire and train local women. "I'm very partial to women because I have 10 sisters," says Chew, who hired the first female construction worker for the project in August 2022 and has since hired more than three dozen women. "I'm here today because of them. They taught me everything I know and raised me to be the man I am today. I've never seen this many women do construction, and they're really doing a good job at it."

BHI has trained women to read construction drawings, use tools, operate heavy machinery, and perform skilled work in trades such as masonry, carpentry, and plumbing—often with the help of technology, including 3D models in Autodesk Cloud Construction Build and Autodesk Revit.

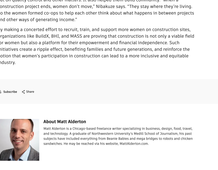
"When you show 3D models to people who don't have experience in construction, their eyes light up," Chew says. "They're able to visualize things that they couldn't really comprehend before. It's really, really helpful."

Learning new tools and skills gives women more economic and social opportunities, according to Hawa Banyah, one of the first women to join the MCOE construction team. "I was suffering a lot because my mother died and I didn't have anyone to take care of me or my family," Banyah says. "Since I started working (for BHI) … I'm doing great things for my family, I'm taking care of myself, and I have more respect. I'm doing construction, and I'm proud of it. It brings me life a lot, and I thank God for that."

Women benefit from construction as much as construction benefits from women, according to Chew, who says women have unique skills that improve project outcomes. "Women are very meticulous. They pay attention to detail and take great pride in their work. They have something to prove—they want to show that they can do whatever men can do, and a lot of times they actually do it better." Chew says that for those reasons he has an all-female quality control team. "When the men say, 'It's good enough,' the women say, 'No, we're not going to accept that.' They're used to taking care of their homes and their kids, so they treat this job/site like it is their home and their kids like they're their children."

This attention to detail helps BHI stretch limited resources further, which puts more money in the hospital's coffers for delivery of care when it eventually opens in the summer of 2024. "It's started a wave," Chew says. "The women are taking pride in what they've learned, and they're telling their neighbors. In turn, their neighbors are telling them, We're so happy. We're getting a new hospital that's for us, and women built it."

MASS Design Group: Raising the bar in Rwanda



The Rwanda Institute for Conservation Agriculture (RICA) project showcases MASS Design Group's approach to integrating women into every phase of construction. Image courtesy of Jean Paul/MASS Design Group

Among African nations, Rwanda is considered a leader in women's rights. Women constitute 61% of its parliament and occupy more than half of cabinet and judicial seats.

The nation's progressive attitude toward gender equity is as evident on construction sites as it is in politics, according to Neella Ndakaza, a design director in the Kigali, Rwanda, office of architecture, design, and build firm MASS Design Group. "I've been working [in the architecture, engineering, and construction industry] for 10 years now … and we've always had women on site," says Ndakaza, who adds that women typically performed manual labor on construction sites but have begun moving into skilled trades and even managerial roles. "The biggest shift I've seen in those 10 years is having women leading on construction sites."

MASS Design Group's Rwanda office has been working on several projects—the 12-unit Gikondo Declaration Campus of the Dian Fossey Gorilla Fund, which opened in February 2022 adjacent to Rwanda's Volcanoes National Park—women made up a significant 25% of the workforce and 54% of leadership roles, a testament to MASS's commitment to gender diversity.

This project, alongside others such as the Rwanda Institute for Conservation Agriculture (RICA), showcases MASS's approach to integrating women into every facet of construction, from manual labor to managerial roles. "That's much higher than what you would normally see," says Bethel Abate, also a design director in MASS's Kigali office. "It's not just having women on-site because in Rwanda that's a bit more normal. It's having women in leadership roles and skilled trades. We even had women working as heavy machinery operators, which is not common."

Critical to this success was the formation of MASS Build, enabling MASS to prioritize social and economic impacts, including gender equity, alongside traditional project metrics. "Usually we are designers or architects, and our clients bid out projects to contractors," Abate says. "This was the first time we were building one of our own projects." Abate adds that having its own construction division allowed MASS to implement impact-based policies and procedures that might not have been feasible otherwise—including local sourcing, health and safety practices, and gender equity. "Contractors usually look at the triangle of time, cost, and quality, but our construction entity tracked social and economic impact for local communities as a success metric."

This innovative approach was bolstered by a robust on-site workforce training program, developed in partnership with international and local institutions, which uniquely empowered women through education and skill development. MASS implemented a construction training program in partnership with the German Corporation for International Cooperation (GIZ) and the Integrated Polytechnic Regional College (IPRC) Musanze. The project employed more than 2,600 Rwandans in its design and construction, accounting for 99% of the total labor, and uniquely, a 30% female construction workforce.

"GIZ you want to invest in the local community, and if you want people from this place to take responsibility for the work and be invested in it for the long run, you have to put aside time and money to make that happen," Abate says. "Women, especially, are very supportive and very inquisitive. They want to learn more, and they want to be empowered to do more. Having training programs on site is a formalized way to help them grow and advance in their careers."

MASS also introduced women's groups on projects, providing a supportive network for women to share experiences, grow professionally, and build community. These groups have been instrumental in giving women a voice in quality control, fostering a sense of belonging, and creating avenues for income generation beyond the construction sites.

"I knew we could do more for the women on-site by creating a women's group where we could come together to understand each other's challenges and dreams, including how they see their career growing and then helping them reach those goals," says Ndakaza, who helped establish the women's group for MASS's 3,400-acre Rwanda Institute for Conservation Agriculture (RICA) project, which was completed in 2021. More than 300 women were trained in skills and construction methods while working on-site at RICA, 16% of whom were women.

The group helped women feel valued and important, which gave them the confidence to speak out on quality control and other matters. It also helped them build community. "When a construction project ends, women don't move," Ndakaza says. "They stay where they're living. So the women formed co-ops to help each other think about what happens in between projects and other ways of generating income."

By making a concerted effort to recruit, train, and support more women on construction sites, organizations like BuildX, BHI, and MASS are proving that construction is not only a viable field for women, but also a platform for their empowerment and financial independence. These initiatives create a ripple effect, benefiting families and future generations, and reinforce the notion that women's participation is critical to a safer and more inclusive and equitable industry.

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About Matt Alderton

Matt Alderton is a Chicago-based freelance writer specializing in business, design, food, travel, and technology. A graduate of Northwestern University's Medill School of Journalism, his past subjects have included everything from Beanie Babies and mega bridges to robots and chicken sandwiches. He may be reached via his website, MattAlderton.com.

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