

How WomEng is displacing the glass ceiling to make room for more women in engineering

 By [Sindy Peters](#)

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Why sit back and complain about life's challenges when you can actually do something about it? This is the positive foundation upon which [WomEng](#) was developed 11 years ago. A product of then UCT students Hema Vallabh and Naadiya Moosajee, WomEng has grown as they've grown, built on their experiences in the field of engineering.



Hema Vallabh, co-founder, WomEng

Co-founder Vallabh takes us through the journey of WomEng - where it all began, and shares some of the organisation's successes with us. She also unpacks the various reasons for the low proportion of women in engineering and provides some advice for those looking to venture into this field.

Where did it start for WomEng?

Operating since 2006, our programming was developed so that those coming after us had the support and opportunities that we wished we had had at every stage of the pipeline. It is also built from our own experiences so that others, hopefully, have a less challenging experience as they traverse the journey into engineering. WomEng today, 11 years later, offers a complete value chain of interventions and programmes at every level. The core programmes are as follows:

- **GirlEng** creates awareness and provides information to high school girls, promoting engineering as a career of choice and breaking perceptions about the industry.
- The **Campus Ambassadors' programme** connects female university students, creating a society on campus and providing a supportive community to stem the tide of the 66% drop-out rate from engineering degrees.
- The **WomEng Fellowship** is an entrepreneurial tech-novation challenge and employability programme for the best and brightest female engineering students looking to find solutions to global challenges, and prepares them for the industry.
- **@Network** creates a platform for both male and female engineers to network and engage on pertinent topics affecting the engineering industry, raising the profile of the sector.
- **#1MillionGirlsInSTEM** is our 10-year global campaign to reach one million girls (aged 12–18) through STEM education and awareness initiatives in at least 10 different regions.
- The **WomEng Enterprise Development programme** is the newest of the WomEng programmes and works to develop and incubate sustainable female-owned startup businesses.

What have been some of WomEng's greatest accomplishments over the last 11 years?

WomEng's successes over the years range from:

- Measurable success resulting from the reach of our programmes. In 2016, WomEng turned 10 years old. During this time, we reached over 14,000 girls and women in STEM.
- Qualitative success measured by seeing a change in perception regarding engineering and engineering careers amongst girls.
- Successes experienced by our partners in the line of talent attraction and retention. A case study that we report as one of our greatest public-private partnerships is with a partner who has recruited 34 female engineers exclusively through WomEng, of which 31 are still with them.

- Success in the leadership development and growth of our volunteers. WomEng volunteers working with the organisation have gone on to win a number of accolades and awards, which is a testament to the work we do to groom talent both inwardly and outwardly.
- Our global reach and impact - to date we have run programmes in over 10 countries, and plan to continue to expand our reach even further in the next few years.

■ ***In your opinion, what accounts for the low proportion of women in engineering globally?***

While we're certainly seeing the needle move towards an increased attraction into engineering and STEM-related studies at tertiary level, it's not enough to just open the talent pool at the beginning of the pipeline, only to see it narrowing very quickly thereafter. Many women leave the sector within three to five years, creating a 'missing middle'. The sector is experiencing a cohort of missing female talent, which presents a leadership vacuum and goes on to result in the low number of senior women in the sector.

While the assumption has been that women leave to pursue other lifestyle choices, like having families, another part of the challenge has been what we call the 'world of one'. Being the only female engineer within a company can cause female engineers to feel isolated, and leave.

A second common reason is a financial one as STEM skills are desirable and engineers are sought after by a variety of sectors where the pay is higher.

Furthermore, the industry has generally been both slow to transform and welcome diversity. Many women leave rather than battle against barriers every day. When working on retention rates for female engineers, my co-founder Naadiya Moosajee often says, a vital approach is to engage hearts and minds. Engaging hearts comes through work that brings about change, which is largely what engineering is about, and helping to create better cities and better worlds. Engaging minds comes through championing career development for women and opening opportunities for them within companies and the sector.

The sector needs to embrace other systemic changes, including providing better financial incentives and pay parity, creating an inclusive and respectful culture, and having male leaders champion the careers of female engineers.

■ ***Tell us more about WomEng's UNESCO-endorsed #1MillionGirlsInSTEM campaign.***



Hema Vallabh and Naadiya Moosajee at the UN headquarters in New York earlier this year.

In 2016, inspired by the GirlEng experience and the last 10 years over which WomEng has built sustainable pipelines of female engineers, WomEng began to scale its efforts across Africa and now worldwide, showcasing the global phenomenon of the skills deficit. This provided the foundation for the bold idea to inspire and impact one million girls through our STEM education initiatives across the world.

Through the #1MillionGirlsInSTEM campaign, which was conceptualised by WomEng in celebration of our 10-year anniversary, WomEng commits to reaching one million girls with the intention to create awareness and provide information about STEM and related careers. When we first presented the campaign to UNESCO, there was immediately shared excitement and clear synergy between our goals and visions. As such, UNESCO officially endorsed the initiative, cementing a formal partnership between our two organisations.

We held our [first #1MillionGirlsInSTEM activation in Paris](#) at UNESCO headquarters where we signed our partnership agreement. Thereafter, we [jointly launched the campaign](#) in March 2017 in New York at the United Nations headquarters on the opening day of [CSW61](#).

▣ ***What are some of the expansion plans for WomEng?***

WomEng is currently on an exciting global expansion mission, especially with our #1MillionGirlsInSTEM campaign. The reach so far can be seen on our interactive, [live Google map](#).

Beyond the #1MillionGirlsInSTEM programme, another exciting expansion development for WomEng was the launch of WomHub, our management consultancy focused on achieving gender parity across industries, through education and technology. WomHub was established as a for-profit entity which enables us to leverage off our successful 10-year track record with WomEng, but also to broaden the scope of work to engage in various projects across multiple sectors, beyond the engineering industry.

While borne out of WomEng, and having the same founders, WomHub has been established as the umbrella company, under which WomEng now serves as the non-profit foundation, enabling us to still have the global outreach impact that we initially set out to achieve to make a difference.

WomHub will continue to support WomEng through staffing and funding, thus ensuring the sustainability of WomEng.

▣ ***Based on your experience, what advice would you give to women pursuing a career in engineering?***

The world of engineering and tech can be a lonely place for a woman, but never change who you are just to fit in. Embrace your 'one-ness'. If you don't fit into that box that society wants to put you in, you're most likely already on the road to success. So always stick to your convictions and values, and be prepared to make some enemies for having the courage to do so, because in the end, it's not your career that defines you, but who you are and the difference you've made in the world when you leave.

▣ ***Is there a female figure that has had a positive influence on your life?***

There are two women in my life without whom I would not be where I am.

The first is my mum – not only because of the role she plays as a mother. As a woman, my mum has been breaking barriers and trailblazing throughout her life. From having the courage to leave a secure day-job as an accountant and tax specialist to start her own practice, becoming an 'entrepreneur' almost 30 years before entrepreneurship was as much of a buzzword as it is now, to successfully completing her EMBA at the age of fifty in 2009. She did this while still fulfilling all the "traditional" roles of women – being a mother, wife, homemaker etc.

The second is my incredible business partner Naadiya Moosajee. Having the unconditional support of each other in everything that we do, and our combined strengths and talents, have taken us to great heights together. It's because we're so different and have different strengths and talents, but at the same time so alike in our shared vision and passion to effect social change, that we are able to achieve all that we do. Naadiya often says that we're soulmates, and I couldn't agree more. She continues to inspire, motivate and encourage me every day. The journey I'm on would not be possible, and certainly not as fulfilling and fun if we weren't on it together.

▣ ***What is your message for Women's Month?***

For me, celebrating women is not limited to a specific day or month, but is embedded into the life-blood of who I am and what I do. However, what excites me about Women's Month is that during this time, the stories of the incredible achievements, feats and successes of women from all walks of life have increased platforms and opportunities to be showcased. This plays an important role in inspiring the next generation of girls and (super)women out there.

My wish is that while we emphasise the role of women during this very special month, the bigger goal is to take this inspiration and live our lives everyday striving to do more, be more and give back more so that eventually, there is no longer any disparity between men and women, and Women's Month becomes an everyday norm.

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