

Wanted: Women Engineers for South Africa's Future

by Naadiya Moosajee, Co-Founder of SAWomEng and member of the IYF Board



South Africa may still be a young democracy, but it is a shining example of how a repressive regime can be changed peacefully. It has also continued to play a leading role in shaping the economic development of the African continent. Yet while we are part of the BRICS (Brazil, Russia, India, China & South Africa) emerging economies, we also have to deal with the inequalities of the apartheid legacy. Our challenge as a country has been to curb rising unemployment and an economic divide that has replaced the racial divide in South Africa. We face a double-edged sword. While we have high jobless rates—especially among our youth—we also face a skills shortage. Our economy, based on mining, manufacturing and agricultural processing, is struggling to find top talent to meet the growing demand within those sectors. Women have largely been marginalised and excluded within these environments. So how do we change it? How do we create a talent pipeline that meets our growing demands for scarce skills, and creates areas of new growth and job opportunities? The answer is simply to utilise the most underutilised resource in South Africa—our women.

People ask me why it is important to have more girls in engineering. For starters, it's one of the oldest professions in the world, yet still has very limited female participation. Reflecting back, I see the challenges facing South Africa today—like the strikes by miners and farm workers and the ongoing trouble in those sectors—are partially symptomatic of a single-gendered environment. Women in any situation bring a different way of thinking, no better or worse than their male counterparts, just different. Our approaches tend to be more collaborative, and I believe that is what this country needs: a more collaborative approach to problem solving. Another strong reason for incorporating women in the engineering sector is that we hold 80 percent of the country's buying power, so creating products with the end user in mind adds value to a company. Moreover, studies show that educating women and ensuring they actively participate in the economy boosts a country's GDP by 9 percent.

My own journey starts as an “accidental engineer.” I grew up in a time of euphoria and opportunity within South Africa when barriers were removed for people of colour. Being a young woman from a conservative society, I found engineering was not a popular choice. The truth is, I did not

know much about engineering or the opportunities it held to change the world. I applied for engineering because I wanted to work in the sciences. Fast forward a few years. With a better understanding of engineering and its role in society, I realised many women in my class were also “accidental engineers.”

For all these reasons, I decided to co-found South African Women in Engineering (SAWomEng) and have spent the last seven years of my life creating awareness for young girls around engineering and developing the next generation of engineering leaders.

Each year, we reach over 1500 girls on our high school program, called GirlEng, which provides trained university mentors to act as big sisters to our GirlEngers. Our industry partnerships help young engineering graduates find jobs, with one of our biggest partners, Unilever, recruiting 20 percent of our delegates to work in their African operations.

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SAWomEng has also created a platform to increase awareness around engineering careers, and through our partnerships with the largest industries, we have provided scholarships for those deciding to enter the field. Furthermore, we provide opportunities for the top female engineering students in South Africa to help develop creative solutions to our country's toughest challenges.

I'm pleased that through our efforts, we have found enthusiastic young women who want to change the world and realize that engineering could be that vehicle to reach their goals. As we increase the number of women within this sector, we will be able to grow it—thus creating more job opportunities for the 70 percent of South African youth who are unemployed. These are difficult times. Our country is at an economic and political crossroads. But with more young women taking up the mantle of leadership, we can create a collaborative space to engineer a more prosperous South Africa. **Y**