Theme: Job Creation Through Home Grown Engineering Solutions the Perspective of Women in Engineering By Engr Dr Elizabeth J. Eterigho FNSE, FNSChE the 2023 ENGINEERING INSTITUTION OF ZAMBIA (EIZ), 5TH ZAMBIA

WOMEN IN ENGINEERING SECTION (ZWES) CONFERENCE Today, I would like to speak to you about the importance of job creation through home-grown engineering solutions. As we all know, engineering plays a crucial role in our daily lives, from the buildings we live in to the technology we use.

However, engineering can also be a key driver of job creation, especially when we focus on developing home-grown solutions.

What do I mean by home-grown solutions? I am referring to engineering solutions that are created and implemented locally, using the resources and expertise of our own communities.

This could include innovations in renewable energy, infrastructure development, or even agricultural technology.

We all know that engineering plays a crucial role in the development of any nation. From transportation to communication, engineering is an essential part of our daily lives.

However, we often rely on foreign companies to provide us with the technology we need. This can be expensive and sometimes doesn't meet our specific needs.

But what if we turned to our own engineers, scientists, and innovators to create solutions tailored to our unique needs? This is where homegrown engineering solutions come in.

By investing in homegrown engineering solutions, we can create jobs and drive economic growth. When we support our own engineers and innovators, we create a virtuous cycle of innovation, job creation, and economic growth. By building a robust engineering ecosystem, we can develop new technologies, create new businesses, and attract investment from around the world. When we focus on home-grown engineering solutions, we can create jobs that are both sustainable and impactful. By developing solutions that are tailored to the needs of our communities, we can ensure that the jobs we create are not only relevant but also meaningful.

Let me give you an example. In many parts of the world, access to clean water is a significant challenge. Instead of importing expensive filtration systems from abroad, local engineers can develop low-cost, high-efficiency solutions tailored to the specific needs of their communities. By doing so, they create jobs, improve access to clean water, and stimulate economic growth.

Another example of home-grown engineering solutions in action is the development of renewable energy technology. With the growing demand for clean energy, there is a significant opportunity to create jobs in the engineering and manufacturing sectors.

By developing and implementing renewable energy solutions locally, we can create a sustainable source of jobs that can support our communities for years to come.



one more example is infrastructure development. As our cities and towns continue to grow, we need engineers who can design and build the roads, bridges, and buildings that we rely on.

By focusing on local solutions, we can ensure that the jobs created in this sector are filled by members of our own communities, who have a vested interest in creating sustainable and safe infrastructure.



When we talk about job creation through engineering solutions, it is important to also consider the perspective of women in this field.

Historically, engineering has been seen as a male-dominated profession, with women being underrepresented and facing various barriers to entry and advancement.

However, women have a vital role to play in the field of engineering, and their participation is essential for creating innovative and effective solutions.

Homegrown engineering solutions can also provide a unique opportunity for women to participate in the workforce and drive economic growth.

By promoting diversity and inclusion in engineering, we can tap into a wider range of perspectives, experiences, and ideas, which can lead to more creative and impactful solutions. Despite significant progress, women still face challenges in the engineering field that prevent them from fully contributing to the industry. Studies have shown that women are underrepresented in STEM fields, including engineering.

This is not just a problem for women, but for the entire industry and economy as a whole. However, when given the opportunity, women can make significant contributions to engineering and innovation. By investing in homegrown engineering solutions, we can provide more opportunities for women to enter these fields, whether through education or employment.

Homegrown engineering solutions can also be tailored to the specific needs of women. For example, in many parts of the world, women are responsible for carrying water long distances from their homes. By developing solutions that make water transportation easier and more efficient, we can reduce the burden on women and give them more time to pursue other activities, including education and employment.

> Furthermore, women who participate in homegrown engineering solutions can serve as role models and mentors for future generations of girls and young women, inspiring them to pursue careers in engineering and STEM fields



This can lead to a homegrown job creation and stimulate economic growth, which is essential for post-pandemic recovery.

To achieve this, we need to take concrete steps towards creating more opportunities for women in engineering.

One of the most important steps we can take is to provide more scholarships and funding for women pursuing engineering degrees This will help to reduce the financial barriers that often prevent women from entering and staying in the field and encourage more women to pursue careers in engineering.

Another crucial step is to provide mentorship and networking opportunities for women in engineering. This will help to provide guidance, and support and open doors for women in the field, while also fostering a community that encourages collaboration, learning and growth

Moreover, promoting gender diversity in engineering can also help to address the gender pay gap and create more opportunities for women to advance in their careers.

This, in turn, can lead to greater economic empowerment for women, which benefits not only them but also their families and communities.





It is important to recognize that women have already made significant contributions to the field of engineering, and there are many successful women engineers who serve as role models for the next generation.

However, we must continue to address the barriers and biases that prevent women from entering and thriving in the field, including lack of access to education, mentorship, and opportunities for advancement.





In conclusion, homegrown engineering solutions are an essential part of any nation's economic development strategy.

By investing in our own engineers and innovators, and most importantly, women engineers, we can create jobs, drive economic growth, and tackle some of the world's most pressing challenges.

Let us all support our homegrown engineering solutions and build a better future for ourselves and generations to come. Job creation through home-grown engineering solutions is critical for the sustainable development of our communities.



Homegrown engineering solutions can provide a unique opportunity for women to participate in the workforce, drive economic growth, and make a positive impact on their communities.

By promoting gender diversity and inclusivity in engineering, we can build a brighter future for everyone.

By focusing on solutions that are tailored to our own needs, we can create jobs that are both impactful and sustainable, while also supporting the growth of our local economies.

THANK YOU!