

Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world. (UNITED NATIONS 17-SDG)

Executive Summary

The Women in Engineering Committee (WiE) is a Standing Committee of the World Federation of Engineering Organisations. Its purpose is to work collaboratively to empower, inspire, encourage, and share the achievements of women in engineering and technology around the world. The secretariat is being hosted by the Nigerian Society of Engineers at the National Engineering Headquarters, Abuja, Nigeria.

We believe that equality, diversity and inclusion in the engineering and aligned sectors is crucial to creating a sector which can address the challenges that exists in the world. Global gender equality and women's empowerment is integral to the success of each of the 17 Sustainable Development Goals, and we aim to inform debate, and use the power of engineering and technology to achieve equality of opportunity for all.

Only by ensuring the rights of women and girls across all the goals will we get to justice and inclusion, economies that work for all, and sustainability of our shared environment now and for future generations.

Mission

To achieve a diverse and inclusive engineering sector, where all individuals have equality of opportunity to succeed, which welcomes and utilises the perspectives of all, and which works to address the global challenges as described by the Sustainable Development Goals.

Vision

WiE will use her worldwide membership, collective power and technology to achieve an engineering profession which attracts, retains, promotes, and welcomes the inputs of women and other under-represented groups. Our skills will be used to create positive impact on the Sustainable Development Goals as we support outreach activities, capacity building, training, and empowerment of women to attain leadership positions, with equal compensations.

Introduction

The Women in Engineering Committee has previously worked to address three overarching themes around: Engineering Workforce Diversity; Leadership and Empowerment; and Engineering Strategic Indicators. In 2018/19 the additional theme of addressing the Sustainable Development Goals was added to our overarching themes. At the WFEO meetings in Melbourne in 2019, during the World Engineering Convention, the leadership of the Committee changed hands, and a refreshed strategy was produced. Themes for the forthcoming term (2020-2023) are:

Theme 1 Engineering Workforce Diversity and Capacity Building

Theme 2: Female Leadership and Empowerment in Engineering

Theme 3: Engineering Strategic Indicators

Theme 4: Working in Partnership to address the Sustainable Development Goals, with a particular emphasis on Goal 5-Gender Equality, and its relationship to the other Goals.

These themes will be addressed in partnership with our National Member Organisations, other WFEO standing committees, as well as through our collaboration with WFEO partners and

other associated organisations including INWES (International Network of Women Engineers and Scientists) WomEng and UN Women.

Theme 1: Engineering Workforce Diversity and Capacity Building

WIE recognises the fact that there is a global problem with gender diversity in engineering, which poses a skills shortage, a barrier to the equal career and social mobility opportunities available to women, and represents a gap in thought diversity and creativity in the creation of technical solutions to the world's challenges. WIE will work with its National Members to deliver capacity building and growth activities for young women in countries where our input has been identified as being impactful and where these initiatives are currently missing, and it will work with other WFEO Standing committees including Capacity Building and Education to seek opportunities to address this challenge.

Theme 2: Female Leadership and Empowerment

In engineering, and in many other traditionally male dominated sectors, there is a dearth of women in leadership positions. This not only limits the career aspirations of women, it also suppresses the voices of women and denies their perspectives and ability to contribute to important decisions. The WIE committee will work towards empowering women to succeed in leadership positions, both within the WFEO organisation, and in the engineering sector more widely. Female engineers will be encouraged to break the power glass ceiling.

Theme 3: Engineering Strategic Indicators

There is a lack of reliable data on the number of women qualifying as engineers, working in the engineering sector and gaining professional status as registered engineers, on a global level. This limits the ability to clearly assess the need, as well as the type and impact of action. This lack of evidence is used all too often to justify a failure to act.

National data is available in some countries, but this has not been collected against any international standards, and so is often difficult to compare from country to country. There is therefore a significant need and opportunity for leadership in collecting reliable and accessible global data on 'gender disaggregated' aspects of engineering, according to standard definitions and methodologies, which will be available for comparison and benchmarking.

According to the UNESCO Report 'Cracking the Code' - *"Internationally comparable data are also needed on a larger scale to ensure evidence-informed planning and policymaking, as well as further documentation of the effectiveness and impact of interventions."*

Theme 4: Working in Partnership to address the Sustainable Development Goals, with a particular emphasis on Goal 5- Gender Equality, and its relationship with the other Goals.

The WIE committee will embed and illustrate the relevant gender perspectives, alongside the other **Sustainable Development Goals**, in order to ensure that no-one gets left behind and highlight the use of Engineering and technology in addressing these challenges. It will specifically gather evidence of cases where women are disproportionately disadvantaged globally, and consider ways of ensuring that engineering and technology can address this.

We recognise too that the members of the Women in Engineering committee can have a joint and multiplying role at WFEO in simultaneously serving on other standing committees, so all members of WIE are encouraged to join a second standing committee as non-voting members, in order to facilitate partnerships and increase our effectiveness in addressing the SDGs.

Operating Principles

Based on the thematic areas identified above, the Women in Engineering Committee will work through its individual members and the national organisations that they represent and also partner with the other WFEO standing committees, as well other identified organisations to deliver specific outcomes matching particular themes. WiE will also contribute to and build on the wider efforts of like-minded organisations around the world to multiply its messages and aims.

Each committee member /member country representative is expected to contribute to this programme of work. There is working project plan for the objectives, which are to be achieved annually - some of which will be executable by individual members in their own country, while others will be the responsibility of the committee as a whole. Members will report annually on progress made against each of their objectives. A reporting format has been uploaded.

Members who serve simultaneously on other WFEO committees will be encouraged to report back on the progress made in those committees, identifying and harmonising any joint initiatives or successes achieved.

A quarterly newsletter will be compiled and published by the WIE secretariat to disseminate information and share resources.

Regional meetings of committee members will be encouraged in order to facilitate progress on the stated themes, where appropriate, adopting sub-themes and activities that are relevant to that region.

Administration

Chair -Yetunde Holloway (Nigeria)

Deputy Chair - Dawn Bonfield (UK) - will double as a secretary at meetings, when Tessy is unavailable

Administrative Staff - Tessy Gbayan (based in Nigeria) who will coordinate activities of the Committee

Each team is led by a member of the WiE, who is a Vice-Chair/Team Lead for the theme and supported by Deputy Vice Chairs. The members are expected to work together to achieve the objectives of the theme in particular and of the committee, in general

Theme 1- *Engineering Workforce Diversity and Capacity Building*

Vice Chair- *Stacey DelVecchio(USA)*

Deputy Vice Chair: *Uwanjye Munyaneza Yvette (Rwanda)*

Theme 2- *Female Leadership and Empowerment*

Vice Chair- *Yvette Ramos (Switzerland)*

Deputy Vice Chair *Enyonam Kpekpena(Ghana)*

Theme 3- *Engineering Strategic Indicators*

Vice Chair- *Ania Lopez(Italy)*

Deputy Vice Chair - *Wai Yie Leong(Malaysia)*

Theme 4 - *Working in Partnership to address the Sustainable Development Goals, with emphasis on Goal 5, Gender Equality, and its relationship with the other Goals*

Vice Chair & Deputy Vice Chair- *Yetunde Holloway and Dawn Bonfield will work together on this Theme*

Membership

There are two categories of members – all of whom should be *members* of WFEO:

1. Organizational members and Country representatives who are officially nominated by their organizations or countries. The numbers are limited to two per country
2. Non-nominated members who are welcome to attend meetings, but are unable to vote.

The format for reporting of programs has been modified slightly and uploaded. Recognition will be given to membership with innovative programs by WIE

Overview of Activities

Theme	WIE Actions	Deliverables and Outcomes
1: Engineering Workforce Inclusivity and Diversity and Capacity Building	<p>a) Engineering Workforce Diversity and Inclusion</p> <ul style="list-style-type: none"> ● Identification and dissemination of global best practice in the recruitment, retention and progression of gender diversity in the engineering workforce. ● A commitment to the recommendations of the UNESCO Engineering Report around diversity and inclusion in engineering. ● Identify legislative and policy levers to increase gender diversity in engineering, and use our global influence to lobby for change. ● Use of our global membership to identify and promote role model female engineers to encourage, inspire others in engineering. ● Work in partnership to identify, support or join other relevant activities exploiting our International membership, to optimise our visibility <p>b) Capacity Building</p> <ul style="list-style-type: none"> ● Identify countries where capacity building and outreach activities are most required. ● Work in partnership with National committee members, WomEng, UN Women, INWES, PEIs or other appropriate partners to deliver suitable activity in various countries, as required. 	<p>Support, reinforcement and participation in existing national or International programmes to promote workforce diversity.</p> <p>Delivered activities (with feedback analysis) to build capacity in countries most in need of support to encourage a pipeline of girls into engineering.</p> <p>Compilation of relevant information about gender diversity requirements in engineering activity globally.</p> <p>Social media presence to support and promote global conversations around gender diversity in engineering, and to feature International role models.</p> <p>Engagement in capacity building activities within National Organisations to establish more secure Professional Engineering Institutions, giving a gendered voice in decision making processes.</p> <p>A more visible presence globally of the work of WIE.</p>

	<ul style="list-style-type: none"> ● Through the strategic indicators and our partners' knowledge, identify countries where particular activities or policies are successful, and share this learning and leadership with our members, and then more broadly to National Organisations. ● Celebrate and share International events linked to gender diversity and inclusion in engineering, such as World Engineering Day, International Women in Engineering Day, International Day of the Girl etc through social media and in other ways. <p>Encourage strategies for keeping girl child interested in STEM , across regions</p>	
Theme	WIE Actions	Deliverables and Outcomes
2: Female Leadership and Empowerment in Engineering	<ul style="list-style-type: none"> ● Promote and support our members and their activities to enable them to reach leadership positions, through visibility of their work and their global activity. ● Facilitate global networking of senior contacts to aid mentoring opportunities for women in engineering ● Encourage innovative deliberations on start-ups and entrepreneurship ● Encourage members worldwide to execute programs which encourage the girl child to do STEM subjects 	<p>Creation of a powerful and confident network of female engineers who are able to utilise their connections to increase their visibility, collaborate in their work specifically towards the Sustainable Development Goals, and act as role models on a global stage.</p> <p>Increased number of female tech entrepreneurs/tech start-ups</p> <p>Creation of a larger pool of female talents for the industry</p>
Theme	WIE Actions	Deliverables and Outcomes

3: Engineering Strategic Indicators	<ul style="list-style-type: none"> ● Work in partnership with other national and International engineering organisations (such as INWES, National PEIs, and CAETS) to create a methodology for standardising and measuring gender diversity in engineering, and collect and publish this data annually. ● Use the strategic indicator data to inform and advise policy and action Internationally 	<p>Creation of a set of global strategic indicators around gender diversity in engineering.</p> <p>Recognition of WFEO as the authority in global engineering gender diversity data.</p>
Theme	WIE Actions	Deliverables and Outcomes
<p>4: Working in Partnership to address the Sustainable Development Goals, with a particular emphasis on Goal 5, Gender Equality, and its relationship to the other Goals.</p>	<ul style="list-style-type: none"> ● Identify ways that engineering and technology could contribute to addressing the targets identified under Goal 5, Gender Equality. ● Specify the ways in which gender equality relates specifically to engineering globally, and develop some actions that are possible to address this, both for our committee, for WFEO, and for the engineering sector globally. ● Consider the gender perspective in relation to all of the Sustainable Development Goals (with particular emphasis on the ones that are most closely linked to engineering and technology), and demonstrate how engineering and technology can respond where disadvantage occurs, to ensure that no-one is left behind. ● Contribute to the WFEO Climate Change Declaration established in Melbourne in 2019 ● Use the work of our female role model engineers in areas which link to the SDGs to show how women are 	<p>Use of our voice to represent women who are disproportionately disadvantaged globally by climate change events, lack of agency, or other unrecognised inequalities to find ways of ensuring that engineering and technology is aware of these perspectives and how to address them.</p> <p>Ensure that future engineering and technological solutions avoid the embedding of gender bias and discrimination.</p> <p>Formation of partnerships with others to deliver progress of the SDG agenda.</p>

	<p>influencing this important development, and encourage more girls to consider careers in engineering</p> <ul style="list-style-type: none"> ● Foster partnerships with others to find ways of delivering our objectives through joint action. Use pre-existing opportunities such as WFEO, UNESCO, COP and ICWES conferences to further our impact. 	
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This document is live and evolving. Should you have questions about this strategic plan, kindly forward your questions to the Chair of the Committee through the address below.

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