



Young Engineers / Future Leaders Committee
WORLD FEDERATION OF ENGINEERING ORGANIZATIONS



YEFL REPORT- OCTOBER 2018



THE WFEO YOUNG ENGINEERS COMPETITION

We had prepared a call for papers to invite Young engineers around the world to write articles on UN SDGs in which the top articles were selected and sponsored to attend a session during the WFEO annual conference in London in October 2018.

Young engineering leaders were invited to present their ideas and perspectives on one of the 17 Sustainable Development Goals. Approximately 150 submissions were received from 30 countries around the world, 11 percent of these were from women.

The first round of the judging for the competition was successfully done by WFEO President, Dr Marlene Kanga in which she identified the top 24 submissions, in the second round after which myself along with President Elect, Prof. Gong ke and WFEO President we finalized the final judging by identifying the top 10-12 submissions in which Kuwait Society of Engineers proudly sponsoring the first winner of the competition to attend the GEC2018 to present his paper as well as KSE agreed to print the booklet which includes the top submissions.

UNESCO ENGINEERING REPORT II- ARAB STATES

As YEFL chair I have been invited to be a part of the steering committee and be a co-author to the subsection on regional trends in engineering in the Arab States by UNESCO. We are in process of preparing part of the 'Chapter 10 Regional Trends in Engineering, sub-section 2: Arab States' of the second Engineering Report.

YEFL Session during GEC 2018 London

YEFL was preparing a session during the Global Engineering Congress in October 2018 in London for:

Humanitarian Session & UN SDGs Session

The session consist of four project presentations from distinguished speakers who have applied humanitarian efforts and engineering in selfless service to humanity at the first Global Engineering Congress (GEC2018).

A global audience of innovative young engineers, global leaders, inventors, policy makers, engineering organizations, entrepreneurs, NGOs, regulators and government agencies from all over the globe will be inspired by outstanding projects, that aim to showcase how the utilization of simple solutions to major global humanitarian issues could result in huge impacts, irrespective of the climes they have been applied.

The speakers of the sessions:

Engineering Sustainability and the SDGs

Dr Tony Marjoram, Guest Professor of Engineering, Science and Sustainability, Aalborg University, Denmark & Founding Editor, UNESCO Engineering Report

Showcase the leadership efforts of young engineers to progress the SDGs

First Winner of WFEO YEFL Competition on UN SDGs



Sim Siang Tze Victor, Principal Engineer (Sustainable Urban Solutions), Surbana Jurong, Former Deputy Director, Nanyang Environment & Water Research Institute Community Development

Infrastructure Capacity Assessment to Support Achieving the SDGs

Geoffrey Morgan, Highly Commended Young engineers Competition –Sustainability Engineer, UNOPS

An ecological sanitation project for the Kumi Hospital in Uganda.

Irene Serrano Gonzalez, Sustainability Consultant, AECOM

WFEO YEFL International Strategic Planning Forum - Stakeholder Collaboration for Global Integration of Youth in Industry

The YEFL International strategic planning forum's strategy is an ongoing phased strategy which does not only aim to resolve all the region-specific issues faced by young engineers globally; rather, we aim to provide the support and networks needed to continue to tackle these issues head-on, to form strong, resilient young leaders, and to make progress in growing the collective representation of young engineers in industry, and professional organizations.

This forum is an opportunity for open discussion between industry professionals, University professors and students to voice their needs and concerns to better synergize. The themes covered for the regional engagements are focused on:

- **Technical and Professional Competence Development:** To highlight the gap in the number of engineers required by industries, and those available and competent to fill resourced positions. It also presents an opportunity to drive the campaign to encourage more youth and women to pursue engineering careers, thus increasing the number of engineers available and competent to solve engineering problems globally. Other concerns raised include the availability of structured development programs for Young engineers in industry, obsolete educational curricula when compared with current industry technologies/competences etc.
- **Entrepreneurship and Start-up Programs:** To focus on the reality of 18-year-old CEOs, child mobile app developers, and collegiate humanitarians in various engineering sectors and industries. Young engineers often come up with solutions to industry and societal problems. These young engineers require support to translate these innovative solutions to working systems for the benefit of humanity and their nations' economies. The value of establishing a start-up or private enterprise is not only fulfilling personal ambition, creating jobs for oneself and others, and improving their nations' economies but also has the added benefit of expanding the limits of innovation & creativity that will usher our world into the future.
- **Soft skills Development:** Young engineers should be able interact with colleagues, the industry, the public, policy makers and the government in today's world. Cultivating the skills to relay important engineering concepts across all sectors' traditional "terminology" barriers is critical to meeting the expectations across these divides. We are facilitating discussions around focused improvement of young engineers' presentation skills, networking abilities, technical writing skills, appreciation of financial tools, awareness of marketing, ethics, managerial skills etc.



- **Coaching and Mentorship Programs:** Young engineers require a better appreciation of the enormity of their regional industry challenges to be able to realize the opportunities for improvement and development. A key repeating theme is the need for structured approaches for young engineers to be introduced to the industry early in their educational and professional careers through volunteering, active internships and short-term assignments. These structures though mostly existent are not designed for the fast pace of change/development in today's world, and are to be reviewed to reflect more collaboration between young engineers, academia and industries.
- **Sensitization on Burning Global Issues:** Stakeholders agree on the need for Young engineers to be sensitized and consistently reminded of the burning issues affecting our world today! This will better guide the choice of how best we apply novelty for the benefit of humanity. Going forward, every program organized for young engineers globally shall incorporate discussions on at least one of the global issues affecting sustainable development and our continuous existence on this planet; sustainable energy and power, environment, climate change, sustainable infrastructure development, healthcare, diversity and inclusiveness, cyber-security, water and sewage, population and urbanization, and other global burning issues.

The YE/FL STC plans to continue the discussion in the other regions of the world, identifying the challenges young engineers face as they transition into industry professional positions, while also exploring the factors inhibiting our role as champions in the global industrial evolution to design-led innovation.

Forum	Event	Host Country	Date	Status
Middle East	WFEO YEFL International Strategic Planning Forum	Kuwait	3 – 6 Mar. 2015	Completed
Asia-Pacific	World Engineers Conference and Convention	Japan	1 Dec. 2015	Completed
South America	World Engineering Congress (WECDDR)	Peru	3 – 9 Dec. 2016	Completed
Europe	World Engineering Forum, (WEFRoma)	Italy	Dec. 2017	Completed
Africa	WFEO YEFL International Strategic Planning Forum	South Africa	-	Yet to be scheduled
North America	WFEO YEFL International Strategic Planning Forum	U.S.A	-	Yet to be scheduled

During this year we have been retaining the outcomes of our previous forums from different regions which has already been covered in Middle East region, Asia Pacific region, South America region and Europe region. And to take the opportunity in London to discuss the progress and way forward to launch the final outcome in Australia during the last year of our term in 2019.