



WFEO Young Engineers/Future Leaders (YEFL)

Committee Meeting

Firas Bou Diab

October 24, 2024 12:15 pm - 1:45 pm Beirut Time

9:15 am - 10:45 am (GMT)

Platform: Zoom

Contents

- Welcome & Opening Remarks
- Introduction of Members
- Summary of 2023-2024 Activities
- WFEO Academy
- YEFL & UN Relations Committee (WURC)
- Vice Chairs
- Regional Updates
- Call to Action



Welcome & Opening Remarks

The YEFL committee is a dedicated group of young engineers working to establish YEFL as the leading global authority representing the voices of young professionals in engineering. By highlighting the important role of young engineers in achieving the United Nations' Sustainable Development Goals, YEFL aims to promote their recognition and success.

Firas N Bou Diab, Chair of YEFL, Federation of Lebanese Engineers







Young Engineer Podcasts, World Engineering Day 202







Young engineers have a crucial role to play in climate action by designing sustainable and energy-efficient systems, advocating for sustainable policies, and raising awareness among their peers and communities. Together, they can create a sustainable and resilient future for generations to come.



Young Engineers have the power to advocate for sustainable urban development, promote community engagement, and champion social equity in Cities. By embracing the principles of SDG11, Young Engineers can create urban spaces that prioritize accessibility, green spaces, and resilient infrastructure, fostering vibrant communities for all.



SDG Digital GameChangers Awards

Role as Chair of WFEO Young Engineers/Future Leaders Committee

- •Date & Location: 21 September 2024, UN Headquarters, New York.
- •Occasion: "A Digital Future for All" as part of the Summit of the Future Action Days.
- •Organizers: Office of the Special Envoy on Technology (OSET), International Telecommunication Union (ITU), United Nations Development Programme (UNDP).

Role:

•Judge for Category 1: People – Empowering Lives and Communities.

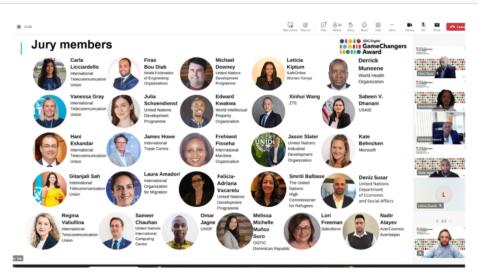
Event Focus:

- •Objective: Propelling forward-thinking commitments leveraging innovation, science, and data for a sustainable digital future.
- •Category 1 Focus: Projects empowering marginalized populations through ICT to promote digital inclusion, access to essential services, education, employment, and gender equality.

Experience Highlights:

- •Witnessed how digital tools can transform lives and address global social challenges.
- •Reviewed projects that focused on reducing inequalities, fostering inclusive growth, and advancing ICT for development.

Takeaway: Inspired by the creativity and dedication of participants working towards a more equitable and just world through technology.







Project Catalyst - "Engineering Insights" Webinar

•Date: 8 August 2024

•Organizers: WFEO Committee on Young Engineers / Future Leaders (YEFL) in partnership with Project Catalyst.

Purpose:

- •Focus: Exploring future opportunities for emerging engineers through collaborations with organizations that directly serve or engage with engineering students.
- •Goal: Provide up-and-coming engineers access to quality resources, mentorship, and platforms to shape their career paths and interests. **Project Catalyst**:
- •Global Reach: Dedicated to promoting equity and inclusion in STEM, especially in biotechnology and engineering.
- •Mission: Support diverse students through educational resources, mentorship, and collaborative projects, fostering an inclusive and innovative engineering community.

Key Takeaways:

- •Strengthening support systems for young engineers.
- •Encouraging inclusive practices in STEM education.
- •Offering pathways for engineering students to develop skills and explore career prospects.





WFEO & ICSI webinar to celebrate **World Engineering Day 2024** – Inspiring collective action through communication, advocacy and best practices – the role of engineers

•Date: 14 March 2024

•Organizers: WFEO Working Group on Climate Change, International Coalition for Sustainable Infrastructure (ICSI), and WFEO Young Engineers / Future Leaders (YEFL) Committee –WG on SDG13.

Objective:

•Focus: Showcasing the critical role of engineers in tackling climaterelated challenges through effective communication, advocacy, and best practices.

Key Discussions:

- •Role of Engineers: Engineers as key communicators and problemsolvers for climate challenges.
- •Tailored Communication: Importance of adapting messages to different audiences, including communities, policymakers, and investors.
- •Best Practices: Highlighted successful case studies showing how tailored communication strategies have mobilized stakeholders toward climate action.

Takeaways:

•Effective communication is crucial to convey the urgency of climate action.



Hackathon

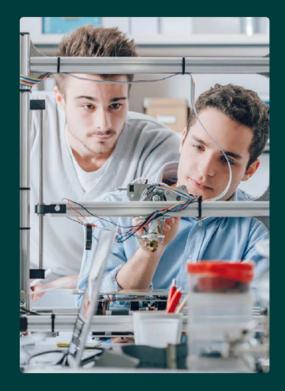




What is it?

The World Engineering Day Hackathon is a global competition that aims to engage engineering students, from universities around the world, with the celebration of World Engineering Day in 2024.

The Hackathon is hosted by the World Federation of Engineering Organisations (WFEO), its members and partners. Partners who are working with WFEO to create comprehensive and relevant engineering challenges that align with the 2024 World Engineering Day theme, Engineering Solutions for a Sustainable World and which will encourage engineering students to develop solutions that advance the United Nations Sustainable Development Goals - the SDGs









This year, we go green

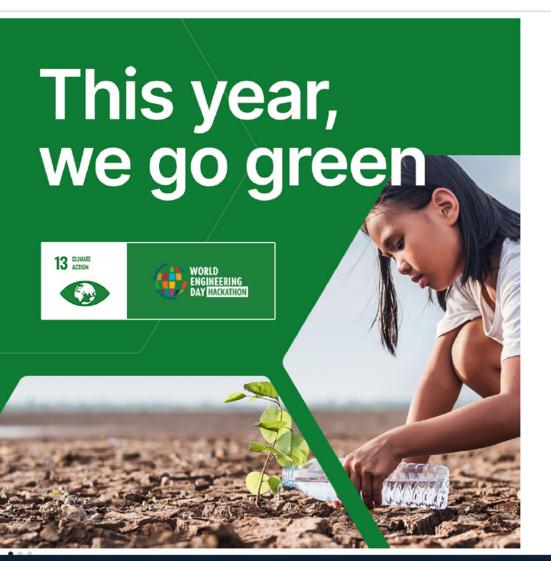




This year we went green!

In a remarkable display of global collaboration and innovation, the World Engineering Day (WED) Hackathon 2024, themed "Engineering Solutions for a Sustainable World," concluded with resounding success. This year, the competition went green, with all challenges aligning closely with the United Nations Sustainable Development Goal 13 - Climate Action.

We had over 2500 participants from across the globe register and received more than 200 innovative submissions.

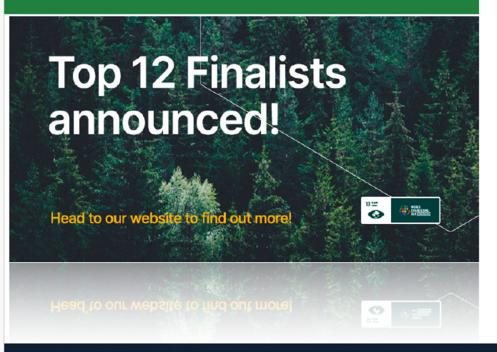


HIGHLIGHTS

- · This is the hackathon's 3rd year
- Hackathon run by World Federation of Engineering Organisations in collaboration with UNESCO
- Three great challenges, developed with the support of EWB as WFEO and Hackathon working committees
- All entries to create a 5-min video explaining their solution to a single challenge.
- We received more than 2500 (1000 in 2023) pre-event registrations of which we received 200 submissions
- The competition had 39 judges for Preliminary Round and 5 judges from our partners in Finalist Round.
- Winners were announced live on air, during our 4 Mar 2024 Global Stream

ABOUT ENTRIES

- · 200 entries received
- 2500 registrations



Total Countries 28 Countries

(from 23 countries last year)

Indonesia Kenya Angola Malaysia Australia Mauritius Azerbaijan Morocco Bahrain Myanmar Belgium Nigeria Burkina Fas Peru Philippines Burundi Rwanda Cambodia Singapore Canada South Afric China Spain Costa Rica Sri Lanka Cuba Sudan Ecuador Tanzania, L Egypt Uganda United Ara Ghana United King Hong Kong United Stat Zimbabwe

India

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CHALLENGE 1

Delivering the climate positive transition

CHALLENGE 2

Promoting climate positive action through innovation

CHALLENGE 3

Protecting the most vulnerable from extreme heat in refugee camps and temporary shelters

Challenge Selected

Challenge 1: Delivering the climate positive transition ... 9%

Challenge 2: Promoting climate positive action through

innovation ... 78%

Challenge 3: Protecting the most vulnerable from extreme

heat in refugee camps and temporary shelters

Team Size

100%

Number in your team

Teams

36%

A team of 3 students ...

A team of 4 students ... 47%

A team of 5 students ... 17%

Engineering participants

Engineering Student?

· · · 13%

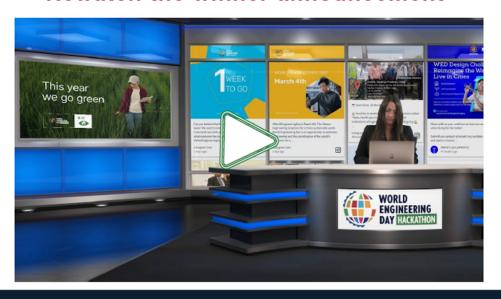
Yes

FINALISTS



- Winning team: Somiant from Yachay Tech University Ecuador. Shirley Vasquez, Alexia Tana, Antonio Bodero, Dario Cabezas & Rashell Mayacela.
- 2nd Place: Eco Cool from Uni of Illinois Urbana-Champaign, Tokyo Institute of Technology, Rice Uni & Hong Kong Uni of Science and Technology. Mathus Jirapunyawong, Thunyapat Silpsamrit, Kumkab Keeratisiwakul& Passapan Sanguanchua
- 3rd Place: Green Space Batangas State University The National Engineering University in the Philippines. Jose Luis A. Valencia, Nathaniel M. Regodon & Maureen H. Fadullo.
- · Winning teams were selected out of 12 Finalist entries.
- From 7 countries Ecuador, USA, Philippine, Kenya (x4)
 Canada, Bahrain, Uganda (x2) and Indonesia

Rewatch the winner announcement



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- · Hackathon Landing Pages
- Hackathon Challenge 3
 Landing Page

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Role of YEFL in WFEO World Engineering Day Hackathon

Key Contributor:

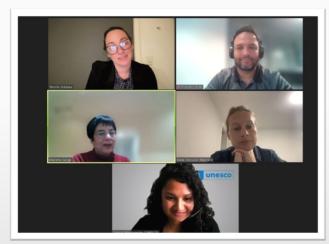
- •The YEFL Committee was pivotal in organizing the Hackathon 2024, designing challenge statements aligned with SDG 13 Climate Action
- •Their global outreach efforts helped attract over **2,500 participants**, fostering broad engagement from young engineers worldwide.

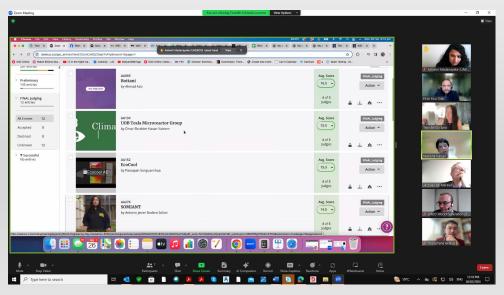
Judging & Expertise:

- •YEFL members served as preliminary judges, evaluating submissions based on creativity, feasibility, and sustainability.
- •Their expertise spanned various engineering disciplines, allowing for a **comprehensive evaluation** of the technical solutions proposed.

Impact:

•YEFL's active role ensured the Hackathon was a platform for learning, collaboration, and innovation, inspiring young engineers to address global issues.

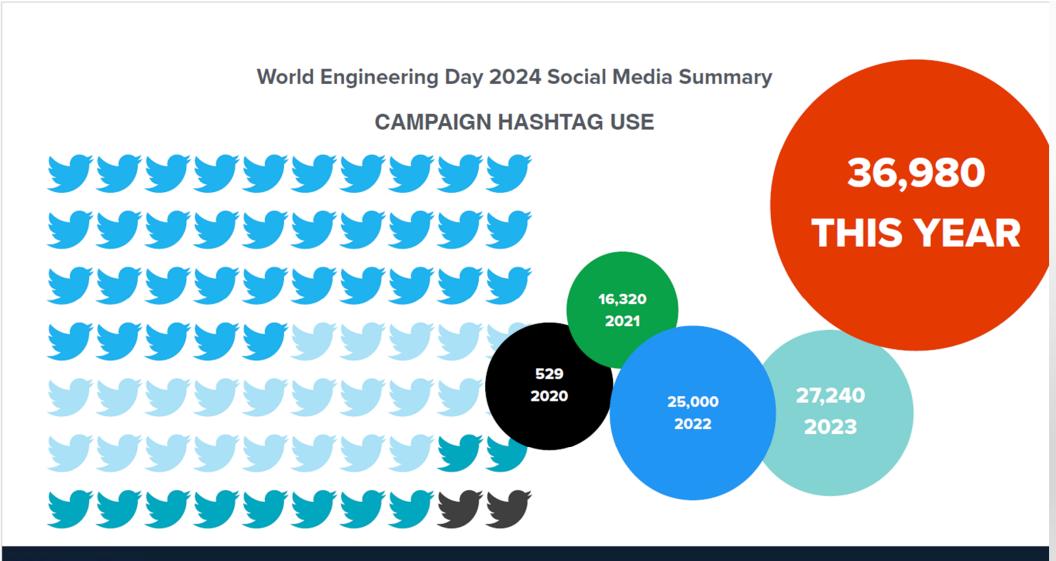








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Global **Stream Partners**



Australian Academy of Technological Sciences & Engineering













































YEFL - WG on SDG13 at COP28

The YEFL **Working Group on SDG13** leveraged past experiences from previous UNFCCC COPs to enhance its impact at **COP28** in Dubai.

Key Highlights:

1.Resilience Hub Co-Lead:

- 1. Selected as a co-lead for the **Infrastructure**, **Energy**, and **Mobility** theme at the **COP28** Resilience Hub.
- 2. Organized one event and supported three others, attracting over **10,000 participants** both inperson and virtually.

2.Key Events:

- 1. "Engineering Action: Influencing the Future of the Built & Natural Environment":
 - Collaborated with ICSI and UNDRR in a fishbowl format to foster dialogue among engineers, policymakers, and finance professionals, focusing on disaster-resilient infrastructure.

2. Youth & Practitioners Side Event:

- 1. Promoted collaboration between engineers and policymakers, highlighting young engineers' roles in climate action in partnership with FIDIC, CEMR, and Engineers Without Borders International.
- 3. Systems Thinking Side Event:
 - 1. Co-developed with the WG on Climate Change to promote transdisciplinary approaches for inclusive and nature-positive climate solutions, addressing the global stocktake.

3. Campaign Review:

 Reviewed the GRA's 3xRenewables campaign, providing feedback on this flagship initiative ahead of its launch.





#EngineeringChange Campaign

•The **#EngineeringChange** campaign was developed in collaboration with the **International Coalition for Sustainable Infrastructure (ICSI)** to empower young engineers and their managers.

Objectives:

- •Implement Sustainable Practices: Encourage the integration of sustainable development into engineering work.
- •Lead and Advocate: Equip young engineers to advocate for necessary changes within their organizations.
- •Address Barriers: Systematically identify and tackle obstacles that hinder the adoption of sustainable practices.

Launch:

•Event: Launched at the COP28 Resilience Hub.

Key Activities:

- •International Survey: Conducted a survey of young engineers and managers to analyze barriers and perceptions regarding sustainable development practices in engineering.
- •Report: Produced an analytical report outlining findings and next steps for the campaign. View Report.

Current Collaboration:

•Working with ICSI to develop a **resource map** that provides freely available tools and materials for young engineers to enhance their skills in sustainable development practices.









YEFL-WG on SDG13 in partnership with C40 Cities.

Event:

Just Energy Transition Strategies for a Sustainable Future

Objectives:

1. Understanding Just Energy Transition Strategies:

1. Explored key strategies that support a just energy transition and how they complement traditional supply-side approaches.

2.Real-world Examples:

 Presented successful implementations, opportunities, and challenges faced in various regions regarding energy transition.

3. Policy and Regulatory Landscape:

 Discussed the roles of various stakeholders in the energy ecosystem, including how governments and utilities are incentivizing strategies to promote a cleaner energy ecosystem.

4. Opportunities for Sustainable Practices:

1. Examined both supply and demand-side opportunities for transitioning to sustainable energy practices.





Buildings and Climate Global Forum

Event: Inaugural Buildings and Climate Global Forum

•Organizers: Government of France and UN Environment Programme (UN EP).

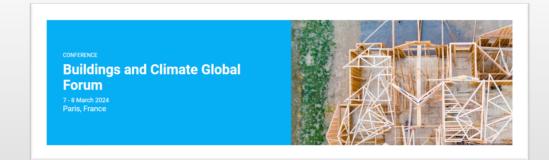
•Location: Paris.

Overview:

- •The forum gathered **ministers** and key stakeholders from the global buildings and construction sector.
- •Focused on collaborative efforts to **decarbonize the sector**, addressing the critical role of buildings in achieving climate goals.

Objectives:

•Foster dialogue among international leaders and industry experts to share insights and strategies for reducing carbon emissions in the built environment.





New York Climate Week

Event: Roundtable Discussion on Scaling Up Adaptation Finance

Participants: YEFL Working Group.Hosted By: ICSI, GCoM, ICE, and BCG.

Overview:

•The discussion centered on strategies to **unlock funding** for equitable, sustainable, and resilient infrastructure.

Key Focus Areas:

- •Collaboration: Emphasized the importance of collaboration between engineers and the investment community to identify and explore new funding opportunities.
- •Adaptation Finance: Addressed how to scale up financing mechanisms to support climate adaptation initiatives.



COP29

Event: Building Capacity and Capability for a Sustainable, Resilient, and Just Built Environment

•Collaboration: Hosted by YEFL Working Group in partnership with FIDIC, Resilience First/ICSI, Institute of Environmental Management and Assessment (IEMA), and World Green Building Council (WorldGBC).

•Location: COP29 Blue Zone.

Overview:

•The side event aims to address the challenges faced by the global built environment community in acquiring the necessary knowledge, skills, standards, and tools.

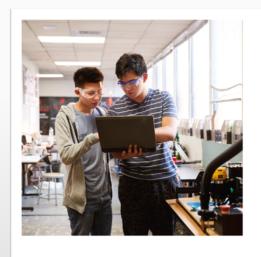
Objectives:

- •Capacity Building: Focus on equipping stakeholders to implement sustainable, resilient, and equitable solutions in the built environment.
- •Knowledge Sharing: Promote dialogue on best practices and strategies to enhance capabilities within the sector.





WFEO Academy



WFEO Academy

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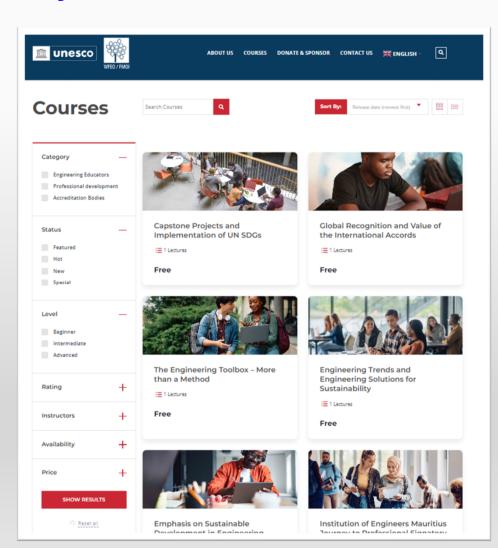
Our Objective

UNESCO Open Science

Our objective is to provide training and build capacity for:

- Individual engineering educators and assessors of engineering programs that align with the requirements of the International Engineering Alliance, including curriculum development, teaching methods and pedagogies and assessment for outcomes based education.
- Professional development of individual engineers at all stages of their career to support their competency and registration where available.
- 3. Institutions, government and non-government, for the development of strong governance and management structures and accreditation and professional development systems for accreditation organisations and professional engineering institutions to enable them to achieve international benchmarks such as those of the International Engineering Alliance.





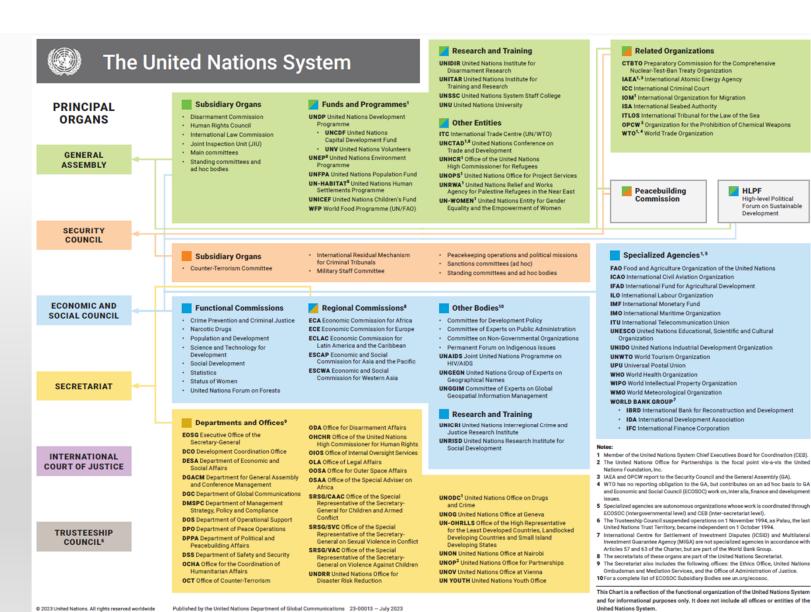
WFEO Academy





YEFL & UN Relations Committee (WURC)

- 1. Which Sustainable Development Goals (SDGs) are you focusing on?
- 2. What projects/themes are you currently working on?
- 3. What results would you like to publish or share with the United Nations?
- 4. Which United Nations forums. agencies, entities, or organizations are you in contact with or interested in contacting?



HLPF

High-level Political

Development

Forum on Sustainable

Vice Chair Role - YEFL Committee

Key Responsibilities

1.Leadership & Support

- Assist the Chair in providing leadership and direction for YEFL activities.
- Take on Chair duties when the Chair is unavailable.

2.Project Leadership

- Lead a key YEFL project or head a Working Group focused on one of the 17 SDGs.
- Ensure the integration of Sustainable
 Development Goals (SDGs) into committee
 initiatives.

3. Collaboration & Representation

- Collaborate with committee members, global partners, and WFEO entities.
- Represent YEFL at internal and external events, including United Nations forums.

4.Strategic Development

- Contribute to long-term strategic planning for YEFL, aligning with WFEO's vision.
- Promote innovation, professional development, and sustainability within the young engineering community.







Tracing YEFL's Previous Endeavors

Biennial Reports - WFEO

WFEO-YE/FL-Members section - WFEO



Call to Action

Webinars for Knowledge Sharing

- Webinars on emerging engineering trends, innovation, and real-world problem-solving.
- Expert-led Sessions to enhance skills and foster global knowledge exchange.
- Target Audience: Young engineers and professionals across WFEO networks.

Hackathon 2025 Promotion

- Share Widely: Leverage social media platforms and professional networks to spread the word about Hackathon 2025's focus on SDG 1 and encourage global participation.
- o Host Informative Webinars: Organize virtual events to discuss the significance of SDG 1 and how young engineers can contribute innovative solutions through the hackathon.
- Collaborate Locally: Engage local engineering communities, universities, and organizations to create teams and foster collaborative projects aimed at poverty alleviation during the hackathon.





World Engineering Day Hackathon 2025

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Register

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Online Event



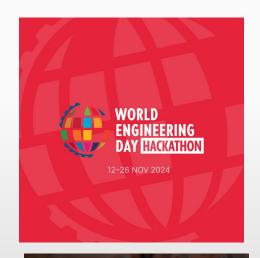


















Thank You

https://www.wfeo.org/

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