

 World Federation of Engineering Organizations

 Fédération Mondiale des Organisations d'Ingénieurs

 50th anniversary



Outcomes and Impacts of

Global Engineering Congress, London,

October 2018



Under the Patronage of UNESCO

United Nations Educational, Scientific and Cultural Organization

INTERNATIONAL ENGINEERING LEADERSHIP FOR SUSTAINABLE DEVELOPMENT

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1. Background

The World Federation of Engineering Organisations (WFEO) was established in 1968 under the auspices of UNESCO and is the peak body for engineering, representing nearly 100 nations and 30 million engineers. It is the voice of engineering at an international level and promotes the important role of engineers in key issues that the world is now facing: sustainable development, the growth of our cities, climate change and strategies for energy production to meet the needs of the growing population around the world.

The World Federation of Engineering Organisations (WFEO) is the only international organisation at the international level that represents all engineering disciplines around the world. It is a member of the major Science Technology and Innovation Group at the United Nations.

The World Federation of Engineering Organisations (WFEO) is recognised by government, intergovernmental organisations, international NGOs and the public in general as a respected and reliable source of advice and guidance on strategies and policies that use engineering and technology for the benefit of human development and wellbeing and sustainable outcomes.

2. WFEO and the UN Sustainable Development Goals

In September 2015, the world came together to declare the new UN Sustainable Development Goals. These goals take an integrated approach for future development, combining progress in economic prosperity, social inclusion and environmental sustainability. The implementation of these goals is a key objective of the World Federation of Engineering Organisations.





WFEO therefore has an important role in leading and co-ordinating the various projects for developing engineering capacity for maximum long term impact to achieve the UN Sustainable Development Goals. WFEO is able to bring together educational institutions, government and industry to facilitate projects that address the need for engineering capacity in various regions of the world. The national and international members of WFEO, are leading professional engineering institutions, and play a key role in this endeavour and in developing country and region specific responses.

The celebration of WFEO 50th anniversary in 2018 was a catalyst to develop a framework for an action plan for the engineering capacity that is required to achieve the UN Sustainable Development Goals (SDGs). The first step was the signing of the Declaration between UNESCO and WFEO on the commitment to advance the UN Sustainable Development Goals through engineering. This Declaration was signed in Paris on 7th March 2018.

3. The Global Engineering Congress (GEC2018)

The Global Engineering Congress (GEC2018) was the first major WFEO event that was held after the signing of the Declaration and an opportunity for WFEO to engage with the world's engineers on their role in advancing the UN Sustainable Development Goals. It was hosted by the Institution of Civil Engineers, the WFEO national member for the U.K as part of its bicentenary celebrations and to also celebrate the 50th anniversary of the founding of WFEO. This event was held at the same time as the annual WFEO Executive Council meetings.

GEC2018 focused on 5 of the UN Sustainable Development Gaols: Water (6), Energy (7) Innovation (9), Sustainable Infrastructure (11) and Climate Change (13). WFEO curated Days 1 and 2 (22 and 23 October), which were a showcase of activities and projects being undertaken by WFEO technical committees, members and partners. Nearly 90 speakers from 40 countries spoke during these two days on a wide range of topics. Important sessions were also held on engineering education (Goal 4) and diversity and inclusion (Goal 5) and there was a special session for young engineers.

The focus on sustainable development and engineering itself was a significant outcome of the Congress. This was recognised by:

- Letter of congratulations from the UN Secretary General Mr. Antonio Gutteres on the occasion of WFEO's 50th anniversary
- Letter of congratulations for the Assistant Secretary general to UNESCO on the success of GEC2018 and the leadership provided by WFEO in advancing the 2030 Agenda.

There were many discussions, forums and workshops at the Congress. This report lists those relating to WFEO and the work that follows as a result of the Congress.



Letter of Congratulations from UN Secretary General Antonio Gutteres



"The United Nations will continue to count on your engagement and support as we strive to achieve the 17 Sustainable Development Goals – the world's blueprint for building a future of peace and prosperity for all on a healthy planet. Every one of the Goals requires solutions rooted in science, technology and engineering.

I am therefore pleased that the focus of this Global Engineering Congress is to advance the goals relating to water, energy, infrastructure and cities."

Message for the Opening of the Global Engineering Congress, 22 October 2018 from the United Nations Secretary General Mr. Antonio Gutterres

Letter of Congratulations from UNESCO ADG Natural Sciences, Flavia Schlegel



"I have been informed by my colleagues who attended the Congress that it was a great success and that it had an important impact on the engineering community.

Moreover, I am pleased to hear that the SDGs have been discussed and debated during lectures and conferences of participants as well as promoted throughout the whole Congress.

The leadership you provide to WFEO makes it a strong partner to advance the 2030 Agenda for Sustainable Development. I welcome our shared commitment to develop an ongoing programme of work that will address engineering for the SDGs. I am convinced that together we can achieve much more than individually.

Please accept my sincere appreciation for your commitment to making engineering for the SDGs a reality, and your support in laying a path for future endeavours."

Letter of congratulations from the UNESCO Assistant Director General for Natural Sciences, Dr. Flavia Schlegel, Paris, 17 December 2018.



4. Recognition by UNESCO and its Member Delegations of WFEO's role in leading the 2030 Agenda through engineering

The global gathering of engineers at GEC2018 and the discussions on engineering increased the visibility of the role of engineers in advancing the goals of sustainable development and the work of WFEO in leading some of these initiatives. As a result, UNESCO invited **WFEO to present its strategies and projects to the Member Delegations at UNESCO**. This meeting will take place on 1st Feb. 2019 at UNESCO in Paris. It is anticipated that a strategic work plan will be developed with support from UNESCO and its members for projects that relate to engineering.

At the invitation of the Working Group on Sciences from the Africa Member Delegations, **WFEO will present to UNESCO members on projects in Africa especially on capacity building for engineers and engineering** education. It is anticipated that the representatives of the African Union on human and resource development will attend. Speakers will include the WFEO leaders from Africa including the current and past Presidents of the Federation of African Engineering Organisations. This meeting will be held on 31 Jan. 2019. This meeting is expected to result in an action plan for the governments of the Africa member delegations to collaborate to build engineering capacity for nation building in Africa.



Reaching for the sky for solutions for the UN SDGs Water, Energy, Innovation, Sustainable Infrastructure and Climate Change



5. Progressing the WFEO Engineering 2030 Plan

The first report of the WFEO Engineering 2030 Plan was launched at GEC2018. This was a significant outcome and brought together the important projects that are in progress and which address various sustainable development goals.

The report presents the projects that have been established by WFEO, its national and international members and its international partners to advance sustainable development during 2017-18. The report demonstrates the diversity of projects geographically and technologically that are addressing a wide range of the UN Sustainable Development Goals. They represent the power of the WFEO network and its partnerships and include:

- WFEO Standing Technical Committees including: Disaster Risk Management and Engineering and innovative technologies.
- WFEO national members Spain, Portugal, Bahrain and Fiji
- WFEO International members the Federation of Engineering Institutions of Asia and the pacific(FEIAP), the Federation of Arab Engineers (FAE), World Council of Civil Engineers
- WFEO International Partners in addressing engineering education standards and capacity building including the International Engineering Alliance (IEA), the International Federation of Engineering Societies (IFEES), the International Federation of Consulting Engineers (FIDIC)
- WFEO Associate members including WomEng, South Africa

Many other projects are in progress and include:

- 1. WFEO Committee on Disaster Risk Management capacity building for earthquake and water related natural disasters and on-line database of engineering information to mitigating these risks
- 2. WFEO Committee on Engineering Education biennial conferences on engineering education and publication of IDEAS journal
- 3. WFEO Committee on Information and Communication international seminars on implementation if technologies for Smart Cities and the Internet of Things and publication on monographs on the implementation of information technology in health care and Industry 4.0 technologies.
- 4. WFEO Committee on Energy international World Energy Forum and publication on solar energy to facilitate the implementation of new technologies in energy
- 5. WFEO Committee on Capacity Building facilitation of capacity building in engineering including Africa Engineering Week, held annually and focussing on developing engineering capacity in Africa
- 6. WFEO Committee on the Environment Codes of Practice for Sustainable Development and environmental Stewardship for Engineers and Principles of Climate Change Adaptation for Engineers and participation in the UN Conference of Parties (COP) events on engineering approaches to climate change mitigation and adaptation
- 7. WFEO Committee on Engineering Innovative Technologies international conferences and seminars on artificial intelligence, use of innovative technologies, robotics and cloud computing

Engineering practice for sustainable development has been addressed by the work of:

8. WFEO Committee for Women in Engineering – survey on the status of women engineers in Africa and work on improving sanitation for women in Africa



- 9. WFEO Committee on Anti-Corruption contribution to the ISO 37001 Anti Bribery Standard, ongoing participation in the ISO technical committee TC-309 on related standards and the development of guidance materials
- WFEO Young Engineers/Future Leaders Committee in supporting young engineers in their roles to advance sustainable development including the inaugural Young Engineers Competition held in 2018.

Detailed reports on committee activities on advancing the UN Sustnable development Goals will be presented as part of the WFEO Biennial Report for the WFEO General Assembly in November 2019.

6. Advancing SDG 17: Partnerships for the 2030 Agenda

The WFEO Engineering 2030 Plan is based on partnerships with other international organisations in science and engineering. These relationships were strengthened by the participation of representatives of these organisations during GEC2018 as speakers and panellists as well as at meeting and workshops that were held as side events. These included:

WFEO was proud to have the support of UNESCO as important speakers at the event:

- Mr. Miguel Clusenser-Godt, Director, Division of Ecological and Earth Sciences Secretary, Man and the Biosphere (MAB) Programme
- Ms. Rovani Sigamoney, Assistant Programme Specialist, Natural Sciences Division
- Mr. Indrajit Banerjee, Director Knowledge Societies Division, expert on implementation of digital technologies and Industry 4.0

Presentations and discussions on trends in *engineering education and requirements for ongoing training* and development from:

- Prof. Michael Auer, President International Federation of Engineering Education Societies (IFEES)
- Mr. Alain Bentejac, President, FIDIC Federation of International Consulting Organisations;
- Dr. Jincheng Kang, Senior Strategic Expert, Engineering education programs development by UNESCO Category II *Centre the International centre for Engineering Education (ICEE)*, based in Tsinghua University, Beijing
- Dato Lee Yee Cheong, Past President, WFEO & Hon Chairman, UNESCO category II Centre, International Scientific Technology and Innovation Centre (ISTIC), based in Malaysia;
- Dr. Lucilla Spini, Head of Sciences Programme, International Science Council
- Ms. Gail Mattson, President, International Network of Women Engineers and Scientists (INWES).

We were delighted that Dame Ann Dowling, President, Royal Academy of Engineering, provided a keynote address on Day 2 on the work of the Academy on capacity building in Africa.

The Panel Discussions held at the end of Day two on "What have we learned so far and how can we move progress the sustainability agenda? "from these speakers and partners was also important in advancing the sustainability agenda through partnerships.





Dame Ann Dowling, President, Royal Academy of Engineering: keynote, Day 2, GEC 2018.



The inaugural report on the WFEO Engineering 2030 Plan and Young Engineers Competition Book were released during GEC2018.



7. Advancing SDG 4: Engineering Education and Training

WFEO curated two sessions on engineering education with speakers including:

- Jincheng Kang, Senior Strategic Expert, International Centre for Engineering Education (ICEE), Tsinghua University
- Michael Auer, President, the International Federation of Engineering Education Societies or IFEES
- Alain Bentejac, President, Federation of Global Consulting Engineers, FIDIC, Switzerland
- J.P. Mohsen, Vice Chair WFEO Committee on Engineering Education, representative of the American Association of Engineering Societies, a national member of WFEO
- Dato Lee Yee Cheong, Past President, WFEO & Hon Chairman, ISTIC, a partner of WFEO
- Yashin Brijmohan, Chair WFEO Committee for Capacity Building, Session Chair

A key focus is capacity building in Africa and the strategy was reinforced by the plenary presentation by Dame Ann Dowling, President, Royal Academy of Engineering.

The **inaugural meeting of the task force on engineering education standards** was held on 21 October 2018 to discuss a framework and work plan to review engineering education standards to meet the needs of the current and future engineers. This meeting was attended by representatives of WFEO members and partners. Further meetings are planned during 2019.

The **inaugural workshop to build capacity in engineering education** was held on 23 October 2018. Representatives of WFEO member delegations from Africa discussed their country's engineering education systems and their current status of development and needs for support. A representative of the International Engineering Alliance (IEA), an important partner of WFEO, Mr. Seng Chuan Tan, was present to provide the framework of mutual recognition under the IEA system of Agreements.

Further meetings are planned in 2019 including discussions with government representatives from Africa on the support that WFEO is able to provide to meet the objectives of national development at UNESCO on 31 Jan 2019 and also at WEC 2019 In November 2019 in Melbourne.

8. Advancing SDG 4: Supporting Young Engineers

The best submissions for the inaugural WFEO Young Engineers Competition were published in a booklet and released during the Global Engineering Congress (GEC2018) in London on 22 October 2018. The competition was for ideas and projects from young engineers around the world, who were aged below 35 years and advancing the UN Sustainable Development Goals through engineering.

Approximately 150 submissions were received from 30 countries around the world, 11 percent of these were from women. The competition was supported by the China Association of Science and Technology with the design of the booklet and Kuwait Society of Engineers, with the printing of the booklet and sponsorship of the travel costs of the winner to GEC2018. Both are national members of WFEO

A session for the young engineers was held during GEC2018. These speakers were:

- Zainab Al Garashi, Chair WFEO Young Engineers Future Leaders Committee, representative of Kuwait Society of Engineers, a national member of WFEO, Session Chair



- Victor Sim, Principal Engineer (Sustainable Urban Solutions), Surbana Jurong, Former Deputy Director, Nanyang Environment & Water Research Institute Community Development, Singapore and member, Institution of Engineers Singapore, a national member of WFEO
- Geoffrey Morgan, Highly Commended Young Engineers Competition –Sustainability Engineer, UNOPS, Denmark, member, ICE UK, a national member of WFEO
- Irene Serrano Gonzalez, Sustainability Consultant, AECOM, Vice Chair, EFOD, London, a member of ICE UK, a national member of WFEO

9. Advancing SDG 5: Diversity

Two sessions on the importance of a diverse engineering profession and strategies for greater participation of women were held during GEC2018. Speakers include representatives of national members of WFEO and UNESCO:

- Valerie Agberagba, Chair WFEO Women in Engineering Committee, Session Chair
- Jeanette Southwood, VP Strategic Partnerships, Engineers Canada, national member of WFEO
- Susan Freeman-Greene, CEO, Engineers New Zealand, national member of WFEO
- Gail G. Mattson, President, International Network for Women Engineers and Scientists (INWES)
- Rovani Sigamoney, UNESCO Natural Sciences Division Capacity Building Section,
- Hema Vallabh, Co-founder WomEng, Associates of WFEO

These leaders also met on side lines of GEC2018 to discuss further work on diversity which can be led by WFEO. The projects that were discussed will also be included in the second report of the WFEO Engineering 2030 Plan.

The **inaugural WFEO GREE Award for Women in Engineering** was presented at the WFEO 50th Anniversary Gala Dinner. This will be an annual ward that recognises the achievements of women engineers around the world to encourage greater participation of women in engineering and advance the objectives of SDG 5.



Celebrating Diversity in Engineering at GEC2018



10. Advancing SDG 6: Water

WFEO curated two important sessions on Water (SDG6) with speakers including:

- Eng. Carlos Mineiro Aires, Chairman, Portuguese Society of Civil Engineers, a national member of WFEO (Session Chair)
- Eng. Izhar ul Haq, President, Pakistan Institution of Engineers, a national member of WFEO
- Eng. Alfonso Gonzalez President, World Council of Civil Engineers, an international member of WFEO
- Eng Tomás A. Sancho, Executive Council Member, WFEO, Institute of Engineers Spain, a national member of WFEO
- Eng. Valerie Agberagba, Chair WFEO Women in Engineering Committee, Nigerian Society of Engineers, a national member of WFEO

As an **important outcome**, a Working Group on Water, hosted by the Institutions of Engineers (Spain), a national member of WFEO was approved during the WFEO Executive Council meeting held during GEC2018 on 24 October 2018.

The main projects of the new Working Group on Water will include;

- Participation in UN Water Task Force Groups as a partner
- Participation in international forums in which water policy is conceived, such as the *World Water Forums* (every 3 years) and in the annual meeting of *SIWI (annual Stockholm Water week)* and other important regional events.
- Preparation of engineering positions and statements typical of engineering and Contribution to global documents of UN Water and their agencies (annual preparation), such as the WWDR (World Water Development Report) of each year

The Working Group will collaborate with global specialized associations such as IAHR (International Association of Hydro-environment and Research), IWA (International Water Association), INBO (International Network of Basin Organizations) and ICOLD (International Commission on Large Dams) as appropriate.

There will be three specific products:

- "Managing droughts and floods: Best practices and engineering contribution", expected to be released at WEC 2019
- "Achieving SDG 6 (Water goals): Contribution from engineering". Summer 2020
- "Adaptation to climate change: water and engineering contribution". Summer 2021

Each of these will be released at specific WFEO annual conference and meetings

11. Advancing SDG 7: Energy

WFEO curated three sessions relating to energy during GEC 2018. Speakers from WFEO included:

- Eng Carsten Ahrens, Professor, University of Applied Sciences Jade-Hochschule, Germany



- Eng Majeed Al Gassab, WFEO Executive Council Member, Bahrain Society of Engineers, a national member of WFEO
- Hongbin SUN, Professor, Tsinghua University, Vice-Chair WFEO Energy Committee, China Association of Science and Technology, a national member of WFEO
- Eng. Daniel Favrat, Professor Emeritus, Ecole Polytechnique Federale de Lausanne, Vice-Chair WFEO Energy Committee Swiss Society of Engineers (SIA), a national member of WFEO
- Eng. Mustafa B. Shehu, Past president Federation of African Engineering Organisations, Nigerian Society of Engineers, a national member of WFEO
- Eng Jorge Spitalnik, Past President, WFEO, representative of FEBRAE, Brazil, a national member of WFEO (Session Chair)

An **important outcome is a proposed statement to address the gap in energy in Africa** and the need for policies and programs to address energy efficiency. This proposal will be progressed by WFEO and its members during 2019 and presented during WEC2019 in November 2019 in Melbourne.

12. Advancing SDG 9: Innovation

WFEO curated four sessions relating to innovation on a wide range of topics from robotics, artificial intelligence, autonomous driving and intelligent transportation. Speakers invited by WFEO including:

- Prof. Gong Ke, President Elect WFEO, Representative of China Association of Science and Technology, a national member of WFEO (Session Chair)
- Walter Weigel, Vice-President and CSO, Huawei European Research Institute
- Jianping WU, Professor, Tsinghua University
- Marwan Abdelhamid, Past President, WFEO, representative of General Union of Palestine Engineers, a national member of WFEO, (Session Chair)
- Indrajit Banerjee, Director, Knowledge Societies Division, UNESCO
- Liming Chen, Chairman, IBM Greater China Group
- Yeming Wang, EMEA General Manager, Alibaba Cloud International
- Ruomei Li, WFEO Executive Council member, representative of China Association of Science and Technology, a national member of WFEO
- Qu Daokui, President, SIASUN Robot & Automation
- Shipeng LI, Corporate Vice President and Research Co-President, iFlyTek
- Francois Lureau, Past President, Ingénieurs et Scientifiques de France (IESF), a national member of WFEO (Session Chair)
- Papias Kazawadi Dedeki, President Institution of Engineers of Rwanda, a national member of WFEO
- Reine Mbang Essobmadje, representative Cameroun Institution of Engineers, a national member of WFEO



The **inaugural Dr. Zuheir Alami Award for Innovation in Engineering** was presented at the WFEO 50th Anniversary Gala Dinner. This Award recognises the importance of engineering innovation in advancing the Sustainable Development Goals and will be an ongoing award for future years.

13. Advancing SDG 11: Smart Cities, sustainable infrastructure

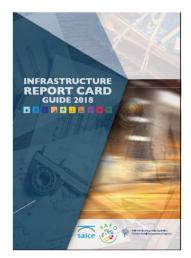
WFEO curated two sessions on smart cities and sustainable infrastructure during GEC2018. Speakers from WFEO included:

- Reginald Vachon, Executive Vice President, WFEO, representative of the American Association of Engineering Societies, a national member of WFEO (Session Chair)
- Martin Van Veelen, Past President of the Federation of African Engineering Organisations, an international member of WFEO
- Ania Lopez, Counsellor, National Council for Engineers of Italy, a national member of WFEO
- SUN Ziyu, Vice President, China Communication Construction Corp
- Julius Riungu, President Federation of African Engineering Organisations, an international member of WFEO

An **important outcome was to establish a Working Group for the Global Infrastructure Report Card**, approved by the WFEO Executive Council on 24th October 2018. This Group will be hosted by the Federation of African Engineering Organisations (FAEO) led by Dr. Martin van Veelen, Past president, FAEO.

The proposal is to produce a report on the global state of infrastructure that can be presented at high level meetings including at the United Nations. Participating WFEO National and International members can also provide reports relevant to then country or region to their government. The Framework for the Report Card and outcomes achieved will be presented at WEC2019.

A prototype of the card has already been developed and further work is needed to facilitate the development of country specific report cards. A workshop on the Guidelines for the report card was run during GEC2018. Progress on this project and further workshops are planned during 2019 at Africa Engineering Week and the World Engineers Convention in Melbourne.



Working Group for the Global Infrastructure Report Card approved during GEC2018



14. Advancing SDG 13: Climate Change

WFEO curated two sessions relating to climate change and its impact on developing countries especially the Small Island Developing States. Speakers included:

- Prof. Jean Venables, Chair WFEO Committee for Engineering and Environment, Past President of ICE, a national member of WFEO, (Session Chair)
- Jorge Alva Hurtado, Chair, WFEO Committee on Disaster Risk management, representative of Peruvian Association of Professional Engineers, a national member of WFEO
- Eng. Seng Chuan Tan, Executive Treasurer, WFEO, representative of the Institution of Engineers Singapore, a national member of WFEO
- Eng. Crtomir Remec, Executive Vice President, WFEO, representative of the Slovenia Chamber of Engineers, a national member of WFEO (Session Chair)
- David Lapp, Manager, Globalization and Sustainable Development, Engineers Canada, a national member of WFEO
- Pratarp Singh, Managing Director, Entec Fiji, representative of the Fiji Institution of Engineers, a national member of WFEO
- Vilas Mujumdar, member WFEO Executive Council, representative of the American Association of Engineering Societies, a national member of WFEO
- Pierre Lena, Founder Office of Climate Change Education, France, spoke on the important of climate change education
- Barry Grear, Past President, WFEO, Australia (Session Chair)
- Ashok Basa, Past President, Institution of Engineers India, a national member of WFEO

An important outcome is increasing interest in the impact of climate change on Small Island Developing States (SIDS).

As a result of increased interest on the impact of climate change on SIDS members, WFEO will be initiating a special focus for these members and highlight activities undertaken under a special tab on the website for SIDS members.

WFEO was invited by the UNESCO Member Delegation of the Dominican Republic to speak at a forum organised by the Small Islands Developing States at UNESCO on 19 November 2018 at UNESCO Paris. The topic was the "Mobilisation of knowledge systems for sustainable development: new challenges for local knowledge of the SIDS". WFEO was able to present projects being undertaken in SIDS national member organisations in the ICE (Caribbean), Fiji and Mauritius.

WFEO participated in a session on SIDS and Climate change education at UNESCO on 9 November 2018. Mr. Pratarp Singh, Past President of Fiji Institution of Engineers, a national member of WFEO is the lead organiser of a conference and training workshop on climate change education for schools in SIDS to be held, from 15-19 July 2019.

The International Conference on Climate Change Education, will gather experts, UNESCO, policy makers, science educators, non-government bodies involved in climate change education, international



organisations from SIDS to deliberate on policies, experiences and follow-up actions in enforcing climate change education. The Conference will enhance better awareness among policy makers, officials of national ministries of education and science educators on the importance to educate the young on climate change. A Declaration and recommendations, for action specifically for climate change education in Small Island Developing States, is anticipated.

15. SDG 16 Governance and anti-corruption

WFEO curated two sessions at GEC2018, including a plenary on the important of good governance and anti-corruption measures. Key speakers were:

- Neill Stansbury, Global Infrastructure Anti-Corruption Centre, UK
- Martin Manuhwa, Chair, WFEO Anti-Corruption Committee Chair and representative of the Engineering Council of Zimbabwe, a national member of WFEO
- Kamel Ayadi, Past president of WFEO, President of the High Committee of Administrative and Financial Control, Presidency of the Republic of Tunisia, Representative of the Tunisian Chamber of Engineers, a national member of WFEO
- Peter Boswell, Special Consultant, FIDIC, a partner of WFEO

WFEO continues to contribute to the ISO 37000 series of standards on anti-bribery and is a member of the technical committee TC-309 that is drafting the new standards ISO37000 on the Governance of Organisations and the Guidance Manual to the ISO37001 Anti Bribery Standard. WFEO attended the plenary meeting of the committee held on 6-10 November 2018 in Sydney.

16. Engaging the Engineering World

One of the most significant legacies of GEC2018 is the engagement with the engineering profession on the UN Sustainable Development Goals. The Conference was the first major international engineering event to focus on this issue. WFEO is very pleased that ICE has taken on this issue with great enthusiasm and will be developing its own report on outcomes and impacts. All future WFEO conferences and events will focus on one or more of the UN Sustainable Development Goals, increasing the focus of engineers on the solutions that are needed around the world. This includes:

- World Construction Forum, (Focus on SDG Goals 6,7,9,11,13 and 17), Ljubljana Slovenia April 2019, see: www.wcf2019.org
- World Engineers Convention, (Focus on all SDGs), Melbourne, November 2019. See: <u>www.wec2019org.au</u>
- Conference on Engineering Capacity Building for Africa's Economic Transformation, to be held with the WFEO Executive council meetings (SDG Goals 6,7,9,11,13), Kigali, Rwanda, October 2020

Other engineering institutions and international organisations have also taken up sustainable development as a key theme in their sureties and events. For example, the Happold Foundation in the UK, sponsored its youth ambassadors to attend GEC2018 and is discussing next steps. See; <u>http://www.happoldfoundation.org/blog/sustainable-development-goals-next-steps/</u>.

These are great examples of the far reaching and ongoing outcomes and impacts of GEC2018.



The world's engineers united in rising to the world's challenges. For a better, sustainable world.



The World Federation of Engineering Organizations

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