



SERVIÇO PÚBLICO FEDERAL

CONSELHO FEDERAL DE ENGENHARIA E AGRONOMIA - CONFEA

RELATÓRIO

TÉCNICO INFORMATIVO

1. DADOS PROFISSIONAIS:

Eng. Eletric. **Evânio Ramos Nicoleit** - Vice-Presidente no Exercício da Presidência do Confea

Eng. Civ. **Daltro de Deus Pereira** - Conselheiro Federal

Eng. Eletric. **Genilson Pavão Almeida** - Conselheiro Federal

Eng. Eletric. **Luiz Antonio Cosenza** - Presidente do Crea-RJ - Representante do Colégio de Presidentes do Sistema Confea/Crea e Mútua - CP

Eng. Agr. **Glauco Eduardo Pereira Cortez** - Representante do Colégio de Entidades Nacionais - CDEN

Eng. Agr. **Flávio Henrique da Costa Bolzan** - Empregado do Confea

2. DADOS DOS OBJETIVOS DA VIAGEM:

Finalidade da participação:

Por meio da Decisão Plenária nº PL-1503/2023 (0806175), de 28 de agosto de 2023, o Confea decidiu nos seguintes termos:

1) Aprovar a constituição de missão representativa do Sistema Confea/Crea para participar da 7th WORLD ENGINEERS CONVENTION - WEC 2023 e Assembleia Geral da FMOI, que serão realizadas de 11 a 15 de outubro de 2023, na cidade de Praga - República Tcheca, com a seguinte composição:

- Presidente do Confea (ou seu representante);

- até 02 Conselheiros Federais representando o plenário do Confea;

- 01 representante do Colégio de Presidentes – CP;

- 01 representante do Colégio de Entidades Nacionais – CDEN;

- 01 empregado do Confea, a ser indicado pelo Presidente, para apoio técnico e logístico aos membros da delegação.

2) Determinar que as despesas relacionadas à emissão de passagens, diárias, auxílios, seguros-viagem e inscrições sejam alocadas no Centro de Custos 1.2.05 – INTER/REPR.

3) Determinar que o respectivo relatório técnico informativo seja apresentado ao Conselho Diretor, no prazo de sessenta dias após o término da missão, conforme disposto no art. 6º da Resolução nº 1.009, de 2015.

4) Indicar, por unanimidade, os Conselheiros Federais Daltro de Deus Pereira e Genilson Pavão Almeida.

Local:

Praga - República Tcheca

Entidade promotora do evento:

World Federation of Engineering Organization - WFEO / FÉDÉRATION MONDIALE DES ORGANISATIONS D'INGÉNIEURS – FMOI

Período:

11 a 15 de outubro de 2023

Definição dos objetivos a serem alcançados, indicando como e onde serão aplicados os conhecimentos adquiridos:

De acordo com a motivação contida na Decisão Plenária nº PL-1503/2023 (0806175), de 28 de agosto de 2023, os objetivos da participação em comento pautaram-se, prioritariamente, nas seguintes considerações:

O Plenário do Confea, reunido em Brasília em 24 de agosto de 2023, apreciando a Deliberação nº 174/2023-CAIS, que trata de mensagem eletrônica enviada ao Confea pelo Presidente da Associação Tcheca de Sociedades Técnica e Científicas, Eng. Daniel Hanus, para participar do 7th WORLD ENGINEERS CONVENTION - WEC 2023, que será realizado de 11 a 13 de outubro de 2023, na cidade de Praga - República Tcheca, e

Considerando que o evento terá como tema "Engenharia para a Vida: Tecnologias Inovadoras e Desenvolvimento de Capacidade com Foco nos Objetivos de Desenvolvimento Sustentável das Nações Unidas" e serão debatidos 1- Novas Soluções para Energia; 2- Cidades Inteligentes e Conceitos de Urbanização; 3- Engenharia para Proteção do Meio Ambiente; 4- Educação na Engenharia e Desenvolvimento Profissional Contínuo; 5- Transporte Verde; 6- Segurança no Mundo Digital; 7- Tecnologia Inovadoras na Indústria; 8- Engenharia e Cuidados com a Saúde; 9- Abastecimento de água e alimentos; 10- Prevenção de Desastres Naturais e na Indústria; 11- Mudanças Climáticas: mitigação e adaptação; 12- Da terra ao Universo; 13- Fórum Jovens Engenheiros; e 14- Mulheres nas Ciências e na Engenharia;

Considerando que o evento, promovido pela FMOI, ocorre a cada quatro anos, tendo a primeira ocorrido na Alemanha, em 2000, a segunda na China, em 2004, a terceira no Brasil, em 2008, a quarta na Suíça, em 2011, a quinta no Japão, em 2015, e a sexta na Austrália, em 2019;

Considerando que por meio da mensagem eletrônica enviada em 14 de dezembro de 2022 (SEI 0695550 e 0695552) a Diretoria Executiva da World Federation of Engineering Organizations - WFEO informa acerca da ocorrência da Assembleia Geral nos dias 14 e 15 de outubro de 2023, em Praga, República Tcheca; considerando que a WFEO/FMOI é uma organização não governamental internacional que representa a profissão da engenharia mundialmente, reunindo entidades de engenharia de mais de 90 países, e representando aproximadamente 15 milhões de engenheiros de todo o mundo;

Considerando que seu objetivo principal é cooperar com instituições profissionais nacionais e internacionais incentivando o fortalecimento da engenharia, e sua missão é representar a profissão internacionalmente, tornando disponíveis as informações sobre engenharia entre seus membros, especialmente acerca das melhores práticas aplicadas à área;

Considerando que o Confea se filiou a FMOI em 1999 e se tornou de fato Membro Nacional do Brasil na FMOI durante o Congresso Mundial de Engenheiros - WEC 2019, realizado no período de 18 a 24 de novembro de 2019, em Melbourne - Austrália; considerando que o papel do Confea na FMOI como Membro Nacional, com direito a voto nas assembleias da entidade, é a única instituição brasileira que representa os engenheiros do país na FMOI;

Considerando que "Membro Nacional" compreende a organização profissional nacional da engenharia, ou o sindicato/associação de organizações dentro de um país, sendo considerada a de maior representatividade dos engenheiros tecnicamente competentes de acordo com os padrões nacionais daquele país; considerando que em 2022, o Presidente do Confea, Eng. Civ. Joel Krüger, foi eleito para ocupar assento no Conselho Executivo da Federação Mundial de Organizações de Engenharia, passando o Confea a ter direito a voz e voto até 2025 na diretoria executiva;

Considerando que durante Assembleia Geral ocorrerá a eleição de Vice-Presidente da FMOI, sendo o Presidente do Confea, Eng. Civ. Joel Krüger, um dos candidatos ao cargo (SEI 00.002444/2023-84);

Considerando as disposições constantes da Resolução nº 1.009, de 17 de junho de 2005, que dispõe sobre os critérios e os procedimentos para autorização de viagem ao exterior, em cumprimento de missão delegada pelo Crea ou pelo Confea; considerando que foi aprovado pelo plenário do Confea em 2020 (Decisão PL-1333/2020) o Planejamento Estratégico de Inserção Internacional - PII do Confea com o objetivo principal de traçar o planejamento estratégico no tocante à inserção internacional do Sistema Confea/Crea, visando aprofundar o relacionamento institucional com entidades internacionais das áreas abrangidas pelo Sistema Confea/Crea, bem como buscar e propor ações conjuntas visando ao intercâmbio de informações sobre o exercício profissional e a respectiva fiscalização (SEI - 0392663);

Considerando que a participação deste Federal no evento oportunizará o aprofundamento do relacionamento institucional com diversas entidades da Engenharia, nos termos aprovados no Planejamento Estratégico de Inserção Internacional – PII aprovado pela Decisão PL-1333/2020;

Considerando que a proposta foi analisada pelo Setor de Acordos e Representações - SETAR da Gerência de Relacionamentos Institucionais – GRI, que por meio da Informação SETAR nº 347/2023 (SEI 0734089), verificou o atendimento aos requisitos da Resolução nº 1.009, de 2005;

Considerando que o SETAR, por meio do Despacho 0761564, apresentou o histórico e a composição das missões relativas à participação do Sistema Confea/Crea na WEC;

(...)

A participação de representantes do Sistema Confea/Crea em congressos internacionais alinha-se ao incremento das expectativas dos profissionais e empresas brasileiras no que se refere a um maior nível de inserção internacional do Sistema Confea/Crea, conforme se depreende das discussões e propostas havidas ao longo das duas últimas edições do Congresso Nacional de Profissionais – CNP:

7º Congresso Nacional de Profissionais (agosto de 2010):	
PNS 55	<i>Formular propostas de política de relacionamento institucional com as Organizações Profissionais Congêneres, Embaixadas, Ministério das Relações Exteriores, Organizações Internacionais e Instituições diversas de interesse dos profissionais e empresas da área tecnológica, buscando desenvolver propostas de parceria e cooperação.</i>
8º Congresso Nacional de Profissionais (setembro de 2013):	
PNS 57	<i>Propor que o Sistema Confea/Crea viabilize a sua participação rotineira em eventos internacionais relacionados às profissões abrangidas, permitindo e buscando a aproximação com INSTITUIÇÕES DE ENSINO E PESQUISA de renome no intuito de fomentar o aprimoramento tecnológico nas áreas de ATUAÇÃO PROFISSIONAL, visando a resultados práticos e palpáveis para os profissionais e para a sociedade brasileira, por meio da abertura de possibilidades de intercâmbio profissional.</i>
9º Congresso Nacional de Profissionais (1ª Etapa):	
PNS 80	<i>Celebração de convênios entre o Confea e órgãos competentes, visando conferir a regularização do registro do profissional estrangeiro e diplomado no exterior no Crea da jurisdição onde pretende exercer sua profissão, bem como promover a inserção internacional via aprimoramento dos profissionais do Sistema Confea/Crea em tecnologia e inovação em países estrangeiros.</i>

As ações e estratégias de atuação internacional, por sua natureza e pelas diversidades entre as nações devem ser pautadas no diálogo e na reciprocidade, parâmetros esses indissociáveis da atuação do Sistema Confea/Crea no âmbito internacional.

A eventual não participação do Sistema Confea/Crea nos fóruns mundiais de discussão do exercício e das atividades das engenharias e agronomia ensejaria o alijamento das engenharias, da agronomia e das geociências brasileiras nas negociações internacionais, certamente refletindo em aspectos econômicos e de soberania nacionais.

A título de ilustração, transcrevemos trecho da publicação "[Sistema Confea/Crea - 75 anos construindo uma nação](#)", relativo à "Internacionalização do Sistema Confea/Crea" (pag. 234):

É um processo que vem de gestões anteriores, de mostrar para o Brasil e para nossas categorias que se tem um mercado enorme lá fora buscando empresas e profissionais competentes, o que, aliás, historicamente já vem ocorrendo. Europeus e americanos buscam nossas melhores cabeças nos cursos de mestrado e doutorado no exterior, oferecendo condições de permanência mais vantajosas do que o retorno ao Brasil. É preciso um projeto efetivo, como o que vem sendo construído ao longo dos tempos nas gestões do Confea, para se ter maior internacionalização da atuação de empresas e profissionais brasileiros. Temos que abrir mercados no exterior para interagir com uma economia que hoje, todos reconhecem, é globalizada. É claro que temos que proteger nosso mercado, ter a nossa soberania, o nosso desenvolvimento tecnológico, mas é preciso interagir com o mundo todo.

Por oportuno, destacamos que a missão representativa em comento também alinhou-se ao Planejamento de Inserção Internacional do Confea - PIIC (0392663), o qual foi aprovado por meio da Decisão Plenária nº PL-1333/2020 (0370501), de 01 de setembro 2020:

2. OBJETIVO PRINCIPAL

Traçar o planejamento estratégico no tocante à inserção internacional do Sistema Confea/Crea, visando aprofundar o relacionamento institucional com entidades internacionais das áreas abrangidas pelo Sistema Confea/Crea, bem como buscar e propor ações conjuntas visando o intercâmbio de informações sobre o exercício profissional e a respectiva fiscalização.

2.1 OBJETIVOS ESPECÍFICOS – ATUAÇÃO INTERNACIONAL

(...)

Fortalecer o relacionamento entre o Sistema Confea/Crea e a Federação Mundial das Organizações de Engenheiros (FMOI), bem como buscar o status de Membro Nacional;

(...)

Corroborar, na qualidade de membros efetivos da FMOI, para as discussões à nível internacional de temas afetos às áreas das engenharias e agronomia;

(...)

6. DOS OBJETIVOS DAS RELAÇÕES INTERNACIONAIS

Dentre as entidades em nível global destacamos os respectivos objetivos:

6.1 FÉDÉRATION MONDIALE DES ORGANISATIONS D'INGÉNIEURS – FMOI

A FMOI é uma organização internacional, não governamental, representando as profissões das engenharias ao redor do mundo, tendo sido fundada em 1968 por um grupo de organizações de engenharia, sob os auspícios da UNESCO (United Nations Educational, Scientific and Cultural Organizations), em Paris, congregando mais de 90 (noventa) nações e representando mais de 20 milhões de engenheiros ao redor do mundo.

A FMOI tem por objetivo incentivar a aplicação da engenharia e o avanço tecnológico para o progresso econômico e social em todo o mundo, promovendo a engenharia como uma profissão no interesse coletivo e em prol da paz.

(...)

13.SUGESTÕES DE ENCAMINHAMENTO

Assim sendo, sugerimos as seguintes ações para o desenvolvimento dos assuntos afetos às relações internacionais do Confea:

- a) Aprofundar o relacionamento institucional em nível internacional do Confea, dando consecução ao relacionamento com as entidades acima listadas, buscando principalmente ações conjuntas visando o intercâmbio de informações sobre o exercício profissional e respectiva fiscalização;
- b) Realizar o planejamento das missões internacionais, de maneira a potencializar a participação da delegação brasileira, atuando com foco em resultados de médio e curto prazo, principalmente com vistas ao intercâmbio profissional e a troca de informações sobre o registro e fiscalização do exercício profissional;
- c) Prospectar e analisar novas demandas de termos de reciprocidade;
- d) Promover a inserção do Confea nas principais discussões internacionais afetas às engenharias e agronomia, tais como: Acessibilidade, Sustentabilidade, Inovação Tecnológica, Prevenção de Catástrofes e Combate à Corrupção nas Engenharias, notadamente aquelas consignadas na Agenda 2030; e
- e) Promover o desenvolvimento institucional do assessoramento internacional, a exemplo dos demais órgãos da administração federal, nos quais existe unidade organizacional específica,

(...)

14.ANEXO I - PLANEJAMENTO ESTRATÉGICO – QUADRO

(...)

Tabela SWOT - Fatores Externos tidos como "oportunidades": Membro efetivo da FMOI, UPADI e COPIMERA, com direito a voz e voto;;

(...)

15.ANEXO II – MATRIZ 5W2H

(...)

PLANEJAMENTO ESTRATÉGICO INTERNACIONAL DO SISTEMA CONFEA/CREA						
WHAT O QUÊ?	WHEN QUANDO?	WHY POR QUÊ?	WHERE ONDE?	WHO QUEM?	HOW COMO?	HOW MUCH QUANTO CUSTA?
(...)	(...)	(...)	(...)	(...)	(...)	(...)
Atuação na FMOI	Fluxo Contínuo	Atender a PNS 55 de 2010 que propõe: "Formular propostas de política de relacionamento institucional com as Organizações Profissionais Congêneres, Embaixadas, Ministério das Relações Exteriores, Organizações Internacionais e Instituições diversas de interesse dos profissionais e empresas da área Tecnológica, buscando desenvolver propostas de parceria e cooperação", no âmbito internacional	Local indicado pela Decisão Plenária pertinente.	Presidência, GRI, representantes do Plenário e representante do Colégio de Presidentes e assessoria da Presidência	Missões delegadas, aprovadas em Plenário	A ser levantado pela GRI na época à aprovação da Decisão plenária pertinente.

(...)

15.ANEXO II – MATRIZ 5W2H

(...)

Programação das Atividades Previstas:

Programação Geral - World Engineering Congress - WEC 2023 (0734087):

		WEC 2023 CONGRESS 11 October - 13 October 2023 Prague Congress Center (PCC)			Sat 14 OCT	Sun 15 OCT
Mon 9 OCT	Tue 10 OCT	Wednesday 11 Oct - PCC	Thursday 12 Oct - PCC	Friday 13 Oct - PCC		
8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00	BEFORE CONGRESS TECHNICAL and SIGHTSEEING TOURS	REGISTRATION	REGISTRATION	REGISTRATION	EXHIBITION SIGHTSEEING TOURS	AFTER CONGRESS TECHNICAL and SIGHTSEEING TOURS
		OPENING CEREMONY	YOUNG ENGINEERS MORNING TEA	GIRLS IN STEM MORNING TEA		
		CONGRESS PLENARY LECTURE	CONGRESS PLENARY LECTURE	CONGRESS PLENARY LECTURE		
		BREAK	BREAK	BREAK		
		CONGRESS PLENARY LECTURE	CONGRESS PLENARY LECTURE	CONGRESS PLENARY LECTURE		
		SESSIONS	CONGRESS BATA FORUM	CONGRESS PLENARY LECTURE		
		LUNCH	SESSIONS	SESSIONS		
		LUNCH	LUNCH	LUNCH		
		HACKATHON, STUDENT EXH. MINI	MINI ORALS, POSTERS	MINI ORALS, POSTERS		
		CONGRESS PLENARY LECTURE	SESSIONS	CONGRESS PLENARY LECTURE		
		SESSIONS	SESSIONS	ROUNDTABLES		
		BREAK	BREAK	BREAK		
SESSIONS	SESSIONS	WRAP UP PANEL				
		CLOSING CEREMONY				
		WELCOME RECEPTION	WEC 2023 PRESIDENTIAL DINNER	WEC 2023 GALA DINNER		

Programação Geral - Reuniões no âmbito da WFEO/FMOI (0789677):

MONDAY 9 OCTOBER										TUESDAY 10 OCTOBER																														
LOCATION										CSVTS (Novotného lávka 5, 110 00 Prague 1)																														
WFEO registration										WFEO registration																														
8:00-9:00	COMMITTEE ON ENGINEERING CAPACITY BUILDING - 30 ppl									COMMITTEE ON ENGINEERING AND THE ENVIRONMENT - 30 ppl			COMMITTEE ON ANTI-CORRUPTION - 30 ppl	COMMITTEE ON INFORMATION AND COMMUNICATION - 30 ppl	GOVERNANCE COMMITTEE - 30 ppl	PRESIDENTS ADVISORY MEETING - 20 ppl	REVIEW AND SUPPORT COMMITTEE - 30 ppl	MEMBERSHIP COMMITTEE - 30 ppl																						
COFFEE BREAK										COFFEE BREAK																														
11:00-13:00	COMMITTEE ON ENGINEERING CAPACITY BUILDING - 30 ppl									COMMITTEE ON ENGINEERING AND THE ENVIRONMENT - 30 ppl			COMMITTEE ON ANTI-CORRUPTION - 30 ppl	COMMITTEE ON INFORMATION AND COMMUNICATION - 30 ppl	INFRASTRUCTURE REPORT CARD PROJECT - 30 ppl	FINANCE COMMITTEE - CLOSED - 10 ppl	ALL COMMITTEE CHAIR - 30 ppl	FUTURE EVENTS																						
LUNCH										LUNCH																														
14:00-15:30	COMMITTEE ON EDUCATION IN ENGINEERING - 30 ppl									COMMITTEE ON ENERGY - 30 ppl			COMMITTEE ON DISASTER RISK MANAGEMENT - 30 ppl	COMMITTEE ON ENGINEERING FOR INNOVATIVE TECHNOLOGIES 30 ppl	WATER COMMITTEE - 30 ppl	WFEO EXECUTIVE BOARD MEETING - 10 ppl - CLOSED	COMMITTEE ON WOMEN IN ENGINEERING - 30 ppl	COMMITTEE ON YOUNG ENGINEERS/FUTURE LEADERS - 30 ppl	WFEO/UN RELATIONS COMMITTEE - 10 ppl	NOMINATIONS COMMITTEE - 30 ppl																				
COFFEE BREAK										COFFEE BREAK																														
16:00-18:00	COMMITTEE ON EDUCATION IN ENGINEERING - 30 ppl									COMMITTEE ON ENERGY - 30 ppl			COMMITTEE ON DISASTER RISK MANAGEMENT - 30 ppl	COMMITTEE ON ENGINEERING FOR INNOVATIVE TECHNOLOGIES 30 ppl	WATER COMMITTEE - 30 ppl	WFEO EXECUTIVE BOARD MEETING - 10 ppl - CLOSED	COMMITTEE ON WOMEN IN ENGINEERING - 30 ppl	COMMITTEE ON YOUNG ENGINEERS/FUTURE LEADERS - 30 ppl	AWARDS COMMITTEE - 30 ppl	STRATEGIC PLANNING COMMITTEE - 30 ppl																				
WFEO DELEGATES COCKTAIL - RESIDENCE OF MAYOR OF PRAGUE - 200 DELEGATES										COMMONWEALTH EVENT - 30 DELEGATES																														
WEDNESDAY 11 OCTOBER					THURSDAY 12 OCTOBER					FRIDAY 13 OCTOBER					SATURDAY 14 OCTOBER					SUNDAY 15 OCTOBER																				
LOCATION																																								
Prague Congress Center (S. Kvitná 1640/65, 140 00 Prague 4)										CSVTS (Novotného lávka 5, 110 00 Prague 1)																														
WFEO / WEC registration										WFEO / WEC registration										WFEO registration					WFEO registration															
8:00-9:00	CONGRESS DAYS*									CONGRESS DAYS*									CONGRESS DAYS*					WFEO COUNCIL MEETING/CONGRESS VENUE - 100 PAX					WFEO GENERAL ASSEMBLY/CONGRESS CENTRE - 300 ppl					WFEO GENERAL ASSEMBLY/CONGRESS CENTRE - 300 ppl						
11:00-13:00	CONGRESS DAYS*									CONGRESS DAYS*									CONGRESS DAYS*					WFEO COUNCIL MEETING/CONGRESS VENUE - 100 PAX					WFEO GENERAL ASSEMBLY/CONGRESS CENTRE - 300 ppl					WFEO GENERAL ASSEMBLY/CONGRESS CENTRE - 300 ppl						
14:00-15:30	CONGRESS DAYS*									CONGRESS DAYS*									CONGRESS DAYS*					WFEO COUNCIL MEETING/CONGRESS VENUE - 100 PAX					WFEO GENERAL ASSEMBLY/CONGRESS CENTRE - 300 ppl					WFEO THE NEW EXECUTIVE COUNCIL - 30 ppl - 8 Paper (preparation)						
18:00-18:00	CONGRESS DAYS*									CONGRESS DAYS*									CONGRESS DAYS*					CONGRESS DAYS*					WFEO GENERAL ASSEMBLY/CONGRESS CENTRE - 300 ppl											
18:00-18:00	WELCOME COCKTAIL - CONGRESS VENUE - ALL PARTICIPANTS										PRESIDENTIAL DINNER - ALL PARTICIPANTS																				WFEO GALA DINNER - 250 ppl									

*For the WEC fully registered participants (not a part of the WFEO meeting)

3. RELATÓRIO TÉCNICO:

Conforme definido na Decisão Plenária nº PL-1503/2023 (0806175), de 28 de agosto de 2023, a missão representativa abarcou a 7th WORLD ENGINEERS CONVENTION - WEC 2023 e a Assembleia Geral da World Federation of Engineering Organizations - WFEO, as quais foram realizadas, respectivamente nos dias 11 a 13 e 14 e 15 de novembro de 2023, em Praga - República Tcheca. Ademais, paralelamente ocorreram as reuniões dos Conselhos e Comitês da World Federation of Engineering Organizations - WFEO.

De acordo com a Czech Association of Scientific and Technical Societies - CSVTS, a WEC 2023 contou com a participação de profissionais de 76 (setenta e seis) países, dentre palestrantes e delegados, tendo como ponto focal os Objetivos de Desenvolvimento Sustentável (ODS) da Organização das Nações Unidas - ONU.

Dentre as diversas preleções ocorridas na ocasião, destacamos a proferida pela Ex-Presidente da WFEO, Engª Marlene Kanga, intitulada *Enabling Our Sustainable Futures Beyond 2023: What it will take, What is being done*:



Foto 1 - Palestra da Ex-Presidente da World Federation of Engineering Organizations - WFEO, Engª Marlene Kanga.

Inicialmente, a Ex-Presidente da WFEO destacou que a educação nas engenharias trata-se de uma das prioridades da WFEO, desde a respectiva fundação em 1968 sob os auspícios da UNESCO. Ademais, por meio da Declaração de Paris, assinada em março de 2018 por ocasião dos 50 anos da WFEO, foi reafirmado o compromisso com o ensino das engenharias para o avanço das ODS, reconhecendo a necessidade de mais engenheiros com as habilidades necessárias.

Nesse aspecto, a palestrante apresentou dados relativos ao déficit global de engenheiros, concluindo que atualmente seriam necessários mais de 50 milhões de profissionais para fazer frente aos desafios globais, tais como a mudança climática. Também foi abordada a importância da mobilidade profissional, sendo destacada a abrangência da *International Engineering Alliance - IEA*, frente a Federação Europeia de Associações Nacionais de Engenheiros - FEANI:

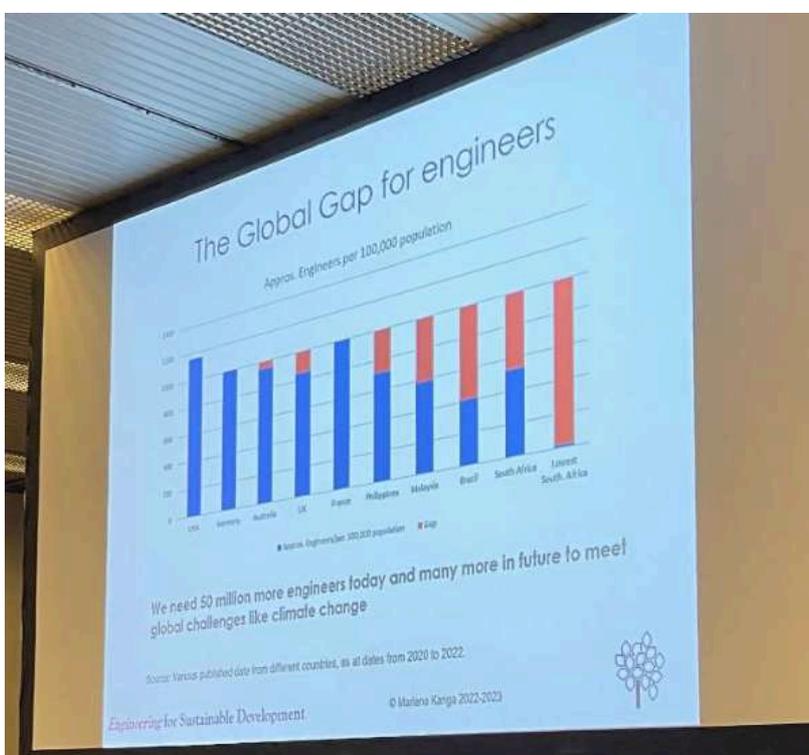


Foto 2 - *The Global Gap for Engineers*, Engª Marlene Kanga

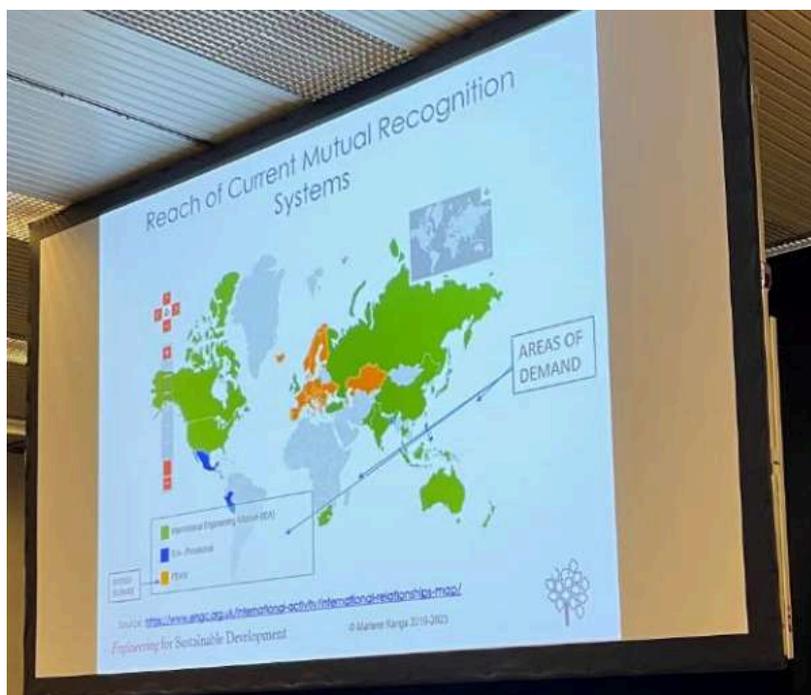


Foto 3 - Abrangência global da *International Engineering Alliance* - IEA, Eng^a Marlene Kanga

Ademais, a Ex-Presidente da WFEO destacou a revisão do documento intitulado *Graduate Attribute and Professional Competency Framework - GAPC*, cujos trabalhos foram desenvolvidos em parceria com a *International Engineering Alliance* - IEA, *International Federation of Engineering Education Societies* - IFEES, *Federation of International Consulting Engineers* - FIDIC, *International Network for Women Engineers and Scientists* - INWES e *International Centre for Engineering Education* (ICEE) da Universidade Tsinghua - China, tendo como principal objetivo assegurar que as graduandos de engenharia tenham as atribuições, competências e habilidades necessárias às exigências dos empregadores, indústria e comunidade global.

Dessa maneira, a palestrante elencou os seguintes tópicos de mudança tecnológica que necessariamente ensejarão na criação e/ou atualização de disciplinas e habilidades emergentes, e que se mostram necessárias aos engenheiros do futuro:

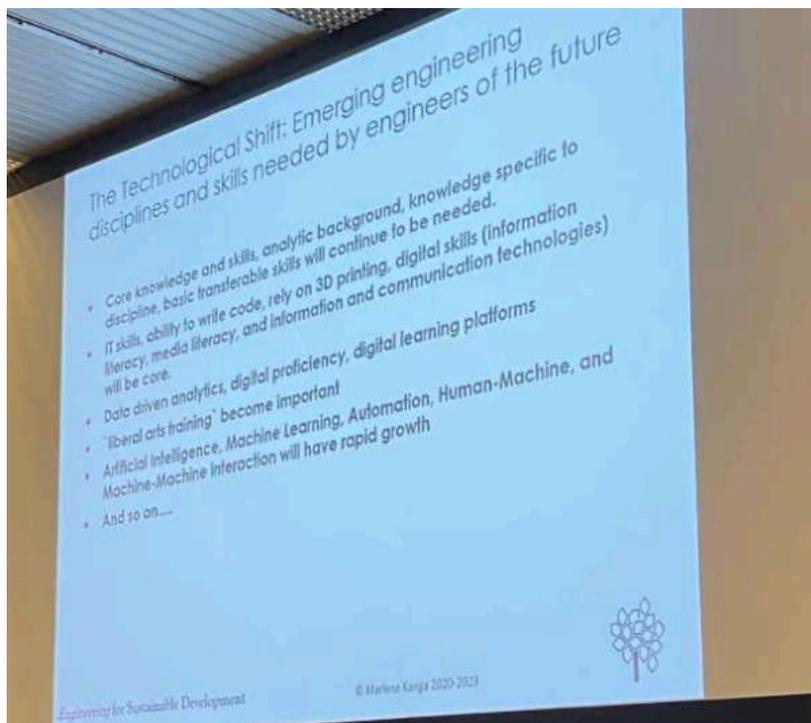


Foto 4 - *The Technological Shift: Emerging engineering disciplines and skills needed by engineers of the future*, Eng^a Marlene Kanga

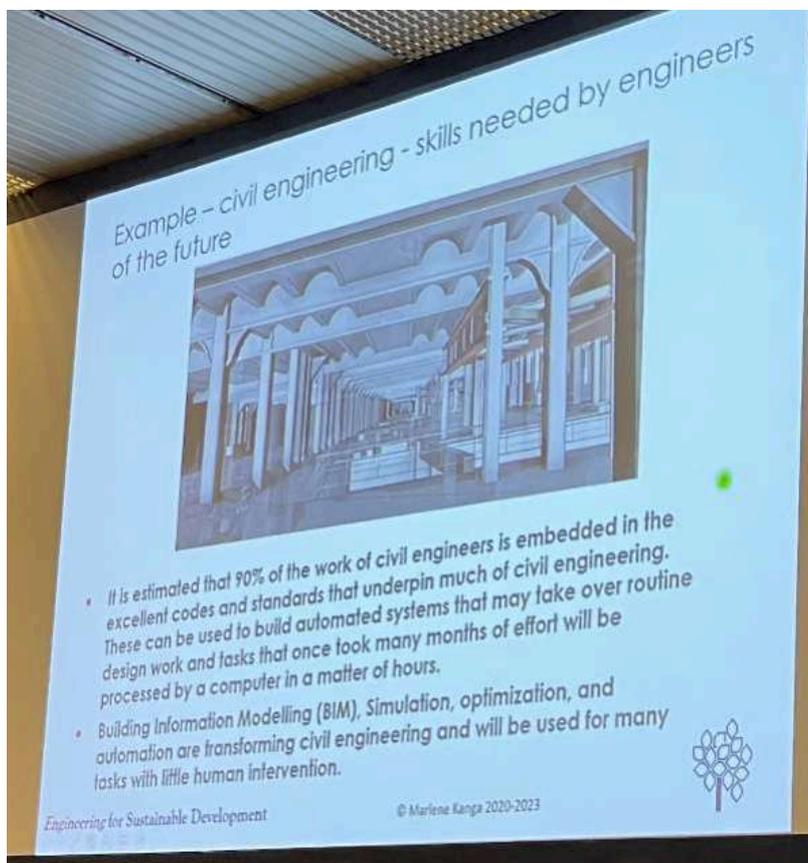


Foto 5 - Example - Civil Engineering - Skills needed by engineers of the future, Engª Marlene Kanga



Foto 6 - The Cultural Shift: The need for engineers to engage with their stakeholders and society, Engª Marlene Kanga

Assim sendo, a Engª Marlene Kanga apontou os seguintes pontos-chave como sendo prioritários para as mudanças:

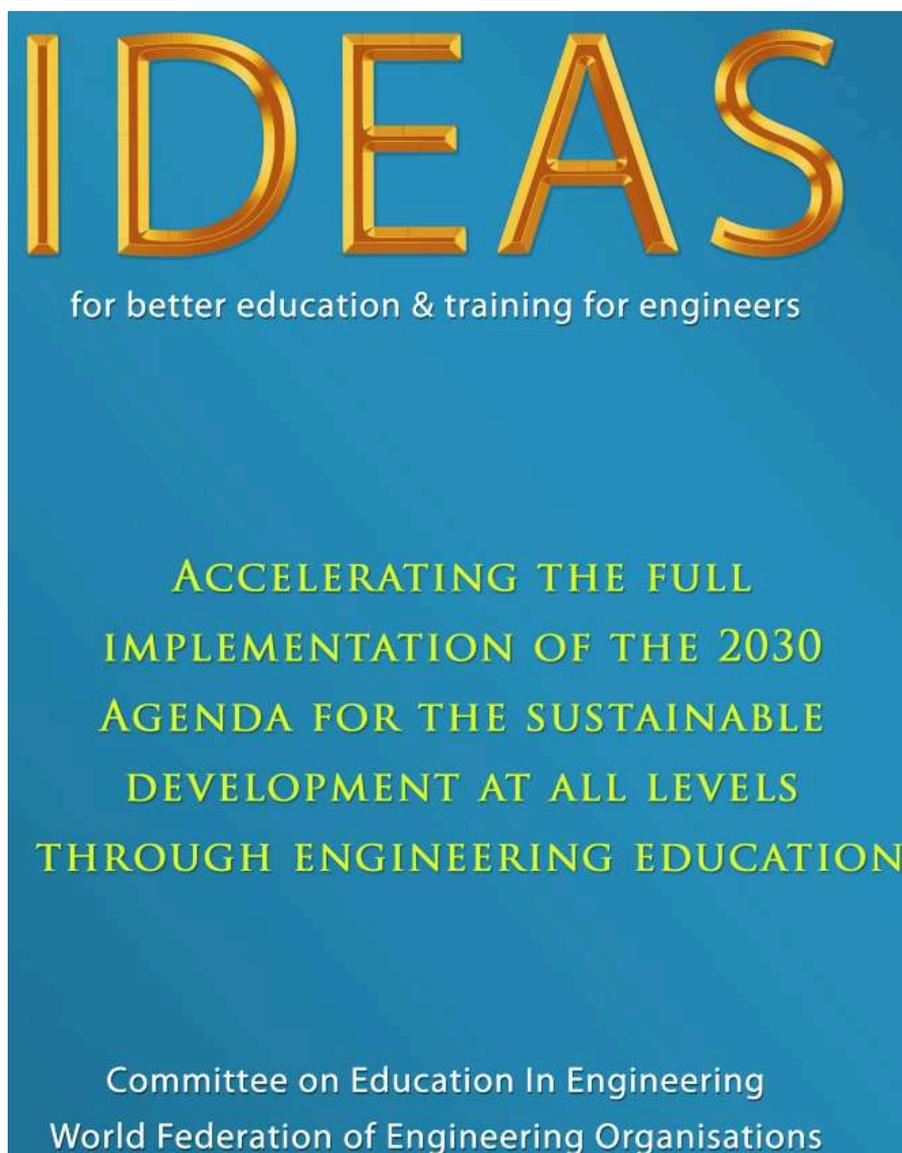
1. Acomodar as necessidades futuras dos profissionais de engenharia e da profissão - fortalecer os atributos necessários sobre trabalho em equipe, comunicação, ética, sustentabilidade;
2. Tecnologias emergentes - incorporam aprendizagem digital, experiência de trabalho ativa, aprendizagem ao longo da vida;

3. Disciplinas e áreas de prática de engenharia emergentes e futuras - mantendo uma abordagem independente, aprimoram as habilidades em ciências de dados, outras ciências e aprendizagem ao longo da vida;
4. Incorporar os Objetivos Sustentáveis da ONU - no desenvolvimento de soluções que considerem diversos impactos - técnicos, ambientais, sociais, culturais, econômicos, financeiros e de responsabilidade global;
5. Diversidade e inclusão - incluir essas pontos nas formas de trabalhar em equipes, sistemas de comunicação, conformidade, meio ambiente, jurídico, etc; e
6. Agilidade intelectual, criatividade e inovação - enfatizam o pensamento crítico e os processos inovadores na concepção e desenvolvimento de soluções,

Ante o exposto, a palestrante informou que a *International Engineering Alliance - IEA*, conjuntamente com os mais de 30 (trinta) países signatários, estão implementando as supracitadas mudanças, por meio dos respectivos membros, os quais se tratam de entidades acreditadoras nas respectivas nações, tendo como desafio que tal implementação esteja totalmente consolidada até 2026.

Por fim, a Ex-Presidente da WFEO, Eng^a Marlene Kanga apresentou a *WFEO Academy*, que se trata do portal de treinamento mantido pela World Federation of Engineering Organizations - WFEO, cujos conteúdos são disponibilizados sem custo para profissionais que sejam membros e afiliados da WFEO, por meio de oportunidades de desenvolvimento profissional contínuo, visando que os benefícios da formação tenham um impacto a longo prazo na capacitação dos engenheiros, agrônomos e geocientistas.

Além disso, na reunião do *Committee Education in Engineering* da WFEO foi oficialmente lançada a revista [Engineering Education Review](#) (1ª Edição), organizada pela Universidade Tsinghua - China, bem como a edição nº 21 do [IDEAS - Engineering Education Journal](#):



Ainda em relação às apresentações e palestrantes do World Engineering Congress, destacamos a palestra do Eng. Aldert Kamp intitulada *Higher Engineering Education for the Digital and Sustainable Society and Workplace*, a qual foi iniciada com a seguinte reflexão paradigmática (tradução livre): " É mais fácil educar os nossos estudantes pelo nosso passado do que pelo futuro deles - O que um jovem deve aprender para levar uma vida bem-sucedida e responsável neste mundo rápidas mudanças? ".



Foto 7 - Higher Engineering Education for the Digital and Sustainable Society and Workplace, Eng Aldert Kamp

Após uma explanação bastante reflexiva, o Eng. Aldert Kamp concluiu que as engenharias passam por pelo menos três grandes transformações, quais sejam: Dupla transição: digitalização e sustentabilidade; Mudança das necessidades e desejos da sociedade; e Humanização da engenharia.

Ademais, na visão do palestrante, enfrentamos duas grandes mudanças de paradigma: de uma sociedade centrada na tecnologia para a engenharia centrada no ser humano e da descoberta científica para o valor humano, sendo necessário reavaliarmos nos currículos de engenharia os valores e qualidades humanas, a agilidade e resiliência e principalmente a flexibilidade a mudanças.

Ainda durante o World Engineering Congress - WEC 2023, foi veiculado o informe acerca do Hackathon do Dia Mundial da Engenharia de 2024 para estudantes de engenharia: <https://www.wfeo.org/the-announcement-of-the-world-engineering-day-2024-hackathon-for-engineering-students>:

WORLD ENGINEERING DAY **unesco**

YOU'RE INVITED!
World Engineering Day Hackathon
FREE ENTRY | CASH PRIZES

For Engineering Students:
World Engineering Day (WED) for Sustainable Development is celebrated on the 4th of March. The WED Hackathon is a unique international competition where engineering students work in teams to solve a real-world problem with a solution that advances one of the UN Sustainable Development Goals. It's a great opportunity to showcase your knowledge and skills.
Register as an individual and form a team to develop a solution to a real-world problem.

For Engineering Educators:
The Hackathon is an opportunity for engineering students to demonstrate their knowledge and skills in alignment with the International Engineering Alliance (IEA) Global Graduate Attribute and Professional Competencies Framework, the international benchmark for engineering education and judging criteria for the competition. The solutions will showcase the achievements of Outcomes Based Education (OBE) at your engineering institution.

Key Dates

Registration Opens
11 October 2023

Challenges Released
12 November 2023

Submissions Due
26 November 2023

Winners Announced
4 March 2024

Find out more at
worldengineeringday.net/hackathon

"Humanity is on thin ice, and that ice is melting fast." UN Secretary-General António Guterres March 2023.

The Hackathon focusses on climate change as the biggest ever engineering challenge for the world

13 CLIMATE ACTION HACKATHON

Antes do encerramento da WEC 2023, o Conselho Executivo da *World Federation of Engineering Organizations - WFEO* aprovou alterações regulamentares, notadamente relativas aos procedimentos eleitorais, com vistas a impedir a candidatura múltipla por um mesmo profissional, tal como foi possibilitado até o presente exercício, no qual houve uma mesma candidatura para os cargos de presidente, vice-presidente e membro nacional, fato que distoa dos processos eleitorais comumente levados a efeitos em fóruns dessa natureza.

Ademais, o Conselho Executivo da *World Federation of Engineering Organizations - WFEO* alterou o o modelo de Código de Ética, restando aprovado o seguinte texto, que deve servir de balizador dos códigos de ética no âmbito das entidades/países membros:

PREAMBLE

As engineering professionals, we use our knowledge and skills for the benefit of the world, in order to create engineering solutions for a sustainable future.

To do so successfully requires ethical behavior. Simply put, ethical behavior is about making choices. In line with our obligations as professionals, we need to ensure that the choices we make enable us to do things which are 'good', and to ensure that we do these 'good things' in a manner which is 'right'.

The WFEO Model Code of Ethics is designed to assist member organisations in guiding ethical behavior by formulating their own Codes of Ethics. This Model Code of Ethics has embedded the Values and Principles stated in the WFEO Values and Operational Principles, which we must adhere to in professional practice. We uphold the belief that the 'good' choices made as engineering professionals should be with excellence, leadership, independence, integrity, collaboration, sustainability, equity, diversity, inclusion, and professionalism.

The exercise of professional judgment is often difficult and complex. A Code of Ethics will not give us all the answers nor tell us what to do under all circumstances. Ethical behaviour reflects an individual's perceptions of right and wrong, guided by their conscience and the values they adhere to. In drafting the WFEO Model Code of Ethics, considerable care has been taken to try and get the balance of obligations and rights, without making statements that could be misleading (and cause problems for members) when interpreted narrowly. But overall, as engineering community, we are not tolerant to any misconduct violating the code of ethics.

The values and principles in the WFEO Model Code of Ethics are those which are deemed to be applicable universally to the practice of engineering. The WFEO Model Code of Ethics provides a framework for analysis and decision making about the appropriateness of particular conduct or behaviour.

As engineering practitioners our future is dependent on engagement and trust from our community. An engineer who practises in accordance with the Model Code of Ethics and the Guidelines will meet these community expectations of responsibility.

The general question of the duties engineering practitioners owe to the community are best captured in an ethics awareness program. Member organisations of WFEO are encouraged not only to develop a Code of Ethics for their organisation based on the values and principles set down in the Model Code, but also to impart the values and principles through ethics support and training programs.

The Guidelines appended to the Model Code set out the principles which underpin each value and give examples of each principle in practice.

GUIDELINES

The primary purpose of a Code of Ethics is to protect the public and to set a high standard of proprietary conduct among engineering practitioners.

Ethical practice requires judgment, interpretation and balanced decision-making in context.

These Guidelines underpin the ethical values expressed in the Code of Ethics and provide examples of the application of those values in practice. They are not exhaustive, nor should they be interpreted as a full or exhaustive list of the ethical situations and circumstances that engineers might face. Rather, the Guidelines provide a framework for ethical decision making in the practice of engineering.

WFEO encourages member organizations to develop their own Code of ethics based on the values and principles set down in the Model Code, and implement effective and feasible ethical management measures in order to promote good values and to deal with misconducts firmly, appropriately, and professionally.

1. DEMONSTRATE INTEGRITY

1.1 Refrain from fraudulent, corrupt or criminal practices, and avoid ethical risks in practice

Corruption is "the abuse of power to obtain personal gain". Corruption is not limited to money or goods. It might be to gain fame or popularity or boost an ego, etc.

Combating the disastrous effects of corruption in the global engineering and construction industry is a top priority because if corruption can be diminished, the poor of the world will be helped most.

Taking a bribe in an infrastructure contract equates to stealing a road! It means that less money is available for the provision of the infrastructure itself. Similarly, corrupt or unreasonable industrial practices are a form of corruption, as they also reduce the amount of infrastructure that can be provided for a given amount of money.

In practice, engineers must exhibit a zero-tolerance attitude to fraudulent, corrupt or criminal practices. This means:

- a) not engaging in misleading or deceptive conduct such as succumbing to the wrong influence.
- b) neither soliciting nor accepting financial or other considerations, including free engineering designs, from material or equipment suppliers for specifying their products.
- c) not accepting compensation, financial or otherwise, from the engaging party for services on the same project, nor providing free services, unless the circumstances are fully disclosed to, and agreed to, by all interested parties.
- d) neither paying offering nor receiving, directly or indirectly, inducements to secure work.
- e) informing an employer or client of any possible adverse consequences of proposed activities based on the accepted engineering practices of the day.
- f) reporting unethical engineering activity undertaken by other engineers or nonengineers. This extends to include for example, situations in which senior officials of a firm make "executive" decisions which clearly and substantially alter the engineering aspects of the work, or protection of the public welfare or the environment arising from the work.
- g) when it comes to practices that may have ethical risks, the legal ethical review process should be adopted to avoid causing things that violate the social ethical consensus.

1.2 Be objective and truthful

Honesty, integrity, continuously updated competence, devotion to service and dedication to enhancing the life quality of society are cornerstones of professional responsibility. Within this framework, engineers should be objective and truthful and include all known and pertinent information on professional reports, statements and testimony.

In practice, this means:

- a) endeavouring to interpret engineering issues to the public in an objective and truthful manner.
- b) applying professional skills and knowledge with honesty, good faith and without personal bias.
- c) ensuring that the professional privileged and trusted position in the community is not used for personal or sectional interests to the detriment of the wider community.
- d) revealing the existence of any interest, financial or otherwise, that might affect or give the appearance of affecting the judgment in any matter about when making a statement or giving evidence.

1.3 Practise fairly and with good faith towards clients, colleagues and other stakeholders

As an engineer, you have a responsibility to provide loyal service to your clients and employers for whom you should apply your knowledge and skills with fairness, honesty and in good faith. You have an obligation to exercise fairness in dealing with others and to provide support and assistance when required. This includes engaging, or advising to engage, experts or specialists when such services are deemed to be in the client's or employer's best interests.

In practice, this means:

- a) giving credit where it is due.
- b) accepting, as well as giving, honest and fair professional criticism when commenting on another's work or making public comment.
- c) not revealing facts, data or information obtained in a professional capacity without the prior consent of its owner.
- d) advising your clients or employers when you judge that a project will not be viable, whether on the basis of commercial, technical, environmental or any other such risk which you might reasonably have been expected to consider.
- e) avoiding any actions or statements which can be construed as being unfairly critical of a colleague or intended to favour your own position at the expense of a colleague.

f) having the ability to make timely judgment, make notification and put forward professional suggestions, when it may bring ethical and other risks.

2. PRACTISE COMPETENTLY

2.1 Practise in a careful diligent and judiciously manner in accordance with their areas of competence

There are three key components to engineering practice, with the Code of Ethics being just one of those components. The other two key components are competence and performance.

The Code of Ethics defines what it means to be a professional and sets standards of behaviour, competence refers to the ability to perform the activities within an occupation to the standards expected in employment and performance is associated with how these activities ought to be carried out or accomplished in an effective manner.

As an engineer, you need to understand the distinction between working or providing advice in an area of competence and working competently. Working in an area of competence requires you to operate within the limits of your qualifications and experiences. Working competently requires principally the application of sound judgment.

In practice, this means:

- a) exercising care and communicating clearly in accepting or interpreting assignments, and in setting expected outcomes.
- b) informing employers or clients, and making appropriate recommendations on obtaining further advice, if an assignment requires qualifications and experiences outside your fields of competence.
- c) presenting issues fairly, accurately and with appropriate qualifiers and disclaimers, and to avoid personal, political and other non-technical biases.
- d) expressing opinions on engineering issues honestly and only in areas of your competence.
- e) reporting or advising on professional matters honestly and only in areas of your competence and honestly inform or reject requirements for suggestions that beyond your professional scope.
- f) attaining and maintaining competence in all areas of involvement including being knowledgeable with the technical and legal framework and regulations governing your work.
- g) having a clear understanding of the consequences of the application of science and technology, especially have a certain ability to predict potential risks.

2.2 Practise in accordance with accepted engineering practices, standards and codes

As an engineer, the work you undertake will be subject to various statutory regulations and compliance issues.

It is important that you identify what codes and/or standards of compliance and/or legislation you are required to adhere to in respect of a particular project. This should form part of the Brief, which should also allocate responsibility for such compliance. Where statutory codes do not exist, it may be necessary to develop appropriate standards based on internationally recognised sound practice.

In practice, this means:

- a) developing a checklist of relevant codes - before each project (and during each project) review the relevance and compliance with each code identified.
- b) examining legislative impacts - seek external assistance to identify what legislation is peculiar to this project.
- c) reviewing Occupational Health & Safety issues - consider anything peculiar relating to this project; address with the client any observations of unsafe work practices noted during site visits - this may not be your responsibility yet you may be held partially liable if you fail to make such comments.
- d) consulting Compliance - obtain evidence of current compliance with Occupational Health and Safety legislation and other code and legislative obligations. Speaking up where codes are broken or not followed, or unsafe practice is evident, and supporting others who do so.

2.3 Maintain and strive to enhance the body of knowledge in which they practise and keep in touch with the constantly updated specialized knowledge and digital technologies

The requirement to practice within one's area of competence is more than simply duty to a standard of care. Engineers have a responsibility to remain abreast of developments and knowledge in their area of expertise, that is, to maintain their own competence, especially in the era of digital transformation. Should there be a technologically driven or individually motivated shift in the area of practice, it is the engineer's duty to attain and maintain competence in all areas of involvement including being knowledgeable with the technical and legal framework and regulations governing their work.

In practice, this means:

- a) having a commitment to ongoing professional development, continuing education and training.
- b) not falsifying or misrepresenting one's own or an associates' qualifications, grades of membership, experience and responsibilities.
- c) promoting the open sharing of knowledge, which is not only conducive to the communication of knowledge, but also conducive to the increase of the total amount of knowledge. Either is beneficial to your career.
- d) assessing and responding to the range and availability of professional knowledge, competencies and resources required to undertake the engineering project and assessing any material uncertainties in these respects.
- e) regularly updating your professional knowledge, especially standards and process knowledge closely related to your practice, as well as legal differences in different times and regions.

3. EXERCISE LEADERSHIP

3.1 Practise so as to enhance the quality of life and bridge the gaps in society

Engineers are sometimes perceived by many in the community as being major contributors to many of the problems in the world, particularly environmental. Having been painted with that brush, engineers are expected to be fundamental in solving or correcting those problems.

But the major problems of the world in an overall sense are not those created by engineers or that can be solved by engineers alone. War, greed, misery, ignorance and political interference, plus natural disasters and human induced pollution and destruction of resources are in fact the main causes of the progressive impairment of the environment.

Rarely do major problems in society turn solely upon the application of engineering development. But engineers are active members of society and ought to be deeply involved in the promotion of sustainable development. They ought to use their talent, knowledge and imagination to assist society in removing those evils and improving the quality of life for all people.

In practice, this means:

- a) aiming to deliver outcomes that do not compromise the ability of future life to enjoy the same or better environment, health, wellbeing and safety as currently enjoyed.
- b) being sensitive to public concerns.
- c) promoting the involvement of all stakeholders and the community in decisions and processes that may impact upon them and their environment.
- d) in identifying sustainable outcomes considering all options in terms of their economic, environmental and social consequences.

3.2 Strive to contribute to the advancement of the body of knowledge within which they practice, and to the profession in general

A Code of Ethics is based on shared values and a shared responsibility to uphold those values.

In practice, this means:

- a) exercising fairness in dealing with others and providing support and assistance when required.
- b) offering services, advising on or undertaking engineering assignments in areas of your competence by virtue of your training and experience.
- c) participating, within the framework of the practice of your profession, in providing opportunities to further the professional development of your colleagues.

3.3 Foster the public's understanding and engaging of technical issues and the engineering significance appropriately, maintain the public image of the engineering profession.

As engineers we possess knowledge and skills on which others rely. Our future is ultimately dependent on engagement and trust from our community. It is important that we meet these community expectations by practising in ways which maintain and enhance community trust in the values and expertise of the engineering profession.

When clients or others question your reasoning, or otherwise request an explanation, there is an expectation that you will be willing and able to explain why you have arrived at your particular outcome, especially as checking and justifying what we do are embedded in the way the engineering task develops.

The notion of explaining one's reasoning and seeking peer review is thought by many to be fundamental to professional integrity, but in no way denies the appropriateness of legitimate differences of reasoned opinion arrived at in a proper and professional manner.

In practice, this means:

- a) endeavouring to ensure that information provided to the public is relevant and in a readily understood form.
- b) applying sound engineering judgment based on experience and relevant analysis to arrive at the appropriate balance of considerations in any given situation.
- c) taking reasonable steps to understand the consequences of your actions and the actions of those working with or for you.
- d) displaying restraint in the manner in which you comment on engineering matters, especially in circumstances where, by explicit reference or implication, there is a reason for the public to believe that such comments are made on the basis of relevant knowledge.

4. PROTECT THE NATURAL AND BUILT ENVIRONMENT

4.1 Create and implement engineering solutions for a sustainable future of humankind and the planet

Issues regarding the environment and sustainable development know no geographical boundaries.

Sustainability is not just about the environment, but also about sustaining our social and economic future. It is not about targets, or quotas, but about strategies. It is not just about technologies, but also about transitional processes. No matter how progressive the innovations in management and technology, they can only move society so far towards sustainability. Modification of consumption behaviour, integrating political and societal aspirations and policies, and advancing the knowledge and skills to enhance the protection and restoration of natural systems all remain important issues to be addressed.

Sustainable development is the challenge of meeting current human needs for natural resources, industrial products, energy, food, transportation, shelter, and effective waste management while conserving and, if possible, enhancing the Earths' environmental quality, natural resources, ethical, intellectual and working affectionate capabilities of people and socioeconomic bases, essential for the human needs of future generations.

Growth in demand and the use of non-renewable energy resources is creating important environmental challenges around the world. These challenges range from a mixture of local or regional environmental concerns such as land degradation, water quality, waste management and urban air quality to global environmental dilemmas such as Climate Change, Green House Gases emissions and the interconnected occurrence of global warming.

In practice, this means:

- a) being aware that the principles of eco-systemic interdependence, diversity maintenance, resource recovery and inter-relational harmony form the basis of humankind's continued existence and that each of these poses a threshold of sustainability that should not be exceeded.
- b) discussing in particular the consequences of proposals and actions, direct or indirect, immediate or long term, upon the health of people, social equity and the local system of values.
- c) promoting a clear understanding of the actions required to restore and, if possible, to improve the environment that may be disturbed, and include them in engineering proposals.

4.2 Be mindful of and do best to minimize the possible economic, societal and environmental risks caused by engineering actions or projects

Proper observance of the principles of sustainable development will help considerably to eradicate world poverty. Sustainability is a system or process which can be maintained indefinitely and which revolves around integrating conservation and development on a long-term basis to provide social and economic benefits, without compromising the needs of future generations. Engineers of all nations should know and respect the environmental ethics.

In practice, this means:

- a) making sure that your own perception of environmental issues is as accurate as possible.
- b) striving to accomplish the beneficial objectives of your work with the lowest possible consumption of raw materials and energy, the lowest carbon emission, the lowest production of wastes and any kind of pollution, while improving social equity and inclusion.
- c) studying the environment that will be affected by your work, assessing the impacts that might arise in the structure, dynamics and aesthetics of the ecosystems involved - urbanised or natural - as well as pertinent socioeconomic systems, and selecting the best alternative for development that is both environmentally and societally sound and sustainable.
- d) rejecting any kind of commitment that involves unfair damages to human surroundings and nature and aim for the best possible technical, social, environmental and political solution.
- e) being aware of and making sure that clients and employers are aware of societal and environmental risks caused by engineering actions or projects, and to endeavouring to interpret engineering issues to the public in an objective and truthful manner, while making best efforts to avoid or minimize the risks.

4.3 Promote and protect the peace, health, safety, privacy, dignity and common wellbeing of the community and the environment, with engineering professional actions as well as to assisting other professions

The obligation to protect the peace, health, safety, privacy, dignity and common wellbeing of the community is often dependent on engineering judgments, risk assessments, decisions and practices incorporated into structures, machines, product, processes and devices. Engineers ought to control and make sure that what they are involved with conforms to accepted engineering practices, standards and applicable codes, and would be considered safe based on peer adjudication.

Laudable though the aim of acting in the interests of the community above all else might be, there is a danger in making simplistic statements that say categorically that our duties and responsibilities lie in only one direction, implying by such statements that we have a duty to override (and not balance) legal, fiduciary and contractual responsibilities if they conflict with that 'grand' duty.

In practical terms, those legal duties and obligations will arise principally in two specific contexts. First, there will be duties and obligations of engineers to their clients. Second, there will be duties and obligations of those engineers who are employees to their employers. In some cases there may be a conflict/tension between legal duties and ethical obligations.

Engineers who have reason to believe that there is a threat to public health and safety as a result of an engineering activity, or its products, processes etc. not conforming to the above stated conditions ought to bring the matter to the attention of the relevant authority.

In practice, this means:

- a) having due regard for the peace, health, safety, privacy, dignity and common wellbeing of the public and fellow employees in all work for which they are responsible.
- b) trying with the best of their ability, courage, enthusiasm and dedication to obtain a superior technical achievement which will contribute to and promote a peaceful, healthy and agreeable surrounding for all people, in open spaces as well as indoors.
- c) informing your employer or contractor of the possible consequences if your recommendations on issues of peace, safety, health, privacy, dignity and common wellbeing or sustainable development are overruled or ignored.
- d) assisting and together with other professions to use technology peacefully, ethically and safely, in particular, to avoid any use that would affect human life or health or destroy the living environment.
- e) regarding military technologies, engineers should do their best to prevent any use of such technologies for aggressive or oppressive actions, exclusively for defensive and law enforcement purposes.

Ademais, o Conselho Executivo também aprovou os requerimentos de registro das seguintes entidades internacionais:

National Members:

- [Engineers Ireland](#) (Irlanda); e
- [Azerbaijan Academy of Engineering](#) (Azerbaijão),

Afiliada:

- [American Board of Engineering and Technology - ABET](#) (Estados Unidos da América);

- [Institute of Electrical and Electronics Engineers - IEEE](#) (Estados Unidos da América); e
- [Royal Academy of Engineering](#) (Reino Unido),

Por fim, a Declaração Final da WEC 2023 foi lida, aprovada e assinada pelo Presidente *Czech Association of Scientific and Technical Societies - CSVTS* e pelo Presidente da World Federation of Engineering Organizations - WFE0, Prof. Daniel Hanus e Prof. José Vieira, respectivamente:





The Prague Declaration

The 7th World Engineers Congress organised by the Czech Association of Scientific and Technical Societies (CSVTS) in collaboration with the World Federation of Engineering Organizations brought together leading engineers from around the world to address urgent planetary challenges and explore how technological innovations and transdisciplinary approaches can deliver environmental, social and economic sustainability to ensure a safe, fair, healthy and peaceful future.

Considering that:

- The UN's Sustainable Development Goals provide the framework to address the unprecedented global challenges facing humanity which threaten our future well-being and quality of life;
- The engineering fraternity has a responsibility to contribute to addressing the Goals and finding solutions;
- Climate change is the most critical and urgent issue of our times;
- Strengthening links between education, science, engineering and policy is essential if we are to achieve the Goals by 2030;
- Covid-19, the Ukraine war and energy have underlined the essentiality of resilience, security and risk awareness along with social concerns;
- There is an inextricable link between engineering and life which can make profoundly positive contributions to the world;
- Government, business and industry must work in partnership to accelerate positive change;
- Our natural resources are finite and biodiversity is facing major threats;
- We need innovative engineering, to advance the Circular Economy;
- Engineering is key to delivering the much-needed paradigm shift and will require concerted efforts to increase the number of engineering graduates;

Accordingly the delegates of WEC 2023 declare that engineers will:

- Address agriculture and natural resources and develop solutions to maintain the balance between energy, water, food, soil fertility and deforestation;
- Develop solutions that mitigate the negative impacts of human activities on ecosystems and species;
- Ensure that computers, robots artificial intelligence and other technologies are used responsibly, ethically and safely, and do not cause harm;
- Take a more active role in addressing issues related to cybersecurity and privacy risks;
- Improve energy security by developing, implementing, and maintaining systems and technologies that ensure reliable and resilient energy supply;
- Develop innovative technologies necessary to ensure the reliability, safety and economy of emerging energy systems based on renewable energy sources;

1

- improve energy storage technologies and develop smart grids to enable efficient and flexible energy distribution;
- Develop and implement technologies, strategies, and solutions that reduce greenhouse gas emissions and address the causes of global warming;
- Support the education of engineers, their professional development and training to for new technologies in industrial and developing countries;
- Develop low-energy and low-emission industrial technologies and processes, ensuring low-material usage, recycling, waste management and supporting a circular economy;
- Develop technologies and solutions that create income-generating opportunities for marginalized communities;
- Design medical devices and healthcare technologies that improve diagnosis, treatment, and healthcare access, particularly in remote areas;
- Develop technologies and systems that empower women economically, socially, and educationally;
- Provide access to clean water and sanitation solutions;
- Develop accessible infrastructure for people with disabilities;
- Contribute to technology solutions for crime prevention, law enforcement, and justice systems;
- Design and construct efficient and eco-friendly transportation networks, such as public transport, cycling lanes, and pedestrian pathways and ensure the transition to electric, hybrid, and alternative fuel vehicles;
- Support sustainable city development by collaborating with urban planners to create mixed-use developments that reduce the need for long commutes, encouraging walking and cycling.

Engineers are masters in creativity, finding new ways to solve or work around problems while creating inventive fail-safes and minimising risks to maximise endurance, functionality and efficiency.

It is fitting that the engineering profession delivers this important Declaration in the city of Prague where the world's first engineering institution dedicated to education was established in 1707 by Christian Josef Willenberg, which laid the foundation for the development of engineering schools globally.



Signed
Prof Daniel Hanus
President
CSVTS



Signed
Prof Jose Vieira
President
World Federation of
Engineering Organisations



Em relação à participação na Assembleia Geral da WFEO, foi cumprida a seguinte pauta:

Update 13 October 2023

**DRAFT AGENDA
WFEO GENERAL ASSEMBLY
Prague, CSVTS
14 October 2023,
9 AM - 6 PM CEST**

1. **Opening remarks (José Vieira - JV)**
2. **Apologies for absence (Jacques de Mérenil - JdM)**
3. **Appointment of advisors for the meeting (JV)**
4. **Approval of the Agenda (JV)**
5. **Acknowledgement of Represented Partnering Institutions (JV)**
6. **Approval of Voting Members in Good Standing (as of 12 October 2023)**
7. **Amendments to Governance Documents (Marlene Kanga - MK)**
Summary of 2022-2023 amendments to the RoPs *For information*

8. ELECTION OF MEMBERS OF THE EXECUTIVE COUNCIL AND THE EXECUTIVE BOARD

- a. Report of the Nominations Committee (Gang Ke),
- b. Approval of the Electoral Commission *VOTE for approval*
- c. Treasurer's position (proposal by the Executive Board) *VOTE for endorsement*
- d. Representatives of International Members with permanent seats *VOTE for endorsement*
- e. Election for President Elect (one position): *roll call and vote (secret ballot)*

9. Approval of the Draft Minutes of the General Assembly of:

- 9-10 March 2022, San José, Costa Rica

VOTE for approval

10. Matters arising from the Minutes (JdM)

- review of status of agreed actions

11. To Receive the Minutes of the Executive Council Meetings of:

- 8 March 2022 (San José, Costa Rica)
- 28 October 2022 (Paris, France)
- 1 March 2023 (Madrid, Spain)

FINANCE AND ADMINISTRATION

12. Report of the Treasurer (François Lureau)

- a. Audited 2021 and 2022 accounts and allocation of result *VOTE for approval*
- b. Review of the draft budgets for 2024 and 2025 *VOTE for approval*
- c. Review of status of payment of member fees
- d. Updating of the members' fees' system *VOTE for approval*

Update 13 October 2023

13. Report of the Internal auditor (Alain Jouanjus)

7. ELECTION OF MEMBERS OF THE EXECUTIVE COUNCIL AND THE EXECUTIVE BOARD (continued)

Announcement of results of the election for President-elect

- d. Election for Executive Vice-president (one or two positions): *roll call and vote (secret ballot)*

Coffee break

14. Report of the Executive Director (JdM)

7. ELECTION OF MEMBERS OF THE EXECUTIVE COUNCIL AND THE EXECUTIVE BOARD (continued)

Announcement of results of the election for Executive Vice-president

- e. National members' representatives (five to seven positions): *roll call and vote (secret ballot)*

15. Report of the Membership Committee (Seng Chuan Tan)

New members and associates' applications *VOTE for endorsement*

- The Azerbaijan Academy of Engineering for National Member
- The Accreditation Board for Engineering and Technology (ABET - USA) for Affiliate Member
- The Institute of Electrical and Electronic Engineers (IEEE) for Associate

Introduction of members which have joined in 2022 and 2023

(national members for Angola, Azerbaijan, Cabo Verde, Burkina Faso, Ireland, Liberia, Mozambique, affiliate members for Kenya and USA)

Removal of members with more than 4 years' arrears from member list *For information*

- Algeria / Qatar / Puerto Rico / EAMC

7. ELECTION OF MEMBERS OF THE EXECUTIVE COUNCIL AND THE EXECUTIVE BOARD (continued)

Announcement of results of the election for National members' representatives

Lunch Break

16. Hosting of the 2025 General Assembly

Presentation of candidates (5° each):

- Baghdad / Dubai / Shanghai / Singapore *VOTE for approval (secret ballot)*

STRATEGIC MATTERS FOR DECISION

Update 13 October 2023

17. Updating of the Model Code of Ethics

18. Hosting of Committees

- Creation of the Working Group on Climate Change *VOTE for endorsement*
- Proposal from the Committee on Energy (hosted by France) to renew its term for another 4 years *VOTE for approval*
- Proposal from the Committee on Education in Engineering (hosted by Myanmar) to renew its term for another 4 years *VOTE for approval*
- Proposal from the Committee on Capacity Building (hosted by Zimbabwe) to renew its term for another 4 years *VOTE for approval*
- Proposal from the Committee on Young Engineers / Future leaders (hosted by Lebanon) to renew its term for another 4 years *VOTE for approval*
- Proposal from Malaysia to host the Committee on Innovative Technologies *VOTE for approval*
- Proposal from China to host the Committee on Engineering and the Environment *VOTE for approval*
- Proposal from Tunisia to host the Committee on Anti Corruption *VOTE for approval*

16. Announcement of results of the vote for hosting the 2025 General Assembly

ACTIVITIES

19. President's Report (Joyé Vieira)

20. UNESCO World Engineering Day for Sustainable Development 4th March (Marlene Kanga)

- Report on 2022 and 2023 celebrations
- video of 2023 Hackathon winner

21. Special Projects (Marlene Kanga)

- Engineering Education Projects (Mentoring and WFEO Academy)
- Climate Change Education Projects
- WFEO UN Africa Coalition

22. Reports from the Chairs of Board Committees (written reports)

- Awards Committee (Ania Lopez)
- Strategic Planning Committee (Ashok Basa)
- STCs & PICs Support and Review Group (Mustafa Shehu)
- Committee and WG Chairs Committee (Davide Stronati)

23. International partners, new and renewed Memorandums of Understanding (Marlene Kanga)

- International Engineering Alliance
- International Federation of Engineering Education Societies & Global Engineering Deans Council
- International Centre for Engineering Education
- International Federation of Consulting Engineers (FIDIC)
- International Science Council
- Office for Climate Education
- Engineers Without Borders - **signing of a MoU**

24. International agencies relationships (JdM)

Update 13 October 2023

25. Reports on the Projects of the Standing Technical Committees (written reports)

- Report of the Committee on Anti-corruption (CAC)
- Report of the Committee on Disaster Risk Management (CDRM)
- Report of the Committee on Energy (CE)
- Report of the Committee on Engineering Capacity Building (CECB)
- Report of the Committee on Engineering and the Environment (CEE)
- Report of the Committee on Information and Communication (CIC)
- Report of the Committee on Engineering Innovative Technologies (CEIT)
- Report of the Committee on Women in Engineering (WIE)
- Report of the Committee on Education in Engineering (CEIE)
- Report of the Committee on Young Engineers/Future Leaders (YE/FL)
- Report of the Committee on Water (CW)
- Report of the WURC (WFEO/UN Relations Committee)
- Report of the Working Group on Global Infrastructure Report

26. Programs/Projects of the International Members in good standing

- Engineers Europe
- UPADI
- FEIAP
- FAEO
- FAE
- CEC
- WCCE
- IFMBE
- IFME

27. FUTURE EVENTS

- Executive Council 2024, Kigali, Rwanda
- WEC2027 and General Assembly 2027 - presentation by Engineers Canada and Ordre ingénieurs du Québec

28. WEC 2023 (Daniel Hanus)

29. Leadership transmission

30. President Elect's Inaugural Address (Mustafa Shehu)

31. Goodwill Messages

32. Any other business (to be advised to the President in advance)

33. Closing Remarks
Next meeting

Nesse sentido, destacamos inicialmente o resultado das eleições internas acerca das quais o Confea apoiou candidatura, consoante a Decisão Plenária nº 1232/2023, de 05 de julho de 2023:



Foto 8 - Vice-Presidente no Exercício da Presidência do Confea, Eng. Eletric. Evânio Ramos Nicoleit, durante o processo de votação secreta.

- Presidente eleito: Eng. Seng Chuan Tan, indicado pela Institution of Engineers Singapore, foi eleito e se tornará presidente da WFEO para um mandato de 2 anos, 2025-2027.
- Vice-presidente Executiva: Engª Ania Lopez, indicada pelo Consiglio Nazionale degli Ingegneri - CNI (Itália) foi eleita para um mandato de 4 anos, 2023-2027.



Foto 9 - Vice-Presidente no Exercício da Presidência do Confea, Eng. Eletric. Evânio Ramos Nicoleit, com a Vice-Presidente Eleita da WFEO, Engª Ania Lopez.

- Representantes dos Membros Nacionais: Engª Nahla Ahmed Al Qasimi (Emirados Árabes Unidos), Eng. Miguel Fierro (Uruguai), Engª He Jing (China), Eng. Nathaniel Matalanga (Quênia) e o Eng. Navinchandra Vasoya (Índia) foram eleitos para um mandato de 4 anos mandato, 2023-2027.

Ademais, a Assembleia Geral também aprovou os países sede e presidentes dos seguintes Comitês:

- Committee on Energy sediado pelo Ingénieurs et Scientifiques de France (presidente: Engª. Marie-Line Vaiani);

- Committee on Education in Engineering sediado pelo Myanmar Engineering Council (presidente: Eng. Zaw Min Aung);
- Committee on Capacity Building sediado pelo Engineering Council of Zimbabwe (presidente: Eng. Martin Manuhwa);
- Committee on Young Engineers/Future leaders sediado pela Federation of Lebanese Engineers (presidente: Eng. Firas Bou-Diab);
- Committee on Innovative Technologies sediado pela Institution of Engineers Malaysia (presidente: Eng. Norlida Buniyamin);
- Committee on Engineering and the Environment sediado pela China Association for Science of Technology (presidente: Eng. Wen Ling); e
- Committee on Anti Corruption sediado pela the Ordre des Ingénieurs Tunisiens (presidente: Eng. Kamel Ayadi),

Dando continuidade aos debates e decisões, a Assembleia Geral conheceu as propostas de sediar a Assembleia Geral de 2025 apresentadas pelos seguintes países/candidatos: China, Emirados Árabes e Iraque, o qual declinou da candidatura, restando apenas os dois primeiros para votação. Assim sendo, após o sufrágio de todos os membros presentes foi decidido que as reuniões da Assembleia Geral da WFEO do exercício 2025 ocorrerão em Xangai - China.



Foto 10 - Parte da delegação do Sistema Confea/Crea por ocasião da Assembleia Geral da WFEO. Obs: por questões logísticas foi permitida apenas a participação de 3 (três) representantes por país na sala principal, devendo os demais integrantes das delegações acompanharem a reunião em uma sala contígua.

Também destacamos a assinatura de um Memorando de Entendimento entre a WFEO e a Engineers Without Borders (Engenheiros Sem Fronteiras), com vistas à elaboração de um plano de ação conjunto para promover as engenharias como um meio para o alcance do desenvolvimento global e sustentável. Nesse sentido, o documento delinea e estrutura diversas possibilidades de cooperações e projetos futuros, por meio da trânsito e mobilidade profissional, mediante o trabalho coletivo em questões de impacto, como o reforço da formação de engenheiros, a mobilização da capacidade mundial de engenharia para colmatar lacunas de infraestrutura e a integração de conhecimentos de ponta sobre como a engenharia pode e deve contribuir o alcance dos Objetivos de Desenvolvimento Sustentável da ONU, tanto para subsidiar os diálogos globais, como subsídios técnicos em eventos de agências da ONU.

O movimento global Engenheiros Sem Fronteiras se estende por todas as regiões globais, com mais de 30 organizações nacionais e operações em mais de 90 países diferentes, visando melhorar a vida das pessoas através do fornecimento de infraestruturas críticas às comunidades necessitadas, acesso à água potável, saneamento melhorado e energia fiável. Ademais, o grupo atua no aprimoramento de novas soluções de engenharia e de uma comunidade de engenharia capaz, para que todas as pessoas e o planeta possam prosperar (www.ewb-international.org).

Ademais, também houve a aprovação e assinatura do documento intitulado "National Infrastructure Roundtables for a Just Transition", cuja declaração versa nos seguintes termos:



World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

**Prague Declaration of the World Federation of Engineering Organizations
National Infrastructure Roundtables for a Just Transition**

October 15, 2023

The World Federation of Engineering Organizations issued the Prague Declaration, announcing a new initiative to create National Infrastructure Roundtables for a Just Transition that leaves no one behind. Organized by engineers, the National Roundtables will promote climate and disaster resilient infrastructure that is inclusive, multisectoral, and sustainable economically, socially, and environmentally.

Noting that the Paris Climate Agreement calls for "equal resources for mitigation and adaptation," the Roundtables will mitigate climate through low carbon energy projects and promote resilience and adaptation by ensuring quality projects that can withstand the climate disasters that are wreaking destruction around the world.

"What is needed," declared WFEO President Jose Vieira, "is a unified agenda to address climate and poverty, and this new initiative will position the largest engineering organization in the world to take a leadership role in facilitating the Just Transition." President Vieira has already played a major leadership role in developing a partnership with the World Bank for the purpose of integrating the climate agenda with the need to invest in economic development.

President-Elect Mustafa Shehu sees the indispensable role of engineers in the Just Transition. "Engineers are responsible for planning, designing, building, and retrofitting all the infrastructure in the world. Therefore, we have a special obligation to build infrastructure that delivers basic goods and essential services to everybody, leaving no one behind. National Roundtables, led by engineers, but bringing every sector to the leadership table, will elevate the role of engineers to stand in the forefront of the climate and sustainable development movement."

The new initiative will be piloted by WFEO members and partners, the American Society of Civil Engineers (ASCE), the Pan American Federation for Engineering Organizations (UPADI), the Climate Risk Institute of Canada (CRI), and the Atlas Initiative for Climate Resilient Infrastructure (Atlas).

Ari Herrera, President of UPADI, is leading the way by establishing the idea throughout the Americas where engineering societies are ready to organize the National Roundtables. "We know

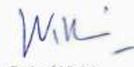
that without engineers there is no infrastructure, but we also know that engineers cannot build infrastructure alone. Our national societies will reach out to the multinational development banks and organizations, the private sector finance and insurance and construction companies, scientific groups, women and indigenous organizations, and social and environmental NGOs to speak as a united voice for climate resilient infrastructure as the main lever for the Just Transition."

Michael Sanio, Executive Director of Atlas, will be guiding the establishment of the National Infrastructure Roundtables: "The twin goals of the Paris Climate Agreement, winning the race to net zero and the race to resilience, need an engine to drive the process. Engineers are uniquely qualified to provide the infrastructure that can lift countries, help vulnerable populations, and drive the climate and sustainable development movement."

"New and upgraded infrastructure investment each year is \$3.9 trillion, and operations and maintenance add another \$5.6 trillion, providing a sufficiently powerful lever to impact the \$105 trillion economy. If we get infrastructure right, we can show a sustainable model for the world," says Al Douglas, the President of the Climate Risk Institute.

"After the WFEO success in the T20-G20 Leaders policy arena, which adopted the policy paper "Catalyzing Investments for Climate and Disaster Resilient Infrastructure", and the accomplishments in the Indian Conference that preceded the G20 Leaders' Summit in New Delhi, we are well-positioned to build on those achievements, help create multisectoral National Roundtables and foster a new era for engineering and climate resilient infrastructure that benefits humankind across the globe" according to Jose Domingo Pérez, President of the Pan American Academy of Engineering.

IKN Gunalan, WFEO's Co-Chairman of the UN Science and Technological Community, Past President of ASCE, and the President of the Atlas Initiative, sees a new vision for engineers in the 21st century. "New challenges call for new thinking and bold leadership. Infrastructure touches everybody and provides the sinews of national strength. Engineers see with professional eyes the cost of poor infrastructure and the urgency of the climate crisis. National Roundtables are needed to create a whole-of-society approach and build climate resilient infrastructure to facilitate a Just Transition that leaves no one behind."


Dr José Vieira
WFEO President


Mustafa Shehu
WFEO President -Elect

Ao final da Assembleia Geral, o Presidente Eng. José Vieira transmitiu formalmente o cargo para o Presidente-Eleito, Mustafa Shehu, o qual presidirá a WFEO até 2025.



Foto 11 - Membros da missão representativa - Eng. Agr. Glauco Cortez, Eng. Eletric. Luiz Cosenza, Eng. Civ. Daltro Pereira, Eng. Eletric. Evânio Nicoleit e Eng. Eletric. Genilson Pavão.



Foto 12 - Parte da delegação brasileira com o membro da delegação mexicana, também membro da UPADI, Eng. Marco Mendez.

4. PROPOSIÇÕES/ RECOMENDAÇÕES A SEREM APLICADAS NO SISTEMA PELA EXPERIÊNCIA ADQUIRIDA

Ante à participação na missão representativa em comento e à luz do Planejamento de Inserção Internacional do Confea (0392663), propomos as seguintes ações:

1) À Comissão de Educação e Atribuição Profissional - CEAP:

a) para que avalie a possibilidade de fomentar o apoio institucional por meio da divulgação digital, nos meios de comunicação do Confea, das próximas edições do Hackathon do Dia Mundial da Engenharia, tendo em vista o encerramento das inscrições no exercício 2023, bem como para que avalie a pertinência de que programa assemelhado possa ser inserido no âmbito do Sistema Confea/Crea;

b) para que avalie a importância de um maior aprofundamento do tema pelo Sistema Confea/Crea, conjuntamente com o Ministério da Educação do Brasil, com vistas a permitir que o Brasil e por consequência os futuros profissionais graduados no país não sejam impactados negativamente por eventual não participação brasileira na *International Engineering Alliance - IEA* e nas diretrizes do *Graduate Attribute and Professional Competency Framework - GAPC*;

c) para que analise a pertinência e relevância de determinar divulgação da WFEO Academy (<https://wfeoacademy.com>) aos engenheiros, agrônomos e geocientistas, por meio dos canais oficiais de comunicação do Confea;

2) Que a Comissão Organizadora da Semana Oficial da Engenharia e da Agronomia - CONSOEA avalie a possibilidade, por ocasião da 79ª SOEA, de oferecer um estande à *World Federation of Engineering Organizations - WFEO*, nos mesmos moldes do estande da Ordem dos Engenheiros de Portugal na 78ª SOEA, de maneira a potencializar a disseminação de informações dos países e organizações membros da WFEO perante os profissionais brasileiros; e

3) Que as demandas administrativas decorrentes das propostas ora apresentadas sejam levadas a efeito pelo Setor de Acordos e Representações - SETAR, no âmbito da Gerência de Relacionamentos Institucionais - GRI da Superintendência de Integração do Sistema - SIS, no caso de serem acolhidas pelas supracitadas Comissões do Confea,

5. CONCLUSÃO:

Ante o exposto, vislumbramos como tendo sido cumpridos os objetivos da participação em comento.

Desta feita, nos termos do art. 6º da Resolução nº 1.009, de 17 de junho de 2005, combinado com o item 3 (três) da Decisão Plenária nº PL-1503/2023 (0806175), de 28 de agosto de 2023, apresentamos o presente relatório conjunto, com vistas à análise e decisão do Conselho Diretor do Confea.



Documento assinado eletronicamente por **Flávio Henrique da Costa Bolzan, Assessor(a)**, em 15/12/2023, às 09:55, conforme horário oficial de Brasília, com fundamento no art. 4º, § 3º, do [Decreto nº 10.543, de 13 de novembro de 2020](#).



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