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

Shanghai Declaration

Taking Action: Engineering Shapes a Green Future

The World Federation of Engineering Organizations 2025 General Assembly and Global Engineering Congress (WFEO 2025 GA & GEC) was held in Shanghai from 12 to 17 October 2025, co-hosted by the World Federation of Engineering Organizations, the China Association for Science and Technology, the Chinese Academy of Engineering, and the Shanghai Municipal People's Government. Under the theme "Engineering Shapes a Green Future", the Congress aimed to explore how engineering and technology can be leveraged to address climate change, drive green economic growth, and accelerate the implementation of the Sustainable Development Goals (SDGs).

We, the representatives from the engineering community across more than sixty countries and regions gathered to deliberate and unanimously adopt the Shanghai Declaration – Taking Action: Engineering Shapes a Green Future.

Challenges and Responsibilities

Engineering, as a transformative force shaping the world and an inexhaustible driver of human progress, has always responded to humanity's enduring pursuit of a better life. Throughout the course of human development – from ignorance to nomadic societies, from agricultural and industrial civilizations to today's digital era – engineers, in their unceasing efforts to open new chapters in history, have not only created countless monumental physical achievements of lasting significance, but have also cultivated an invaluable spiritual legacy of innovation, cooperation, rigor, and responsibility.

Today, standing on the foundation laid by the wisdom of our predecessors, we are nonetheless confronted with pressing challenges in the development process: rising poverty, hunger, and inequality; the tangible threat of climate change; extensive economic growth that jeopardizes future generations' right to survival; and the technological divide that triggers new inequalities, reversing years of sustainable development gains. In uncertain times for global security and human well-being, we deplore the growing skepticism about the ability of technological progress to enhance social and individual well-being in a more extensive and equitable manner. The engineering community must assume greater responsibility than ever before.

With only five years remaining until 2030, we commit to unprecedented speed, scale, and in-depth cooperation to harness the full power of engineering in accelerating the implementation of the 2030 Agenda for Sustainable Development, the Paris Agreement, the Pact for the Future, and the Global Digital Compact, ensuring that engineering serves as a key driving force in addressing development bottlenecks and unlocking new momentum for global growth.

Action Statement

In line with this commitment, we pledge to the following actions:

1. Green Transformation of Engineering: A Core Objective

We reaffirm that engineering is the core force to achieve the SDGs. We will advance a comprehensive green transformation, proactively expanding the social responsibility of engineering.

- We will treat the carrying capacity of ecosystems as a non-negotiable constraint in engineering practices, accelerating economy-wide emission reduction (SDGs 12, 13) and safeguarding biodiversity on land and in oceans (SDGs 14, 15), thereby protecting our planet as the common home of humankind.
- We will prioritize social equity and justice in engineering practices, foster resilient cities, communities, and infrastructure (SDG 11), and catalyze industry innovation and decent work (SDGs 8, 9), building harmonious societies that are more inclusive and beneficial (SDGs 5, 10).
- We will ensure the right to survival and development as the fundamental goal of engineering, accelerate the eradication of poverty and health risks (SDGs 1, 3), and guarantee fair access to food, clean water, and affordable energy (SDGs 2, 6, 7), advancing the common well-being of all humankind.

2. Innovative Solutions: An Engine for Development

We affirm that innovation is the engine for achieving the SDGs through transformative leaps. We will innovate in a context-specific manner to effectively solve problems using appropriate technologies.

- We will push the frontiers of technology with responsibility, driving social transformation through advances in digital, biological, clean energy, and materials science technologies.
- We will draw from local wisdom to spark innovation, cultivating innovative and dynamic solutions that are rooted in local communities, land, and culture.
- We will harness nature-based solutions, leveraging the growth and self-repair power of nature to strengthen ecological security and societal resilience.

3. Engineering Capacity Building: An Endogenous Driver

We recognize that the sustained enhancement of engineers' capacities is the foundation of all above-mentioned actions. We will balance development and security and continuously deepen our understanding of sustainable development to unleash engineers' potential to the fullest extent.

- We will deeply integrate technology for good, global perspective, and interdisciplinary innovation capacity into engineering education and continuous professional development (SDG 4).
- We will promote the integration of engineers into the heart of policy and decision-making processes, integrating engineering wisdom at the earliest stage nto global governance.

- We will break down barriers of gender and age, support the development of women and young engineers, foster an inclusive environment, and unlock the full potential of diverse perspectives (SDGs 5,10).

4. Global Partnerships: A Powerful Bond

We reaffirm that the challenges to human survival and development can only be overcome through strengthened cooperation. We commit to building diverse partnerships, enhancing mutual learning and exchange in engineering culture and practices, and jointly fostering an open and inclusive global ecosystem for engineering cooperation.

- We will promote open access, data sharing, and the efficient global flow of best practices.
- We will find the right balance between innovation and governance, collaboratively promote the reliable application of emerging fields such as artificial intelligence, and foster a safe, trustworthy, and controllable development ecosystem.
- We will promote greater interoperability among international and national engineering standards to reduce the cost of cross-border services.
- We will accelerate the bilateral and multilateral mutual recognition of engineering qualifications to facilitate the mobility of talent.
- We will support and promote North–South, South–South, and triangular cooperation and foster experience exchange and technological solidarity to build strong global innovation linkages through the bonds of engineering.

Conclusion

We uphold the principle of green development. We believe in the power of engineering to shape the world. We are committed to demonstrating and generating evidence of the positive impact of innovations and technologies designed to drive changes that benefit everyone.

On the occasion of the 80th anniversary of the founding of the United Nations, let us unite the wisdom of engineers worldwide, pursue bold innovation, and move forward together—steadfast in our commitment to building a prosperous future where humanity and nature coexist in harmony **!**