



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;

- 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
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Signed
Prof Jose Vieira
President
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