



IFEES Peace Engineering and Sustainability Declaration February 2020

Context

At the WEEF-GEDC 2018, the First Global Conference in Peace Engineering, we defined Peace Engineering as the intentional application of systemic-level thinking of science and engineering principles to directly promote and support conditions for peace. ***Peace Engineering works directly towards a world where prosperity, sustainability, social equity, entrepreneurship, transparency, community voice and engagement, ethics and a culture of quality thrive.*** Engineers have the power to play a vital role in the creative solutions that can radically transform and improve the wellbeing of people and other living systems, day to day.

Engineers - Their Systems Mindset, Skills, Creativity and Intention will Determine Humanity's Future. So, just as it continues to enable undreamt improvements in quality of life for many people of the world and to generate abundant material value, so too does technological innovation enable unprecedented crises - *this is the law of unintended consequences.*

At the ***core of Peace Engineering is our planet's sustainable future***, which is calling leaders to act in concert from a systems mindset. It is a call to develop solutions differently: that is, collaboratively; integrating transdisciplinary expertise and education programs; simultaneously applying technology solutions while supporting ethics, policy and living systems. And it is a call in the mingled vernacular of civil society, global institutions, and science and technology. Further, beyond addressing today's challenges, we must cultivate together the development of next generation leaders to continue to drive momentum. *It is a call for action and a new mindset for doing engineering and for existing disciplines and new ones to be created to address global challenges like climate change. We are living amid critical economic problems challenging our future. Shouldn't climate change, peace and sustainability be items in your agenda?*

IFEES brings together many international organizations to provide and develop the necessary content, research and commercialization of peace technology to address the pressing global challenges clearly identified in the 17 United Nations Sustainable Development Goals and the 11 US National Academy of Engineering Grand Challenges.

Therefore, as engineering education societies we have a **special responsibility in constructing a sustainable society, through development of new knowledge and technologies**, and equally important through the **education of a new generation of global leaders**. This is the moment when traditional institutions are failing, in the middle of exponential inequality, immigration, social unrest and political paralysis. We need to educate new global leaders. Education content/games have to cover a wide range of needs, from K-12, undergraduate and graduate programs, minors, certificates, executive training, consulting, and deal with new learning paradigms.



We invite every School of Engineering, Engineering Societies, Engineering Consortiums, Professional Societies, Multilateral organizations, Industry, NGOs, government agencies and concerned global citizens to join us in making commitments to move decidedly towards a sustainable and peaceful society.

The principles that guide our commitment are:

- a) **Educate new generations of sustainability and global leaders.**
- b) **Increase education and research efforts**
- c) **Become an exemplary institution/individual from which the students/community/academia/industry/government can experience first-hand a sustainable way of life; foster social responsibility**
- d) **Develop case studies to be shared globally**
- e) **Develop metrics and data analytics to measure results**
 - Successes and efforts to be measured using the metrics developed for sustainable development and healthy social processes, and in some cases in investment funds will be a measure of success.
 - Want to measure good vs bad transactions lead to positive peace vs negative peace with direct implications in sustainable and healthy social processes
- f) **Transparency and information/knowledge to be symmetric**
 - Conflict avoidance, conflict resolution, negotiations, diplomacy, sound investments cannot occur without information/knowledge being symmetric

Commitments towards a sustainable and peaceful society

Engage and promote within the Global Engineering Deans Council and IFEES communities, in conferences, forums and other global events. A partial list of commitments from the 17 UN SDGs span the following dimensions:

- 1. Reductions of greenhouse gases emissions
- 2. Responsible water, air quality, energy usage
- 3. Reduction in natural resources use and waste production
- 4. Education and Research for sustainable development
- 5. Outreach and governance
- 6. Policies, Private and Public
- 7. Study the intended and unintended consequences; conflict
- 8. Peacebuilding, peacemaking, peacekeeping
- 9. Metrics, data models, analytics

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