CAETS 2026 Statement

International Council of Academies of Engineering & Technological Sciences

CAETS

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From Knowledge to Action – Engineering for a Resilient and Sustainable World

Engineering and technological sciences enable societies to observe change, understand complex systems, anticipate risks and develop solutions. Yet technological capability alone does not create progress. Progress depends on translating knowledge into responsible action – supported by strong institutions, trusted expertise and international cooperation.

This was the overarching message emerging from the 2026 Annual Meetings of CAETS, held in Munich, Germany, from 14 to 17 September 2026 and hosted by acatech – National Academy of Science and Engineering. Participants from 31 countries brought national and regional perspectives to discussions on interconnected technological, environmental and societal challenges.

The public symposium, *From a Distance – Earth Observation for Monitoring, Comprehension, and Change*, addressed innovation, security and resilience, soil management and natural hazards. Exchanges among Academy leaders, CAETS Working Groups and Committees, CAETS and Euro-CASE, and the next generation of engineers broadened these discussions and revealed a number of common themes.

Emerging themes from CAETS 2026

From observation to action.

Satellites, sensor networks, modelling and artificial intelligence provide increasingly detailed information about our planet and help anticipate environmental change and natural hazards. But data alone does not create impact. Its value depends on turning observation into understanding, anticipation and responsible action. Data quality, accessibility, cybersecurity, resilient infrastructure and trust in the integrity of data and systems are therefore essential to turning technological capability into impact.

Resilience and sustainability require systems thinking.

Today's challenges cannot be addressed through individual technologies alone. Soil connects climate, food security, water and biodiversity. Natural hazards require integrated systems for observation, forecasting, communication and response. Future energy systems must combine decarbonisation with security of supply, affordability, competitiveness and resilience. Engineering must therefore consider interdependencies, trade-offs and potential cascading effects across systems.

International cooperation strengthens resilience.

Global challenges do not stop at national borders, and neither does the knowledge needed to address them. At a time of geopolitical tensions, strengthening technological sovereignty and resilience should not lead to technological isolation. Exchanges between CAETS and Euro-CASE demonstrated the value of combining global and regional perspectives and learning from different national experiences.

The Academy Leadership Meeting reinforced this message. Leaders and senior representatives of engineering academies from across the world highlighted orientation, trust and leadership as core responsibilities of academies. They can provide trusted spaces for dialogue, connect expertise across borders and maintain cooperation even when political circumstances become more difficult. Participants also stressed the need to strengthen communication and engagement with policymakers so that engineering evidence can contribute effectively to decision-making.

The admission of the ASEAN Academy of Engineering and Technology (AAET) as a new Associate Member further broadens the CAETS network and strengthens its links across regions.

Engineering capability matters as much as technological capability.

Technology alone cannot deliver sustainable development. Societies need skills, education, strong institutions, professional standards and effective governance to develop, operate and adapt technological systems. Discussions around the *Global Engineering Capability Review 2025* highlighted the importance of strengthening engineering capability as a whole.

CAETS Working Groups contribute to this effort by bringing together expertise from different countries and disciplines. Strengthening their ability to connect robust evidence with the needs of policymakers, industry and society can help move from knowledge generation towards knowledge-to-impact.

Communication is part of creating impact.

Engineering knowledge contributes to informed decisions only when complex technological developments are communicated accurately, clearly and accessibly. The CAETS Communication Prize reflects this responsibility. In 2026, the prize was awarded to Ningshao Xia of the Chinese Academy of Engineering for *The Story of China's World-first Hepatitis E Vaccine*, recognising an outstanding example of communicating complex scientific and technological achievements to a broader audience. Communication is not an add-on to engineering excellence; it is part of translating knowledge into societal impact.

The next generation must help shape the future of engineering.

CAETS committed to increasing the engagement of young and early-career engineering professionals, including by creating opportunities for them to participate directly in CAETS Working Groups. Intergenerational cooperation combines experience and institutional knowledge with new perspectives and emerging expertise.

The Munich Message

Across these discussions, five interconnected principles emerged:

- **Observe** – Reliable evidence provides the foundation for understanding change.
- **Understand** – Engineering expertise turns data into knowledge and places it in context.
- **Anticipate** – Engineering helps identify opportunities, risks and vulnerabilities.
- **Act** – Knowledge creates impact when it informs responsible decisions and solutions.
- **Cooperate** – Global challenges require expertise, experience and perspectives across countries, institutions and generations.

Together, these principles define a shared responsibility for engineering academies: to turn knowledge into action, connect technological capability with societal needs, and bring national expertise into international cooperation.

In an increasingly fragmented world, cooperation between engineering academies is not a luxury. It is part of the infrastructure needed to build resilient and sustainable societies.

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