IEEE SA STANDARDS ASSOCIATION

Socio-Technical Standards
Introducing the IEEE Society for Social Implications of Technology Standards Committee

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IEEE SSIT SOCIETY ON SOCIAL IMPLICATIONS OF TECHNOLOGY

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Who Are We?

Purpose: Ethical, responsible and provable socio-technical standards that prioritise human and ecological flourishing.

Founded in 2017, following on from

IEEE Ethically Aligned Design and **IEEE Planet Positive 2030**

SSIT Standards Committee is focused on

driving Principles into Practice with the following pillars

- Sustainable Development & Humanitarian Technology
- Protecting the Planet & Sustainable Technology
- Ethics, Human Values and Technology
- Technology Benefits for All
- Future Societal Impact of Technology Advances
- Gender Equality and Social Inclusion

Chair: Ruth Lewis (Australia)
Vice Chair: Karen Bennet (Canada)
Secretary: Peter Reid (Australia)

Representing 18 Working Groups
Over 200 volunteer expert Standards contributors

IEEE SSIT SOCIETY ON SOCIAL IMPLICATIONS OF TECHNOLOGY

https://sagroups.ieee.org/ssit/

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Why Are IEEE SSIT's Standards Important?

- **Converting concepts (IEEE SA Industry Connections programs, Academic Research, Technical Communities) into practice**
- Published by the IEEE SSIT Technical Society, approved by the IEEE SA Standards Board
- Defines what is **ethical and sustainable (good) behaviour** for developers and implementors of emerging technology and data use
- Informs **global** organisational governance practices and policy development
- **A basis for assurance** of ethical and sustainable behaviour of organisations, products and services
- Anticipates social and planetary **impact of resource and emerging technology use at scale**
- Enhances society and the planet of the future – social, ethical, wellbeing and environmental factors

IEEE SSIT's Socio-Technical Standards

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How Are SSIT's Standards Different?

Traditional Technical Standards

- **The vast majority of global standards**
- Objectively studied and defined
- Empirical tested and verified
- **Generally omit ethics, societal or planetary considerations**
- Outcomes - technical and quantitative quality and interoperability of systems

Socio-Technical Standards

- **Very rare in the global standards world**
- Developed and co-created through stakeholder participation, based on **holistic, theoretical and lived knowledge**
- Uses critical subjectivity, experience & experiential methodologies
- Demands active engagement in process of co-creation of standards
- **Outcomes – Wellbeing – to 'flourish', quantitative and qualitative**
- Recognise, define and address the ethical and ecologically sustainable aspects of engineering design and deployment, hold the designer/implementor accountable, and measure **more than avoidance of risk, but actual measurable and expected Wellbeing outcomes that will impact society and the planet**.

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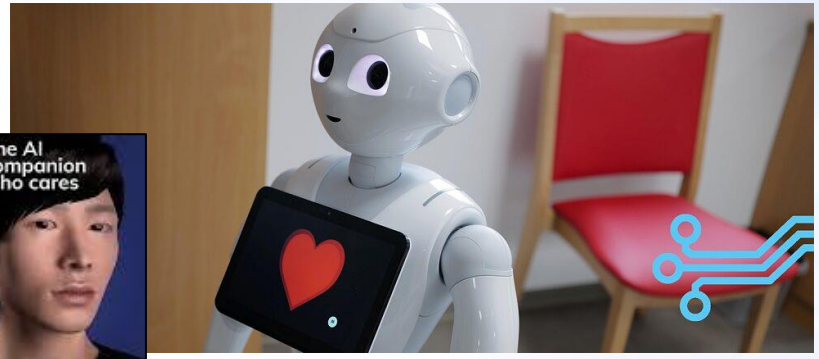
Examples of Our Standards

IEEE 7014™-2024 Standard for Ethical Considerations in Emulated Empathy in Autonomous and Intelligent Systems



https://replika.com/

Provides guidance for the design and implementation of empathic AI systems that are prioritized to maximize human flourishing and protect users from bias, abuse, or exploitation.

7014

IEEE P7017™ Recommended Practice for Design-Centered Human-Robot Interaction and Governance

Describes the ‘compliance by design’ in the area of human-robot interaction for socially assistive robots.
Includes emotional, physical and religious robots.

Photo by Ruth Lewis

Examples of Our Standards

IEEE P7800™ Recommended Practice for Addressing Sustainability, Environmental Stewardship and Climate Change Challenges in Professional Practice

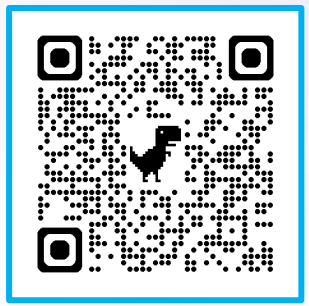
- Encourages engineers, scientists, technologists and other professionals to incorporate climate change and environmental stewardship into their practice
- Supports the creation of a clear record of the outcomes of these environmental and social considerations

IEEE P7010.1™ Recommended Practice for Environmental, Social Governance (ESG) Action Implementation and Advancing Corporate Social Responsibility (CSR)

- Translates ESG goals into meaningful metrics for organisations
- Integrates ESG goals into extended decision-making processes across domains and organisational stakeholders

Why join us for your new standards development?

- Standards development and emerging technology deployment at scale must take into account that technology works, it is safe, it has to benefit humanity and the earth's ecosystems – you are invited to participate!
- We enable and guide you and your Standards Working Group with our 'Best Practices' for this special type of 'Socio-Technical' Standard, and get your standard published and adopted by Industry.
- Contact us now if you would like to explore how to convert your idea, research paper or practice into a new IEEE SSIT Standard!



Thank You

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What are our Standards?

What are Global Standards?

Standards setting of technology innovation and professional practices by global expert contributors

- through the development of Multi-Stakeholder, Voluntary, Consensus-based Standards.
- to legitimise and diffuse norms, values and interests of all parties, including global governments and various governance interests

A middle ground between

- a Market-based approach (leading to de-facto standards), and
- a government-led standard approach

A technical standard

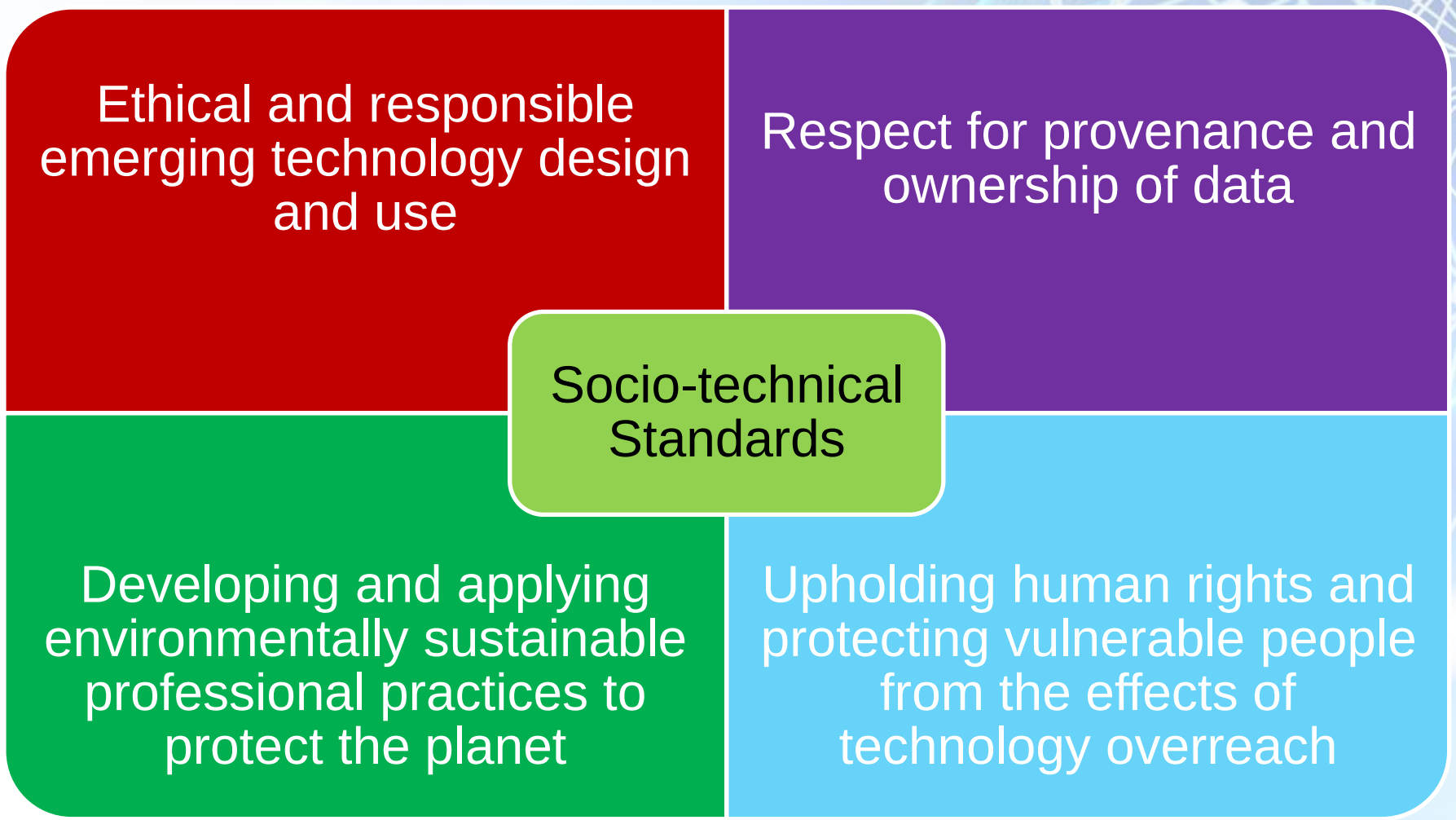
A document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose.

SEI 2018 Technical Standards, Invention, Innovation, and Economic Growth (nsf.gov)

A socio-technical standard

A technical standard that recognises the holistic and complex interconnected contribution of technology, human, organisational, cultural and environmental systems as they interact together.

What are our Standards in practice?



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Chair, IEEE P7800™ WG, Recommended Practice for Addressing Sustainability, Environmental Stewardship and Climate Change Challenges in Professional Practice

Chair, IEEE Planet Positive 2030 Initiative

Co-Chair IEEE, Future Directions SusTech Initiative.

IEEE VP MGA, 2021

President, IEEE Canada, 2018-19

Managing Director, R&D, Carbovate Development