KRACH INSTITUTE FOR TECH DIPLOMACY
AT PURDUE

THE GLOBAL TRUSTED TECH (xGTT) STANDARD INITIATIVE

A Summary of the Purpose and Draft Framework for the Development of a Global Trusted Tech (xGTT) Standard

Overview

Technology has immense potential to enhance the human condition, but it can also lead to unintended consequences and be weaponized by authoritarian regimes and malign actors. Ensuring the trustworthiness of technology is essential to preserving a free, open, secure and prosperous world.

The initiative to develop the world's first Global Trusted Tech (xGTT) Standard will establish a clear framework to define and label trusted technology, enabling seamless, secure and efficient collaboration across companies, countries and organizations. Its primary goal is to accelerate the adoption of critical and emerging technologies that safeguard freedom, security, and prosperity.

Critical and emerging technologies (CETs) are advanced technologies that impact not only typical business activity, but also national security. The xGTT Standard will be designed to apply to all critical and emerging technologies, including but not limited to:

5G/6G

Biotechnologies

Hypersonics

Advanced Manufacturing and Robotics

Clean Energy and Electrical Grids

Quantum and Advanced Computing

Artificial Intelligence and Machine Learning

Cloud Computing

Semiconductors and Microelectronics

Autonomous and Electric Vehicles

Financial Technologies

Space Technologies and Systems

The xGTT Standard initiative is a key output of the Global Tech Security Commission, chartered by the Krach Institute for Tech Diplomacy at Purdue with bipartisan support from the U.S. Congress and international partners. The multi-year Commission, which includes a global network of more than 200 public- and private-sector experts, examined the technological landscape and produced recommendations to accelerate the innovation, deployment, and adoption of trustworthy critical and emerging technologies. Developing trusted technology standards was a key recommendation, and this initiative serves to execute on that imperative.

xGTT Board of Governors

The initiative to develop the xGTT Standard is guided by a distinguished Board of Governors, chaired by Taiwan's Cyber Ambassador-at-Large, Audrey Tang, and comprised of renowned industry leaders and international experts:

Chair:

- **Audrey Tang**, Taiwan's Cyber Ambassador-at-Large; Author of *Plurality: The Future of Collaborative Technology and Democracy*

Board of Governors:

- **Roberto Baldoni**, Founder and First General Director of the National Cybersecurity Agency of Italy; Honorary Professor at University of Rome La Sapienza
- **Isabel Cane**, Former Head of OECD's Trust in Business Initiative and the Blue Dot Network
- **Alex Capri**, Senior Fellow and Lecturer, National University of Singapore (NUS) Business School; Author of *Techno-Nationalism: How It's Reshaping Trade, Geopolitics and Society*
- **Ricardo "Rick" Echevarria**, Former Vice President of Security Solutions, Intel; Technology and Technical Innovation Commissioner for the International Olympic Committee
- **Obiageli "Oby" Ezekwesili**, Founder and Chairperson, School of Politics, Policy, and Governance; Former Vice President (Africa Region), World Bank; Former Nigerian Minister of Minerals and Minister of Education
- **Fernando Garibay**, Polymath, Producer, Academic, Founder & CEO, The Garibay Institute
- **Melanie Garson**, Director of Research and Insight, ISTARI; Associate Professor, University College London
- **Dan Goldin**, Former and Longest-Serving Administrator of NASA
- **Yasmin Green**, CEO, Jigsaw
- **Takashi Oda**, Director, Business Strategy, Corporate Strategy Planning, NTT
- **Roman Pačka**, Chief Advisor to the Director, National Cyber and Information Security Agency of the Czech Republic
- **Heather Petersen**, Former Head of Trust Strategy & Marketing, DocuSign
- **Arvind Raman**, Dean of Engineering, Purdue University
- **David Roberts**, Former CEO, Applied Research Institute
- **Harsh Shringla**, Former Foreign Secretary of India, Former Ambassador of India to the U.S.
- **Tom Sonderman**, CEO, SkyWater Technology Foundry
- **Yigal Unna**, Former Director General, Israel National Cyber Directorate
- **Ken Urquhart**, Global Vice President, 5G Strategy, Zscaler

The Trusted Technology Doctrine

The development of the Global Trusted Tech (xGTT) Standard is rooted in the values of the Trusted Tech Doctrine.

The Trust Doctrine embodies the belief in the primacy of trust as the foundation of peaceful relationships. Trust is firmly grounded in integrity, accountability, transparency, reciprocity, and a profound respect for the fundamental pillars of free societies, such as the rule of law, human rights, property rights, fair labor practices, responsible environmental stewardship, freedom of expression, and national sovereignty.

Amid the wave of historic technological change shaping the trajectory of humanity in the 21st century, this underlying aspect of human relationships remains: People do business with people they trust. They partner with people they trust. They buy from people they trust. They help people they trust. Trust is how deals are made, friendships are forged, alliances are founded, and peace is preserved.

Technology's central role in modern relationships necessitates its trustworthiness.

The Trust Doctrine became the foundation for the Clean Network Alliance of Democracies comprising 60 like-minded countries, representing nearly two-thirds of the world's GDP, more than 200 telecommunications companies, and dozens of industry-leading firms that committed to securing their 5G infrastructure from the threat of authoritarian dominance. It has now become the foundation for the xGTT Standard initiative.

Leaders from government, technology, business, academia, civil society, and everyday citizens are encouraged to embrace the following values of the new Trusted Technology Doctrine as the basis for the innovation, deployment, and adoption of critical and emerging technologies, so they may serve their ultimate and highest purpose: the advancement of human freedom.

Technology must advance freedom to be trusted.
The primary use of technology must be the advancement of human freedom. It must be developed in the service of the common good with low expectation of harm.

Technology must protect human rights to be trusted.
The development and use of technology must be respectful of the inherent dignity and equality of all individuals and ensure non-discrimination, fair labor practices, and freedom of expression and religion.

Technology must respect privacy to be trusted.
Robust measures must be in place to safeguard personal, corporate and government data and national security, providing timely notice and consent.

Technology must be subject to the rule of law to be trusted.
The innovation, deployment, and use of technology must be bound by the legal protection of individual freedom and human dignity, providing people legal recourse if they are harmed.

Technology must safeguard intellectual property to be trusted.
Producing new ideas is essential to improving the human condition. Creators and innovators should be able to reap the benefits of their work and have confidence that their intellectual property will not be stolen.

Technology must be subject to human direction and control to be trusted.
Without human oversight, technology could be unpredictable, harmful, or misaligned with ethics and the law.

Technology must be transparent to be trusted.
Transparency helps users understand how their data is used, how decisions are made by algorithms, and the potential impacts of technology on their lives. It also enables stakeholders to identify biases, errors, or harmful practices. Meaningful information, including governance policies, should be publicly available and easily accessible.

Technology must be rooted in scientific values to be trusted.
Innovators must utilize recognized scientific processes, including freedom of inquiry, openness, honesty, objectivity, replicability, and dependable methods for observing, acquiring, storing, managing, and sharing data.

Technology must respect the environment to be trusted.
Responsible environmental stewardship, recognizing the importance of sustainable practices and the preservation of natural resources is critical in technological development. By prioritizing environmental protection, technology can help promote a healthier ecosystem and enhance people's quality of life.

Technology must respect national sovereignty to be trusted.
Advancing freedom requires technological accommodation of both sovereign borders and individual liberties, empowering citizens, companies, and governments to maintain ownership of their sensitive information and control over their national destiny.

Strong leadership across every sector of society is vital in delivering a peaceful and prosperous future for all people. By adhering to the values of the Trusted Tech Doctrine, we strive to create an environment conducive to responsible and ethical technological progress, while enhancing the well-being of society as a whole. We believe there is strength in numbers and power in unity and solidarity to face our greatest challenges and ensure that technology advances freedom.

A Draft Framework for Developing the xGTT Standard

The xGTT Standard, to be developed by the xGTT Board of Governors in partnership with critical stakeholders, will specify the criteria for entities to be labeled as purveyors of trusted technology.

The following three categories—Technology Development, Technology Deployment, and Technology Governance—provide initial guidance on the criteria that will be used to evaluate entities under the forthcoming xGTT Standard.

The xGTT Standard Board of Governors will also work with stakeholders to determine which existing standards, laws, regulations, and norms must be reflected in the xGTT Standard criteria. Examples of such benchmarks include, but are not limited to, International Standards Organization (ISO) standards on data protection and cybersecurity; EU Sustainable Development requirements; World Bank borrower requirements; World Trade Organization agreements and treaties; and World Intellectual Property Organization norms.

TECHNOLOGY DEVELOPMENT CRITERIA

How an entity goes about innovating and building its technologies.

1. Adherence to Intellectual Property (IP) Norms

a. *National Laws:* The Entity adheres to pertinent national laws concerning intellectual property protection.
b. *International Norms:* The Entity adheres to pertinent international norms and understandings concerning intellectual property protection.
c. *Country of Origin*: The country in which suppliers operate has sufficient laws and regulations protecting the IP of private companies and is party to multilateral agreements supporting such protections.

2. Sourcing of Inputs

a. *Labor:* The Entity's suppliers adhere to national labor laws consistent with international labor norms to protect the rights of workers, and supplier company has sufficient documentation to verify as much.
b. *Environment:* The Entity's suppliers adhere to national laws and international standards on environmental protection, including raw material and resource extraction.
c. *Country of Origin:* The country in which suppliers are based provides sufficient freedom for companies to conduct legal business without undue influence or pressure from the government.

3. Manufacturing and Assembly

a. *Labor Law Compliance:* If not manufacturing themselves, the contract manufacturer for the Entity seeking to be labeled as "Trusted Tech" adheres to national labor laws consistent with international labor norms to protect the rights of workers. The company must be in good standing with these laws, with no explicit violations, lawsuits or major disputes related to them.
b. *Environmental Law Compliance:* Manufacturer adheres to national laws consistent with international standards on environmental protection.
c. *Country of Manufacture:* The country in which suppliers are based provides sufficient freedom for companies to conduct business without undue influence or pressure from the government.
d. *Good Standing:* The supplier's company (state-owned or private) and/or products manufactured by the company, or its affiliate/s are not sanctioned or banned from trusted international markets.

TECHNOLOGY DEPLOYMENT CRITERIA

How an entity uses, or allows others to use, its technologies.

1. Data Privacy and Protection

a. *User Privacy:* The Entity seeking to be labeled as "Trusted Tech" has data privacy policies in place to protect users' data privacy and implements strong protections to ensure user data cannot be accessed without permission from the user. The user is also made aware of if and how their data will be utilized by the Entity.
b. *Cybersecurity Practices:* The Entity deploys cybersecurity measures to protect user data from malicious misuse by outside actors. The Entity also has a record of zero or nominal data leaks, and in the event of a cybersecurity breach, has taken action to mitigate future risk.
c. *Country of Incorporation:* The Entity's country of incorporation is in good standing with respect to cybersecurity, including having laws in place to protect data privacy, both for developers of technology and users thereof.

2. Responsible Distribution

a. *Responsible Deployment:* The Entity is designing and deploying their technologies in a way that does not violate users' civil and human rights.
b. *Mitigating Abuse:* In the event an entity's technologies are found to be complicit in a way that it violates user civil and human rights by a third party, the Entity is going to extraordinary lengths to mitigate the negative impacts, including abstinence from transactions with known violator third parties.

3. Competitive Pricing

a. *Respect for Global Markets:* The Entity seeking to be labeled as "Trusted Tech" must avoid predatory pricing and price gouging that undercut competition in a manner that violates international trade agreements or international norms.
b. *Transparency:* The Entity has, and clearly communicates, policies on its pricing practices, and subjects itself to regular audits and reporting on these policies, in standing with good business practices.
c. *Commitment to Open Standards:* The Entity supports interoperability and open standards, allowing users of its product to switch services without significant barriers or vendor lock-in.

TECHNOLOGY GOVERNANCE CRITERIA

How an entity is structured, owned and operated.

1. Ownership

a. *Ownership Structure:* A transparent ownership structure with clearly identifiable major shareholders, avoiding opaque shell companies or complex webs of ownership that obscure responsibility and accountability.
b. *Conflicts of Interest:* The Entity should avoid ownership ties to industries or individuals that create conflicts of interest.

2. Transparency

a. *Public Disclosure of Governance Policies:* The Entity should have available its governance policies, including how decisions are made, how the board is selected, and how conflicts of interest are managed.
b. *Transparent Financial Reporting:* Regular financial reporting, in accordance with recognized international standards (e.g., GAAP, IFRS) and public audits to establish financial integrity.

3. Ethics

a. *Code of Conduct:* A robust, publicly available code of ethics outlining acceptable practices.
b. *Avoidance of Corrupt Practices:* Commitment to anti-bribery and anti-corruption practices, with clear, executable policies.
c. *Human Rights Commitments:* A formal commitment to respecting human rights, with policies ensuring compliance with global standards and frameworks like the United Nations Global Compact.
d. *Strong Legal and Regulatory Framework:* The Entity should be operating within the context of strong rule of law, stable institutions, and robust enforcement of corporate regulations, particularly concerning transparency, environmental responsibility, and anti-corruption.

4. Country of Incorporation

a. *Strong Legal and Regulatory Oversight:* The Entity should be incorporated in a country with strong rule of law, stable institutions, and robust enforcement of corporate regulations, particularly concerning transparency, environmental responsibility, and anti-corruption.
a. *Regulatory Compliance:* Adherence to international governance standards, regardless of the country of incorporation, such as the OECD Guidelines for Multinational Enterprises, ensuring accountability beyond the home country.
a. *Commitment to Local Laws and Global Standards:* Even when incorporated in countries with less stringent regulations, The Entity should commit to adhering to best practices in governance, environmental sustainability, and ethics as laid out by international frameworks like the United Nations Global Compact.

Why Adopt the xGTT Standard?

Trustworthy countries, companies and entities operating in the global market must abide by many standards, laws, regulations, norms, and agreements to participate in highly regulated markets. While these technical and legal regulations play an important role in facilitating commerce and protecting various rights, adopting the xGTT Standard offers unique benefits for organizations.

- **Competitive Advantage:** As the Trusted Tech Doctrine observes, "People do business with people they trust. They partner with people they trust. They buy from people they trust. They help people they trust. Trust is how deals are made, friendships are forged, alliances are founded, and peace is preserved." The formal recognition of an entity as a trusted partner, through its adherence to the xGTT Standard, will optimize its competitiveness in the increasingly technology-driven landscape.

- **Ahead of the Curve:** "Skate to where the puck's going to be, not where it's been." Legendary hockey player Wayne Gretzky coined this pearl of wisdom on the importance of anticipation. It's applicable to technology as well. That is why trusted technology provisions are increasingly featured in legislation and international agreements, especially among nations that cherish freedom. "Trusted Tech" is where the free world is headed. Complying with the xGTT Standard will position you to take full advantage of the opportunities in the global marketplace.

- **Frictionless Collaboration:** Trust enables frictionless collaboration that helps accelerate innovation. Abiding by these guidelines will deliver speed and security, both of which are necessary to outpace untrusted actors.

- **Attractiveness:** Being labeled a "Trusted Tech" entity attracts likeminded trusted tech partners around the world.

- **Strength in Numbers:** In a world of intense, weaponized economic competition, organizations need to feel secure. Those that abide by the values expressed in the Trusted Tech Doctrine, such as respect for the rule of law, human rights, property rights, and other hallmarks of free societies, are often vulnerable to malign actors that disregard those values. Joining a Global Trusted Tech Network provides strength in numbers and power in unity and solidarity to stand up to authoritarian threats.

- **Trusted Tech Pipeline:** A reliable trusted talent pipeline is critical in a technology-driven economy. It is one of the foremost concerns of employers in the interconnected world. By complying with the xGTT Standard, entities will gain preferential access to the most qualified and trustworthy workforce.

- **Access to R&D:** Likewise, a "Trusted Tech" labeled organization will gain priority access to research and development pipelines around the world, ability to partner with top-tier universities and academic institutions and operate on the cutting edge of your sector.

- **Efficiency:** Being a party to the xGTT Standard will help an entity meet other accepted standards that indicate the trustworthiness of its technology.

- **Moral High Ground:** Finally, by innovating, deploying, or adopting trusted technology, an entity will benefit from the goodwill associated with being on the side of freedom and humanity.

Conclusion

Organizations across the public and private sectors are encouraged to collaborate with partners that adhere to the forthcoming xGTT Standard. By doing so, they will ensure advanced technologies not only align with their goals but are also designed to serve the broader common good. Beyond the commercial and reputational advantages of following the xGTT Standard, "Trusted Tech" entities will strengthen their defenses against authoritarian and malicious threats by aligning with other likewise designated partners around the world, multiplying our collective effort to ensure technology advances freedom.