NEW AMERICA

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Guiding Principles for Technologists Could Bolster an Inclusive Digital Future

Allison Price & Afua Bruce

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About the Author(s)

Allison Price is a senior advisor with the Digital Impact and Governance Initiative (DIGI) at New America. The DIGI team supports the development of the next generation of technology platforms to transform the way governments deliver value and better outcomes through research and collaborative pilot projects designed to address some of the world's most persistent challenges like transparency, identity and corruption.

Afua Bruce was a fellow with the Public Interest Technology program at New America. Previously she was the director of engineering for the program. Bruce joins New America after spending several years working in the Federal government—at the White House and at the FBI.

About New America

We are dedicated to renewing the promise of America by continuing the quest to realize our nation's highest ideals, honestly confronting the challenges caused by rapid technological and social change, and seizing the opportunities those changes create.

About Digital Impact and Governance Initiative

The Digital Impact and Governance Initiative (DIGI) works to catalyze next generation systems and solutions powering the field of digital public infrastructure through cross-sector collaboration with government partners, the technology sector, and civil society.

About Public Interest Technology

Public Interest Technology works to make the public interest a cornerstone of technology development, deployment and governance in collaboration with universities, government agencies, policymakers, nonprofits, the private sector and civil society.

Contents

Overview

Technology impacts our lives in countless ways—facilitating public services, supporting access to education and jobs, and enabling commerce and communication. We encounter it in almost everything we do. But there isn't a unified or comprehensive global approach for responsible development and use of digital solutions that intentionally incorporates inclusivity and ethical innovation considerations. This critical gap is complicated by the crowded and fractured landscape of existing codes of ethics and conduct and the need to establish standards and norms that affect all professions working in the technology space.

In 2022, New America launched an open inquiry exploring the merits of overarching **guiding principles for technologists** created through cross-sector collaboration and designed alongside a framework for implementation. Through a series of consultations and roundtables held over the course of a year, we found strong support for effective, inclusive, and consistent guiding principles among a broad range of stakeholders.

The consensus recommendation resulting from this collaborative effort is challenging yet clear: Empower the creation of a framework broad enough to be practical and accessible for general use and understanding, specific enough for applicability and accountability, and flexible enough to respond to ongoing processes and refinement.

This brief is not a set of guiding principles; it is a collective summary of findings that highlight areas of additional inquiry and research. It also suggests next steps to move this effort forward globally, while building off of existing work and resources in the field. Digital platforms, models, standards, and systems will continue to reflect the values and norms of technologists and the organizations they work for. Democracies should seize this opportunity to better define consistent principles that apply to all technologists, explore new structures or incentives for implementation, and build capacity for public interest tech.

Approach

New America's **Digital Impact and Governance Initiative** (DIGI) hypothesized that a **technologist code of ethics** could provide an ethical framework for technologists to help ensure better people-centered outcomes when developing and harnessing digital tools. This concept of applying ethics to a practice or institution isn't novel. Such a code, commonplace in professional fields like social work, law, and medicine, could define "values, ethical principles, and ethical standards to which professionals aspire and by which their actions can be judged."[1]

New America recognized that a **public interest technology** (PIT) lens,[2] focusing on issues of justice and equity at the intersection of technology and policy, could provide a useful framework for testing the effectiveness of a technologist code of ethics with democratic values and respect for human rights central to the profession. This orientation could allow technologists to rethink the transformative and diverse ways in which technology impacts every community and encourage a more global dialogue on the tradeoffs and opportunities at the intersection of innovation, modernization, and fundamental rights.

At **RightsCon** 2022, **New America** committed to exploring a foundational process around creating a technologist code of ethics. In concert with this announcement, a panel discussion, **A Technologist Code of Ethics: Building a Rights-Respecting Digital Future**, featuring technologists and global civil society leaders, delved into the potential for a code and the role of norms, standards, and culture in building a rights-respecting digital future.

The first phase of this work required conducting landscape research on existing science- and technology-related codes of ethics, as well as facilitating roundtable conversations with technology, civil society, social science, business, government, and academic experts around the world to determine the validity of the goal.

DIGI partnered with New America's **Public Interest Technology** and released a request for proposals (RFP) for **Public Interest Technology University Network** (PIT-UN) member universities to host cross-sector roundtables. PIT-UN is a consortium of 65 universities and colleges working to build public interest technology as a discipline within academia and develop the skills of the next generation of technologists to better assess the ethical, social, political, and economic dimensions of innovation.

Four proposals were selected. Over the course of the roundtables, over 170 academic instructors, students, industry professionals, public servants, civil society members, activists, and innovators discussed the value and potential of a technologist code of ethics.

New America provided framing and prompts to help launch the discussions. The following provocation served as the problem statement for the roundtables:

> *There have been multiple efforts to develop versions of a technologist code of ethics. However, because of many challenges—including lack of enforcement mechanisms, limited buy-in, and an imprecise or overly specific criteria for who is considered a technologist—prior efforts have not gained widespread traction. By centering a cross-sector collaboration to inform a new technologist code of ethics, this effort has the potential to generate a new standard for technologists. Together, perspectives from academia, the private sector, civil society and governments, accreditation agencies, and*

professional societies can provide input into content, implementation, and enforcement of a new code. A code of ethics, if drafted with care through an inclusive and multi-stakeholder process, and paired with enforcement structures, could help transform the underlying values of global technical innovation and shift the norms towards people-centric development and design.

For details on the responses to the problem statement and specific prompts, please see the **Additional Resources** section.

Lexicon Challenges

It became clear from the outset of the convenings that lexicon poses one of the first hurdles—with common terms being interpreted differently or used interchangeably.

For example, the terms "**technologist**" and "**technology**" are often ambiguous and evolving, given the immense scope of the field and the variety of skills, roles, and expertise of the practitioners involved. In the interest of clarity, New America offers these foundational definitions.

- **"Technologist"** is a person who uses designed artifacts for the purpose of solving problems or making products. This broad conceptualization of technologists includes portions of communities that currently have codes of ethics— computing professionals, data scientists, intelligent systems designers, software engineers, and others—and communities or practitioners without formal codes, such as some civil society technologists and hobbyists. Some communities that lack formal codes may already abide by codes, or at least should have the same standards apply as others doing similar technologist work.

- **"Technology"** includes computer software and hardware, information systems, electronic devices, mobile phones, robotics, biotechnology and genetic engineering, artificial intelligence (AI), data mining and other analytic technologies. Of paramount concern is the impact (both intended and unintended) that technology can have on the community.[3]

Further, in the foundational convenings and consultations, participants often used the terms "**code**," "**guidelines**," "**principles**," and "**frameworks"** interchangeably. It became apparent that the application of frameworks, codes, and standards will be complicated by the fact that these terms aren't easy to understand or agreed upon in theory or in practice.

In contemplating a "**code of ethics**," this exploration was guided by **Merriam-Webster**'s definition of the term: "a set of rules about good and bad behavior." However, in practice: What is good and bad behavior in the development and use of technology? While seemingly simple, this has clearly been a challenge for some of the largest tech companies—given the magnitude of unintended, or even intentional, consequences—or for regulatory bodies empowered to protect the public interest. Further, many participants from various roundtables flagged that there isn't a single approach to ethics, and the overall effort could benefit by better defining collective approaches to related areas like virtues, values, and rights.

Participants concluded that the application of lexicon matters. It is a challenge that needs to be addressed—especially in the early stages of thinking through an effective approach to guiding principles for technology practitioners.

Findings and Recommendations

The consensus recommendation is to empower the creation of a framework broad enough to be practical and accessible for general use and understanding, specific enough for applicability and accountability, and flexible enough to respond to ongoing processes and refinement. Consistent guidance for ethics and standards that applies across all communities in service of technology is warranted.

While the preliminary research and roundtables inspired high levels of interest and engagement about the creation of guiding principles for technologists, questions remain about effective models of implementation and accountability. It is essential to recognize that codes or frameworks conceived to strengthen people-centered societal outcomes are just one tool. Developing our digital future will take multiple approaches with different communities, organizations, and institutions.

To move this effort forward, the following ten areas need to be thoroughly examined and addressed to effectively create and implement guiding principles for technologists:

1. **Commit to an open, iterative, and inclusive multistakeholder process.** Global representation is essential. There must be a substantive effort to be inclusive and ensure that all stakeholders—especially vulnerable and underserved communities that are frequently affected both directly and indirectly by technology governance decisions—have an equal voice.

2. **Build upon existing code and frameworks.**

3. **Prioritize transparency, accessibility, and implementation.**

4. **Acknowledge that directing efforts towards technologists may be more effective in parallel with additional measures** like regulation, compliance, and ethics policies.

5. **Identify resources for drafting processes and participants.**

6. **Design for cross-sector engagement and endorsement**, especially from the private sector leaders training and employing technologists.

7. **Include academic institutions.** Educational institutions have a critical role to play in including and advancing ethics and technology in meaningful ways through curriculum development and implementation.

8. **Operationalize viable implementation plans** that create mechanisms for accountability and adaptability with local context and culture.

9. **Pilot or test guiding principles in several contexts, organizations, and sectors.** This could help advance understanding of what different contexts might involve, stress-test the recommendations covered in these findings, and potentially identify additional challenges and opportunities.

10. **Empower regular review of guiding principles.**

Based upon the roundtable discussions and our initial findings, three action areas could be undertaken by a global, interdisciplinary, rights-respecting community:

1. **Document a process** for drafting guiding principles for technologists that includes both the principles and an associated framework for operationalization;

2. **Create or identify engagement and accountability structures**; and

3. **Execute an open, inclusive, and iterative drafting process**.

Sustaining and encouraging an ongoing dialogue around the development of technologist guiding principles focused on global inclusion, cross-sector collaboration, and equity could build upon the work of the many individuals and organizations exploring various codes for technologists or working in the field of tech governance. Providing an open and inclusive forum to begin consolidating these conversations could be a real benefit for the field of responsible technology use.

There is consensus from participants that this effort could be most effectively undertaken by an international organization. There are existing multi-stakeholder collaboration processes that could be adapted to better inform the strategies powering this field of work. For example, some multilateral movements pursue global codes or frameworks with multiple regional initiatives driven by a combination of stakeholders that span sectors and areas of expertise. In these models, deliberations and drafting processes are often open and responsive—incorporating periods for public response and engagement. Further, regional initiatives can increase participation and inclusivity, rather than relying on the leadership and relationships of one country or entity.

Other inclusive and independent approaches could be modeled after existing international bodies, civil society organizations, or technical governance and standards forums. Many different models were cited during this process, including the ASEAN Online Business Code of Conduct, Freedom Online

Coalition (FOC), Internet Governance Forum (IGF), International Association of Science and Technology for Development (IASTED), Internet Corporation for Assigned Names and Numbers (ICANN), Internet Engineering Task Force (IETF), and the Organisation for Economic Co-operation and Development (OECD).

Although New America is not the appropriate global entity to lead on these three actions, we are ready to support global institutions as a civil society leader and independent convener committed to advancing rights-respecting initiatives. Working on effective guiding principles for technologists is just one critical piece of a complicated puzzle for a better digital future. We are encouraged by the enthusiasm to build on the conversations and ideas debated during the consultations and cross-sector roundtables hosted by our university partners.

Additional Resources

The following section contains a number of resources for organizations and individuals to build upon the findings and recommendations.

This section includes:

- **Insights from Foundational Discussions and Roundtables**
- **Roundtable Hosts and Participants**
- **Initiative Activities and Timeline**
- **Examples of Ethical Frameworks**

Insights from Foundational Discussions and Roundtables

New America began this provocation challenge by conducting a landscape review of best practices in the science and technology space. This combination of a desk review and interviews with private sector, civil society, and academic experts from around the world provided the foundation for the work and contributed to the refinement of several learning questions. New America recognized the opportunity to obtain a broader perspective to address these questions and released a request for proposals (RFP) for Public Interest Technology University Network (PIT-UN) member universities to host cross-sector roundtables.

CEPI FGV Direito São Paulo, Cleveland State University, Stillman College, and University of Edinburgh hosted roundtable discussions with community, industry, and private sector partners in the fall of 2022. These academic institutions were selected to host roundtables based on their demonstrated expertise and ongoing research into ethics and structures of technology development and use.

To focus the initiative, the following five broad questions were developed to guide the project's research and foundational discussions. The guiding questions and the collective insights from the responses follow.

1. What has been learned from previous efforts to draft industry-wide ethical codes?

Codes are powerful especially when clear, enforceable, and focused on organizations.

The complex and rich history of industry-wide ethical codes provides many lessons for a technologist code of ethics to address. Codes are powerful tools to shape behavior in ways that go beyond establishing moral principles. Codes allow institutions and industries to explicitly define priorities and the desired norms. An aspirational code of ethics can generate knowledge, establish definitions, and create new social arrangements and expectations for how technology should interact with communities.

While codes offer value to a sector, they are often fragile and can lose relevancy over time. This is due to the long and complex drafting process that results in content that is too vague or abstract, focuses on individuals rather than organizations and collectives, or is unenforceable. People involved in drafting other science and technology codes of ethics described the challenge of reconciling ethical issues and norms that are deeply contextual across communities, countries, and continents. A code of ethics that covers all technologists would likely be unreasonably long in order to address specific concerns for every subdiscipline; a shorter, more general code of ethics could make it difficult for specific technologists to appreciate its relevance.

Additionally, codes have historically been backward-looking and rarely proactive or anticipatory, leaving them unsuited to governing emerging technologies in a democratic way. A significant shortcoming of most codes of ethics referenced is the lack of a clear path for enforcement. There are concerns, for example, that a "name and shame" approach for enforcement would expose the organizing body to lawsuits by both individuals and corporations.

Any new, modern code of ethics should be structured to address these challenges. Regardless of its scope, a new code of ethics should allow ongoing review and adaptation, have endorsement from stakeholders across industries, and be supported by enforcement mechanisms. Without the proper structure and support, a new code may become lost or indistinguishable from a sea of already existing codes for subsets of technologists.

2. What is the value of focusing on the norms and culture of the global tech industry at a time when conversations are dominated by legal, regulatory, policy and governance questions?

A code of ethics or guiding frameworks are tools—distinct but complementary to policy and regulation—that can shift the norms and standards for the development, deployment, use, and governance of technology.

Tackling the complexity of legal, regulatory, and political domains in which technology simultaneously operates is a daunting task. Additionally, addressing the cultural, spatial, geographic, and temporal variability of all stakeholders' perspectives is difficult: What is acceptable in one country or culture may be deemed unacceptable in another country or culture. Some discussion participants suggested that it may be possible to construct a global technology code of ethics by starting small and outlining minimal areas of consensus. A code could also be explored in conjunction with other strategies that safeguard the inalienable rights of individuals in society.

A code of ethics is one tool to shift the norms and standards for the development, deployment, use, and governance of technology. This tool should be considered as a complementing effort of more structured tools, which include legislation, regulation, and enforcement. In fact, a code can support the interpretation of existing legal rules or fill gaps in the regulatory landscape that typically does not keep pace with the development of emerging technologies. Codes of ethics are often developed and distributed through professional societies, academic institutions, and civil society organizations; they are meant to shape practices in the training of professionals in the academic environment as well as the functioning of professionals in the industry.

Navigating contextual differences and differing legal and regulatory environments is one of the most challenging aspects of developing a technologist code of ethics. In fact, "some participants advocated that it is not possible to build a global code of ethics, since the cleavage between the Global South and North is marked by Occidentalism, disregarding several ethical traditions."[4] Intentional design, significant hands-on management of the process, and enough flexibility in the schedule and priorities to mitigate friction points as they arise, will all be required to help navigate these differences and find minimal consensus.

3. How could an open drafting process help to strengthen connections among digital activists, academics, and technologists from the Global South and North and bridge conversations about algorithmic discrimination and digital repression?

The drafting process should start by naming power dynamics, cultural differences and resources needed to facilitate a healthy dialogue.

Drafting a technologist code of ethics necessitates a "dialogue that focuses on the common ground that must be sought between disparate, divergent, and even polarized perspectives."[5] All participants must be given an equal voice in this

process. This is hard to achieve, as "among the needed stakeholders, there is no parity of strength in terms of resources and voice reach (i.e., it is difficult for members of the **Public Power** to access arguments from civil society in the legislative process because companies have more presence)."[6] Additionally, working across cultures presents other challenges. Some discussion participants expressed concern that a poorly designed process would amplify the effects of historical racism and inequalities on a global scale.

Foundational discussion participants recommended that future facilitators of a code or guiding principles practice "institutional reflexivity"[7] and systematically consider the assumptions, motivations, and boundaries of participation. For example, it will be necessary to identify funding and resources for civil society and academia to participate in the creation or open drafting process of a code of ethics or guiding principles in order to ensure inclusivity. By including some, others are excluded, so process facilitators will need to transparently communicate decisions about who is invited to specific conversations and how to maintain a safe and inclusive environment, especially for historically marginalized voices.

4. What considerations about operationalization and implementation of such a code should be considered from the outset to maximize impact?

Operationalization of a code should clearly define the code's community, and be designed for transparency, accessibility, and implementation.

There is no global, well-established definition of who is a technologist and whether that identity replaces or encompasses other professional identities. Similarly, there is no clear public understanding of which sectors or industries would be subject to a technologist code of ethics, or if the new code would be in place of or in addition to existing codes that are society-specific or industry-specific. These issues must be addressed and clearly communicated before a technologist code of ethics can be operationalized and implemented.

Above all, a code should be transparent, accessible, and implementable. Therefore, any group affected by the code should be involved in its development. That means including a cross-sectional representation of developers, testers, designers, representatives of company management, professional and business entities/associations, civil society organizations, and academia. It also means that people or communities who are impacted by technology, or advocates working on their behalf—there were many mentions of the interests of children and adolescents—should also be involved.

The need to be inclusive is more than just participating in the process: Both public and private sectors must be represented, active, and want to work together to generate a unified output. Finally, it must be noted that students and early-career professionals are critical inputs for changing norms.

Codes of ethics are largely shaped by their social, cultural, political, and technical contexts, and to be useful must be anchored within them.[8] For this reason, the drafting process must include voices from many countries and ethnicities. Having diversity in the drafting process is a necessary but insufficient goal for creating a technologist code of ethics. A global code of ethics must look for diversity throughout organizations—at the top and the bottom, and in between.

Codes should also seek to influence company and organizational culture. Rarely are big technical decisions and strategies decided by a single person; rather, key technical and ethical decisions are made by teams or broadly by the managers and leaders.[9] A code of ethics should accompany a plan to create a culture of ethics-by-design in companies. It should also encourage a strong culture of sharing feedback and creating room for error among technologists.

An effective code should be able to adapt to the needs of technologists as contexts change. A sentiment heard repeatedly throughout the foundational discussions can be summed up in the words of one participant at the University of Edinburgh roundtable, Dr. Emma Frow: "We don't seem to be lacking in codes, but we do seem to be lacking in means and incentives for developing capacities for bringing these codes to life and living with them."

5. What insights from public interest technology work are most applicable to an ethical code?

Public interest technology engages directly with communities throughout technology design and implementation.

While the exact wording to define the growing field of public interest technology varies, there is consensus on the field's overarching principles.

This definition, crafted by New America's Public Interest Technology program, illustrates well its framework:

> *Public interest technology (PIT) refers to the study and application of technology expertise to advance the public interest in a way that generates public benefits and promotes the public good. By deliberately aiming to protect and secure our collective need for justice, dignity, and autonomy, PIT asks us to consider the values and codes of conduct that bind us together as a society.*

This definition provides insight for developing and maintaining a technology code of ethics.

Public interest technology principles of justice, transparency, and integrity should be applied to general technology development. Among the broadly

defined technologist community, there is an appetite for convening and discussing shared objects of concern within the public interest technology field, especially as it relates to creating sustainable change among individual technologists and organizations that rely on technologies to generate products and services. Public interest technology work is done by engaging directly with communities throughout the technology and policy design and implementation processes. To affect systemic change and to create a more equitable world, these values can be applied to a code of ethics that seeks to do the same with technology.

Roundtable Hosts and Participants

To conduct the cross-sector and interdisciplinary conversations, New America selected four academic institutions to host roundtable discussions after an open call for proposals to host convenings. These four Public Interest Technology University Network (PIT-UN) members represented a diversity of demographics: an innovation center within a private university in Brazil; a U.S.-based, predominantly white Institution from the Midwest; a U.S.-based, historically Black college and university from the South; and one public university in Scotland. Each roundtable consisted of presentations and discussions to answer key questions about a potential new technologist code of ethics.

Over 170 academic instructors, students, industry professionals, public servants, civil society members, activists, and innovators participated in four global roundtables to discuss the value and potential of a technologist code of ethics.

To encourage robust dialogue, the roundtables brought together a diverse and interdisciplinary set of perspectives. Participants provided insight from academia, public interest technology, business, philosophy, information systems and engineering, health care, artificial intelligence, military technology, ethics, human rights, law, and religion.

Together, these individuals represent a vast network of organizations, including over 24 universities and colleges,10 public and civil society organizations, and three hospitals, as well as various private sector organizations.

Please note, due to differences in how roundtables were summarized by hosting organizations, this report may not represent the full scope of the roundtables' audience size. In addition, because certain information was conveyed anonymously, a full breakdown of all roundtable participant data is not available.

Participation by hosting institution is as follows:

CEPI FGV Direito São Paulo – Brazil

Participants: 80, including online participation

Speakers/Presenters

- **Maraísa Cezarino** (Lawyer, Daniel Law; Pro-bono Practitioner, Casa1)
- **Paula Marques Rodrigues** (Partner, Daniel Law; Law and Technology Specialist, POLI/USP Brazil; Civil Law and Civil Procedure Specialist, EPD Brazil)
- **Luiza Sato, LLM** (Partner, TozziniFreire)

Participant Background and Represented Organizations

- Participants represented academia, private companies, public sector, and Brazilian and international civil society, with focuses on public interest technology, engineering, religion, internet freedom, health care, legal rights, and artificial intelligence. This included representatives from seven Brazilian universities and colleges (all non-PIT-UN member universities except the hosting institution), two hospitals, one healthcare network company, and several civic and research organizations.
- Student participation mostly comprised those from graduate law programs, master's degree programs, and doctoral programs.
- Particular care was taken to reflect sectoral, regional, gender, and racial diversity among participants.

Read the university report from CEPI FGV Direito São Paulo's roundtable **here**.

Cleveland State University: Cleveland, Ohio, United States

Participants: 15

Speakers/ Presenters

- **Emmanuel Ayaburi, PhD** (Assistant Professor of Information Systems, College of Business, Cleveland State University)
- **Joseph Carvalko, JD** (Director, Technology and Ethics Working Group, Interdisciplinary Center for Bioethics, Yale University)
- **Michael X. Delli Carpini, PhD** (Director, PIT-UN Program, University of Pennsylvania)
- **Shannon French, PhD** (Professor of Philosophy, Inamori International Center for Ethics and Excellence, Case Western Reserve University)

- **Brian Gran, PhD, JD** (Professor, Department of Sociology, Case Western Reserve University)
- **Ray Henry, PhD** (Associate Dean, College of Business, Cleveland State University)
- **Mihir Kshirsagar, JD** (Director, PIT-UN Program, Princeton University)
- **Nikhil Marda, MS** (Policy Advisor, National AI Initiative Office, White House Office of Science and Technology Policy)
- **Charles McElroy, PhD** (Assistant Professor of Information Systems, College of Business, Cleveland State University)
- **Nigamanth Sridhar, PhD** (Provost, Cleveland State University)
- **Patricia Stoddard Dare, MSW, PhD** (Designee to PIT-UN, Cleveland State University T.E.C.H. Hub)
- **Martin Wolf, PhD** (Professor, Department of Mathematics and Computer Science, Bemidji (Minnesota) State University; Director, Association for Computing Machinery (ACM) Ethics and Society Committee)

Participant Background and Represented Organizations

- Most participants were from academia, with a broad array of interdisciplinary expertise represented, including ethics, public interest technology, information systems, health care, artificial intelligence, and military technology.
- One-third of participants were explicitly recruited for their expertise in ethics and technology.
- Six American universities were present at the roundtable: four PIT-UN member universities and two non-PIT-UN member universities.

Stillman College: Tuscaloosa, Alabama, United States

Participants: 55

Speakers/Presenters

- **Eric Carlton** (Principal, Reinvigorate)

- **Derrick Gilmore, PhD** (Executive Vice President, Stillman College)

- **Kevin Harris, PhD** (Program Chair and Associate Professor, Department of Computational and Informational Sciences, Stillman College)

- **Joseph Johnson, MS** (CEO/Founder, Telein Group)

- **Robert Santos, MS** (Director, United States Census Bureau)

Participant Background and Represented Organizations

- Participants included both students and faculty from academia, as well as industry leaders, public service administrators, civic and social justice activists, and community members.

- Seven American universities were present at the roundtable: two PIT-UN member universities and five non-PIT-UN member universities.

University of Edinburgh: Edinburgh, Scotland

Participants: 22

Speakers/ Presenters

- **Nina Maria Frahm, PhD** (Postdoctoral Researcher, School of Communication and Culture, Department of Digital Design and Information Studies, Aarhus University in Denmark)

- **Emma Frow, PhD** (Associate Professor, School for the Future of Innovation in Society and the School of Biological & Health Systems Engineering, Arizona State University)

- **Luke Stark, PhD** (Assistant Professor, Faculty of Information and Media Studies, University of Western Ontario)

- **Shannon Vallor, Ph** (Baillie Gifford Chair in the Ethics of Data and Artificial Intelligence, Edinburgh Futures Institute, University of Edinburgh; Director, Centre for Technomoral Futures)

Participant Background and Represented Organizations

- Five global universities—from Denmark, Canada, the United States, and Scotland—were present at the roundtable, including two PIT-UN member universities.

- Participants included technology practitioners, industry professionals, innovators, and activists with a variety of backgrounds including philosophy, scientific and technological services, and engineering.

- The attendees and speakers also represented a diverse array of career stages ranging from students to professors and company directors.

Read the university report from the University of Edinburgh **here**.

Initiative Activities and Timeline

Phase 1: Initiative Launch (May – June 2022)

- New America and USAID complete a consultative process to prepare for the initiative launch.

- The Technologist Code of Ethics initiative is announced at RightsCon 2022 by New America and USAID (June 10, 2022). The announcement includes two events:

    - **A Conversation on How to Build an Inclusive and Rights-Respecting Digital Future** [Zoom-side chat between USAID Administrator, Samantha Power and New America CEO, Anne-Marie Slaughter]

    - **A Technologist Code of Ethics: Building a Rights-Respecting Digital Future** [Panel]

Phase 2: Landscaping, Consultations, and Outreach (June – August 2022)

- New America completes a brief landscaping of existing and complementary workstreams related to a technologist code of ethics.

- New America releases a request for proposal (RFP) seeking applications from PIT-UN member universities interested in hosting a Technologist Code of Ethics roundtable. Four university proposals are accepted.

Phase 3: Convenings (November – December 2022)

- Technologist Code of Ethics roundtables are held at four universities around the world:

- Stillman University – Tuscaloosa, Alabama, United States (November 17, 2022)
- University of Edinburgh – Edinburgh, Scotland (November 18, 2022)
- Cleveland State University – Cleveland, Ohio, United States (December 5, 2022)
- CEPI FGV Direito São Paulo – São Paulo, Brazil (December 15-16, 2022)

Phase 4: Collate and Share Findings (January – June 2023)

- New America collates roundtable materials to inform a public-facing summary of findings. The report will be published on newamerica.org in May.
- New America presents the summary report during the RightsCon 2023 interactive roundtable session, "Code Word, Ethics: Collaborating on Guiding Principles for Technologists" (June 5-8). The roundtable will feature:
  - **Afua Bruce**, Principal, ANB Advisory Group
  - **Dr. Charles McElroy**, Assistant Professor of Information Systems, College of Business, Cleveland State University
  - **Allison Price**, Senior Advisor, Digital Impact and Governance Initiative at New America
  - **Sophie Stone**, PhD Candidate and Research Assistant, University of Edinburgh

Phase 5: Next Step Recommendations to Develop Guiding Principles for Technologists (June 2023 onward)

- At the conclusion of this consultation process, New America recommends the following steps to creating **guiding principles for technologists** in order to establish standards and norms that affect all professions working as technologists***:***
  - **Identify an independent entity to move the drafting process forward.** This should be a global civil society entity that

demonstrates expertise and involvement in the fluid field of tech and ethics, in addition to having access to the resources and regional reach needed to host an inclusive process.

- **Sustain and encourage open dialogue around the development of technologist guiding principles, focused on global inclusion, cross-sector collaboration, and equity.** Continue conversations begun during the academic-hosted roundtables. Intentionally and openly engage with stakeholders across sectors, particularly engaging private sector perspectives, including technologists, decision-makers, and leaders, which were underrepresented in the original roundtable process.

Examples of Ethical Frameworks

The following list includes examples of codes, principles or other forms of guiding ethical frameworks that were either cited during the initial research or during the collaborative inquiry stage of the process. This list is representative of the variety and scope of the field, and although comprehensive, it is not exhaustive.

ASEAN Online Business Code of Conduct

Asilomar AI Principles

Association for Computing Machinery Code of Ethics and Professional Conduct

Barcelona Declaration

Codebase Code of Conduct

Data for Children Collaborative with United Nations Children's Fund Guidance on Ethics

Designer's Code of Ethics

DIYbio Code of Ethics from European Congress

Family Educational Rights and Privacy Act

Geostationary Space Station Good Practices

Health Insurance Portability and Accountability Act
Hippocratic Oath
Institute of Electrical and Electronics Engineers Ethically Aligned Design
Internet Corporation for Assigned Names and Numbers Policy Development Process
National Society of Professional Engineers Code of Conduct
Never Again Pledge
Organisation for Economic Co-operation and Development (OECD): **Recommendation on Responsible Innovation in Neurotechnology**
Organisation for Economic Co-operation and Development (OECD): **Recommendation on the Ethics of Artificial Intelligence**
Partnership on AI Responsible Practices for Synthetic Media
Payment Card Industry Compliance Guide
Rigour, Respect, Responsibility: A Universal Ethical Code for Scientists
Scottish Intercollegiate Guidelines Network Clinical Guidelines in Relation to Delirium
Society of American Foresters Code of Ethics
Society of Petroleum Engineers Code of Conduct
Software Engineering Code
Tianjin Biosecurity Guidelines for Codes of Conduct for Scientists
United Kingdom Research and Innovation British Standard for Responsible Innovati

United Nations Educational, Scientific and Cultural Organization (UNESCO): **Recommendation on the Ethics of Artificial Intelligence**

United States Data Science Institute Code of Ethics and Standards

Notes

1 National Association of Social Workers, "Code of Ethics," https://www.socialworkers.org/About/Ethics/Code-of-Ethics/Code-of-Ethics-English.

2 See https://www.newamerica.org/pit/about/. Public interest technology (PIT) refers to the study and application of technology expertise to advance the public interest in a way that generates public benefits and promotes the public good. By deliberately aiming to protect and secure our collective need for justice, dignity, and autonomy, PIT asks us to consider the values and codes of conduct that bind us together as a society.

3 Charles McElroy, Sybilla Waltrip, and Shilpa Kedar, *Technologist Code of Ethics Roundtable: Cleveland State University Grant Final Report Narrative* (Cleveland Ohio: Cleveland State University, 2023).

4 CEPI FGV Direito São Paulo, *Final Report: Technologist Code of Ethics Roundtable* (São Paulo, Brazil: CEPI FGV Direito, 2023), https://bibliotecadigital.fgv.br/dspace/handle/10438/33536.

5 CEPI FGV Direito São Paulo, *Final Report: Technologist Code of Ethics Roundtable* (São Paulo, Brazil: CEPI FGV Direito, 2023), https://bibliotecadigital.fgv.br/dspace/handle/10438/33536.

6 CEPI FGV Direito São Paulo, *Final Report: Technologist Code of Ethics Roundtable* (São Paulo, Brazil: CEPI FGV Direito, 2023), https://bibliotecadigital.fgv.br/dspace/handle/10438/33536.

7 Brian Wynne, "Public Uptake of Science: A Case for Institutional Reflexivity," *Public Understanding of Science* 2 (4), 321–337, https://journals.sagepub.com/doi/10.1088/0963-6625/2/4/003.

8 S.A.R. Stone, R.D.J. Smith, M. Vidmar, F. Cuttica, *Critical Codes: Roundtable Report – A Public Interest Technology Event on Ethical Codes of Conduct as a Mode of Governance for Emerging Technologies* (Edinburgh: University of Edinburgh, 2023), https://rri.ed.ac.uk/wp-content/uploads/2023/04/CC-report_v1_3.pdf.

9 S.A.R. Stone, R.D.J. Smith, M. Vidmar, F. Cuttica, *Critical Codes: Roundtable Report – A Public Interest Technology Event on Ethical Codes of Conduct as a Mode of Governance for Emerging Technologies* (Edinburgh: University of Edinburgh, 2023), https://rri.ed.ac.uk/wp-content/uploads/2023/04/CC-report_v1_3.pdf.

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