

## AFTERWORD

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THE FORD FOUNDATION SUPPORTS “visionary leaders and organizations on the frontlines of social change.” Tara McGuinness and Hana Schank fit the bill, as do the women and men they write about so compellingly in these pages: Marina Nitze, who collaborated with the state of Rhode Island to clear an eighteen-month backlog of foster care placements in a weekend; Michael Brennan and Adam and Lena Selzer, cofounders of Civilla, who worked with the state of Michigan to reduce the length of the form that residents must fill out to apply for unified benefits by 80 percent, from a daylong process to twenty minutes, dramatically increasing the number of fully and accurately completed forms, reducing the burden on caseworkers, and speeding the flow of benefits; or Jos de Blok, who revolutionized community nursing in the Netherlands.

Many of these leaders have been practicing public interest technology without necessarily using the term or recognizing the concept. A great contribution of this book is to bring many disparate people and organizations together under a common rubric, one that both pulls together existing work and pushes us all to think about “technology” as much more than the shorthand we use to refer to a piece of digital hardware or software.

In its widest sense, technology refers to the application of scientific knowledge for practical purposes, or, more colloquially, the transformation of research into tools. Public interest technology, as McGuinness and Schank define it, brings together multiple strands of science around design, data, and delivery and applies them to the solution of public problems. That process of application, in turn, is, in their words, a *practice*, a “new practice . . . that better positions organizations to be responsive problem solvers.”

The definition of public interest technology adopted by the Public Interest Technology University Network is similar: “The study and application of technology expertise to advance the public interest, generate public benefits, and/or advance the public good.” It is not accidental

that this definition is emerging now. Like the emergence of Black American studies, ethnic studies, and women's studies in the 1960s and 1970s, all of which sought to redress a paucity in scholarship about groups deemed to be on the margins of society, public interest technology offers a counterweight to dominant narratives about who technologists are, what they make, and whom they make it for.

More concretely, public interest technology offers us a framework from which to consider how to advance and protect human rights in a digital world. It argues for a systematic way of studying technology in the world—including unforeseen and adverse consequences. And it offers us new language and vocabulary with which to understand how technological tools and innovations may impede and erode hard-fought rights won and gained from the early nineteenth century through the twentieth century. As mass protests swept through the United States during the summer of 2020, we not only heard cries for the right to breathe and exist, but for the right to not be surveilled or attacked through technological weaponry.

### A Brief Historical Excursion

To understand the full value and potential of where we are, it's necessary to go back a bit. We are both international lawyers by training; we both came of age as public interest law was becoming not only a field but an indispensable part of any good law school's curriculum and career offerings. The creation of that field was not accidental; it was spurred and funded by philanthropy, with the Ford Foundation in the lead. We both thus quickly saw an analogy, even if an imperfect one, between public interest law and public interest technology.

Back in 2013, many years before the work of intentionally marrying the fields of technology and public interest began and this emerging field of PIT had a name, the Ford Foundation was struggling and failing to find sufficient and culturally appropriate technologists to work with grantees. As foundation staff researched the problem, they found it to be similar to so many challenges arising from the enormous technical transformation sweeping through parts of the world. So Ford took the challenge to its peers as the focus of the first-ever NetGain collaboration.

NetGain was an attempt to pick a few large, complex, structural technology-driven problems that all foundations were grappling with and to wrestle with them together, president to

president, as a means of developing smarter solutions. In this collective spirit, the MacArthur, Open Society, Mozilla, Knight, and Ford Foundations agreed that the first NetGain Challenge should focus on what they called “the tech talent pipeline.” Further research revealed that even though more students were graduating with computer science degrees than ever before in history, very few of these computer scientists would find their way into a career path beyond academic research or the private sector. Even fewer of them had the training to wield their technological knowledge in service of addressing social problems.

The foundations commissioned Freedman Consulting to create a framing document for their discussion. The resulting report, *A Future of Failure? The Flow of Technology Talent into Government and Civil Society*, documented the structural barriers that were keeping technical talent off a pathway to public service. NetGain presidents used that document as a road map for several shared grants that directly addressed some of the identified gaps. They funded fellowships to civil society and government, interdisciplinary courses between computer science and law schools, peer-reviewed journals so that public interest technologist academics could publish, and professional development opportunities. These grants made clear the mammoth scope of the challenge ahead, but also the reward in solving it.

Freedman’s second report, *A Pivotal Moment: Developing a New Generation of Technologists for the Public Interest*, came with a set of twenty-six recommended “interventions” for foundations and individual philanthropists to consider on the demand side, the supply side, and the marketplace to grow the field of public interest technology. Reading that report, Anne-Marie was inspired to write a grant proposal designed specifically to “enable individual technologists to plug into a larger system—a set of educational and career pathways that reinforce one another and add up to a larger whole.” This book helps define the parameters of that larger ecosystem.

A final report, *Building the Future: Educating Tomorrow’s Leaders in an Era of Rapid Technological Change*, built a blueprint for universities to break down silos between the technological- and the humanities-based programs to develop technologists who would be more effective in different environments such as civil society and government. The report suggested that we needed educational programs that would prepare individuals to be able to move back and forth across different communities of practice, mixing and matching different disciplinary

traditions. A convening with twenty-five university presidents led to the establishment of the Public Interest Technology University Network. That network, discussed below, is now thirty-six universities strong, all of which are legitimizing, expanding, and professionalizing a practice that historically had been the work of outliers.

As McGuinness and Schank make abundantly clear, the public interest technology ecosystem depends on many different hubs: not only specifically tech-focused organizations like Code for America and Civic Hall, both of which have been indispensable to building this field, but also a host of organizations that do *not* think of themselves as tech-oriented but that use the design-data-delivery approach. That broadening of both the definition of technology and of the category of organizations and individuals who use it is critical for the further development of the field.

### The Public Interest Technology University Network

A key piece of the PIT ecosystem is the university and college pipeline. PIT-UN launched in March 2019 with twenty-one charter members: Arizona State University, Carnegie Mellon University, the City University of New York, Columbia University in the city of New York, Florida International University, Georgetown University, Georgia Institute of Technology, Harvard University, Howard University, the Massachusetts Institute of Technology, Miami Dade College, Olin College of Engineering, Pardee RAND Graduate School, Pepperdine University, Princeton University, Stanford University, the University of California, Berkeley, the University of Chicago, the University of Michigan, the University of Texas at Austin, and the University of Virginia.

As of this writing, we have thirty-six members. The network is the spine of a growing community of practice: a group of faculty members and administrators who meet regularly to share their innovations—new courses, internships, student and community projects, certificates offered, and programs created. Listening in on these calls is a rare opportunity to watch field building in practice. To hear about how

- MIT's Schwarzman College of Computing, UVA's School of Data Science, and UC Berkeley's Division of Data Science and Information (DDSI) are all creating multidisciplinary spaces where computer and data scientists will interact with ethicists, philosophers, humanists,

and social scientists to explore their ethical and social responsibilities in a wider context.

- The Pardee RAND Graduate School has completely revamped its curriculum to train students in three broad areas of policy engagement: research, analysis, and design; community-partnered policy and action; and technology applications and implications.
- The University of Chicago has pioneered a two-year master's degree in computational analysis and public policy; Arizona State University (ASU) has created a master's of science in public interest technology. Many other universities have created new degrees and certificates to combine science, particularly computer and data science, and public policy.
- Carnegie Mellon University, Georgia Tech, UT Austin, Harvard University, and others are aiming to foster a culture of interdisciplinary work without creating new academic infrastructure. They have done this through creating nontenure public interest technology roles and integrating public interest modules and principles into their teaching and research.
- Miami Dade College and CUNY's College of Staten Island are creating a direct pipeline of course work and experiences for high school students of color to prepare them for associate and bachelor's degrees in PIT-focused majors.
- Florida International University, Carnegie Mellon University, Olin College of Engineering, Princeton, and Stanford University have created fellowship and internship programs for both graduate and undergraduate students to use applied, tested digital service methods to help solve problems during their placement in government and local organizations.
- Georgetown, Pepperdine, and Arizona State universities offer opportunities for midcareer professionals in government to enhance and upgrade skills. Georgetown is piloting replicable workshops on AI & Ethics for those working at the intersection of technology and policy, while Pepperdine and ASU offer weekend-based certificate and master's degree programs for those seeking to learn about the latest technological tools they can use to make local governments more transparent, inclusive, and responsive to the residents they serve.
- The University of Texas and the University of Michigan cohosted the first of what they hope will be an annual undergraduate PIT conference to rotate across their institutions.
- Howard University, in partnership with Georgetown and Stanford, leads an effort to

capture case study narratives of past public interest technology projects, so that others may learn from PIT-UN members and build upon their successes.

These institutions see public interest technology as an interdisciplinary endeavor that places the welfare of society at its center. They seek to engage a cross section of disciplines to determine how to prevent technology from exploiting the structural and institutional barriers that erode the rights and advancement of its most vulnerable citizens.

## Looking Forward

Think tanks emerged on the policy landscape roughly a century ago to provide “good government” solutions to difficult social and economic problems. They have traditionally hired lawyers, economists, and PhD- or master’s-level experts in fields like education, environment, labor, housing, and national security. Today, in think tanks, government offices, and civic organizations, we need a technologist at every problem-solving table. Not necessarily—or even mostly—to create or recommend a technological solution, but to bring a tech mindset—an engineer’s, designer’s, or data scientist’s mindset—to the problem at hand.

We believe an essential element of advancing social justice is ensuring that technology is a force for public good. At Ford the entire foundation’s work has been transformed by our learnings in the public interest technologist sphere. In the fall of 2016 Ford began hiring technology fellows to work in each of the foundation’s program areas. The aim is not only to bring a tech lens to the foundation’s work but also to cultivate a generation of tech leaders equipped to use technology to challenge inequality in all its forms and expand inclusion and opportunity.

This wonderful book makes the best possible case for why and how we need to transform our understanding of what public problem solving is about and how we need to reinvent government to build the capacity necessary to tackle problems at scale. But McGuinness and Schank are the first to recognize how far we have to go. As they write in the final chapter, “The good work happening today is a drop in the ocean of how most governments and nonprofits function. To make the kind of change required to scale the work described in this book will take a lot of little and big actions. So where do we begin?”

They argue for storytelling and investing in people, both of which are essential. We would add a number of additional proposals, many of which build on work that is already ongoing, but which outline an even bolder vision.

1. *A Cornucopia of Academic Opportunity*. Every university or college that offers a policy track of some kind—whether a certificate, a major, an advanced degree in policy, public and international affairs, or public administration—should have a tech track within it, as prominent and well funded as the economics track. The University of Chicago’s MA in computational science and public policy is a great example, as is ASU’s MS in public interest technology.
2. *A Digital National Service Corps*. In the summer of 2020, amid the pandemic and the massive economic crisis, proposals surfaced for a Digital Works Progress Administration, modeled on the New Deal program that paid people across the country to go to work on government projects. Now imagine that we finally pass a law requiring all young people, and encouraging all people, to devote a year of their lives to national service, either physical or virtual. Those who chose the virtual track could get their first taste of public interest technology. Over the course of the year they would be able to take webinars and trainings introducing them to all sorts of public interest tech opportunities in multiple sectors.
3. *From CPA to CPIT*. Like public interest lawyers, public interest technologists would see themselves as part of a licensed profession with a mission of service and advocacy in technological innovation. They would be public problem solvers specifically skilled in design, data, and delivery. It should be possible to set up a global entity to license them, one that would begin by defining criteria that could be met both by education and above all by service hours.
4. *A Civic Hall in Every City*. Civic Hall in New York City is a space where community activists, practitioners, and scholars meet. Many would define themselves as part of the civic tech movement pulled together by Code for America, the Personal Democracy Forum, and other hubs for young people committed to using technology in the public interest. We need more of these spaces, which can serve as a kind of tech public square. They

should have common membership criteria, mission statements, and programming, even if they take different forms and are funded differently in their respective communities. But they should aim to provide a meeting place to bridge government and civil society initiatives in the broader service of public interest technology.

5. *A Black Tech Ecosystem*. The for-profit technology companies are overwhelmingly white, which makes them uniquely unsuited to serve a plurality country in which no one ethnic or racial group has a majority. It is essential, particularly for public interest technology, that we build entire ecosystems of technologists of color, starting with Dr. Fallon Wilson's idea of a Black Tech Ecosystem. To fund this ecosystem, just as we fund any innovation, we need multiple investment funds—venture capital, impact funds, angel investors, funding collaboratives—to invest specifically in Black technologists and technologists from other communities of color.

We hope that professors in all the universities and colleges listed above and many more will assign *Power to the Public* as the first book on the syllabus for any course exploring how technology can be used in the public interest. We hope that college and university presidents will choose it as a first-year pre-read. We hope that nonprofit organizations, from think tanks to community advocacy and service providers, will recommend it as a must-read for their staff. We hope that aspiring politicians at every level, from the school board to the cabinet, will read it and reimagine what government can do and how it must do it. We hope it will be a requirement for anyone wishing to take the civil and foreign service exams, for both federal and state government.

People throughout the United States and around the world need hope and belief in our collective capacity *to solve problems*. Indeed, in many countries we need to forge a new social contract with our governments: to provide health, justice, liberty, equality, safety, and prosperity through new and far more equitable systems. For all who seek to engage in this work, *Power to the Public* is both a manual and a manifesto.