

Truth Telling: Ensuring The Lived Experiences, Values, and Contributions of BIPOC Communities Remain the Vanguard of Public Interest Technology

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Introduction

Community organizing, research, and development efforts with underrepresented practitioners is necessary to inform the nascent field of public interest technology (PIT). Diversity, equity, and inclusion efforts are strengthened when underrepresented stakeholders within the field of PIT find each other, co-create, and share knowledge -- ultimately developing problem definitions and solutions that better align with all communities and those most impacted by the proliferation of technology. A great deal of community input is needed before one line of code is ever written.

Although it's exciting to imagine the future of public interest technology, it's unclear how communities of underrepresented practitioners, specifically Black, Indigenous, and people of color (BIPOC) communities, will help shape it. It is also difficult to imagine a future for the field of PIT without critically examining both the past and present. Before we can speculate on the future, we will first examine a sampling of stories from historic Black practitioners who demonstrate through their activism work to dismantle racism, the importance of an anti-racist and inclusive framing of public interest technology. These harbingers of PIT embody the ideal notion of public interest technology.

Our objective is to provide historical and anecdotal evidence that demonstrates how these practitioners are predecessors of PIT and how violence, survival and the struggle caused by white supremacy has animated innovation and technology in Black communities. We cite a few present day examples where BIPOC communities have full participation and support

on this pathway to the future of PIT. We also acknowledge and highlight the legitimate reasons why some practitioners may doubt the field's ability to realize a more diverse, equitable, and inclusive future given the existing historical and empirical evidence and the current social impact efforts that continue to play out today.

The working definitions of public interest technology speak to the identities and lived experiences of communities most impacted by the proliferation of technology.

The PIT Knowledge Network (PIT-KN) team at the University of Michigan, considers the field of PIT to be an ever expansive ecosystem made up of everyone in the supply chain of technology, including the end user. "As such, public interest technologists design, implement, and advocate for tech-enabled solutions with the goal of advancing the common good in an equitable manner." In order to achieve this goal, the field must incorporate the individual lived experiences from underrepresented communities who are often most directly and sometimes negatively impacted by these solutions. Knowledge of how these communities navigate systems of racial and gender inequity, often accelerated by technology, is paramount.

The field should establish a working definition of PIT for itself that speaks to the goals of diversity, equity, and inclusion. A few iterations of the definition of PIT have surfaced over recent years, including New America's own which defines it as, "[The study and application of technology expertise to advance the public interest/generate public benefits/promote the public good.](#)" Like technology and its developers, these definitions were ostensibly created from a small group of stakeholders that doesn't explicitly reflect a wide-range of input from underrepresented communities.

The PIT-KN team at University of Michigan released a report called, "[Building Career Pathways for Diverse PIT Entrepreneurs](#)"¹ which found that several social entrepreneurs did not ascribe to the normative or widely used definition of public interest technology that posits that you must have a technical skill or background.

Overall, there is evidence that this definition can reduce or even silence the multitude of people, including participants of the PIT-KN project, who operate within the field, and who see themselves as addressing social justice issues, but who often do not have formal STEM backgrounds or training. For example, #BlackTechFutures Research Institute conducted a 2021 survey of their own Black Tech Ecosystem Builders across four cities (e.g. Houston, Memphis, Birmingham, and Nashville), and found that only 28% of them reported having a technology degree (e.g., engineering, computer science, etc). They define Black Tech Ecosystem Builders as Black practitioners who work to build thriving Black tech ecosystems² in their local municipalities.

Another confounding challenge experienced by practitioners is the fact that there are some people *with* STEM backgrounds who *do* identify as technologists, but *do not* see themselves and their lived experiences as being reflected and valued as part of the field. For instance, the University of Michigan's study of PIT entrepreneurs, revealed that this sentiment is more widespread than is recognized. For example, Michael Odiari, founder of [Check](#), an app that facilitates contactless traffic stops as a result of the escalating violence during routine traffic stops they saw occurring, described themselves not as a public interest technologist, but rather as a *social technology evangelist* who brings about change through co-creating solutions within the very communities that are directly impacted by the

¹ PIT entrepreneurs also referred to as social entrepreneurs

²#BlackTechFutures Research Institute defines a Black Tech Ecosystem as a thriving ecology of institutions within Black communities (e.g. Black tech startup and support organizations, Black tech workforce organizations, Historical Black Colleges and Universities [HBCUs], churches, and social justice tech organizations) and outside of them (e.g., entrepreneurship centers, local government, economic offices, city workforce boards, chambers of commerce, etc.) that are optimized and aligned to expedite the growth of Black tech futures within a city.

problem. In their view and others interviewed by the PIT-KN team, the field could benefit from further re-defining in order to convey the fact that underrepresented communities that have proximity to a problem are and serve as valuable change agents rather than passive recipients to these solutions. How the lived experiences of these diverse segments connect and mirror each other reveals insightful patterns that can help us better understand the context for PIT problems and solution making.

Sentiments of exclusion are also consistent with a [2018 field study led by #MoreThanCode](#) that asked BIPOC stakeholders through both interviews and focus groups, about their views of public interest technology. Many of their respondents associated the broader PIT field as being “predominantly White, male, D.C. focused, and funder-driven.” The limitations of the working definition for PIT in conjunction with the continued institutional support of funders to canonize this field, will require us to take the steps needed now to broaden the participation, provide acknowledgment, and recognize the value that these diverse stakeholders bring to the table, as opposed to having to later overhaul the field’s lack of diversity, equity, and inclusion (DEI) in the future.

Making this point plain, Dr. Fallon Wilson, Co-Founder of #BlackTechFutures Research Institute notes how this noble effort to canonize the field can also serve as a cautionary tale for those individuals who are critical of public interest technology. She states:

If accreditation [at institutions of higher learning] takes root... with [backing from] philanthropic investments, they will train thousands of undergraduate and graduate students who will, in some ways, battle tech companies for the sanctity of freedom in a digital world. Public Interest Technology will fail for the same reasons all great social interventions fail in this country: It is agnostic about racism. Specifically, in how it affects the ability of Black people to fully participate in this new discipline and field.

Moreover, there is empirical evidence that examines the impact of systemic racism that is currently present in the tech pipeline (e.g. from primary grades to job placement) and how

it effects high potential BIPOC students who frequently encounter endless obstacles that shape and limit their opportunities to ultimately enter any STEM related career fields. The data shows that many BIPOC students are being left behind and excluded at multiple points on their educational journey to become part of the PIT Field (see insert below).

Barriers BIPOC Students Face at the K-12 and Higher Education Levels

- Black students are 8% percent less likely to have access to high-speed internet and 4% percent more likely to have no internet access than their white counterparts. This is augmented by the fact that since March 2020, 15 million children missed school as result of not being able to connect online.³
- Black students are least likely to have computer science instruction in their public schools. Though there has been a rise in the number of Black students taking advanced placement (AP) Computer science, they still lag behind their white peers. Specifically, Black students in Grades 7 to 12 are less likely than their white and Hispanic counterparts to be exposed to computer science learning at school.⁴
- African Americans represent only 7% of STEM majors.⁵ Black students are most likely to leave a STEM major their first year in college.⁶
- Black STEM PhDs are least likely to be hired at four year colleges and universities to teach STEM. For instance,
- Though HBCUs produce the largest number of STEM and CS graduates, their entry into tech companies is fraught with many racial obstacles.⁷ For example, .

If we consider these realities, it is clear that if the prerequisite of being included within public interest technology rests upon being a formally trained and educated technologist,

³ American Community Survey (2019)

⁴ Gallup and Google

⁵ <https://cew.georgetown.edu/cew-reports/african-american-majors/>

⁶ Does STEM Stand Out? Examining Racial/Ethnic Gaps in Persistence Across Postsecondary Fields
Catherine Riegler-Crumb, Barbara King, Yasmiyn Irizarry

⁷ Jennifer Elias 2021 Google's program for Black college students suffered disorganization and culture clashes, former participants say

many current and future underrepresented practitioners would not be included in the mission of defending our digital democracy.

The field of PIT develops knowledge by examining the impacts, technology, and actionable insights of historical BIPOC practitioners that we can use today.

There is evidence that increased interest in the field of PIT began nearly twenty years ago in the footholds of government, non-profit, and private sectors.⁸ However, we argue that underrepresented practitioners of the past, driven by their lived experiences and shaped by their identities, and who operated in a time well before advanced computing and technology, were also driving forces of change in this field decades before it became wide scale, notable and mainstream today. To understand the broad impact and influence of these individuals, notably Ida B. Wells, Fanny Lou Hamer, and August Wilson, we use the Merriam-Webster [definition of technology](#) or “the practical application of knowledge especially in a particular area”. We highlight their knowledge and its application in the interest of the public. While the rapid advancements in technology continues, the technology or tools used by practitioners then was understandably rudimentary compared to the tools that are available today, but the knowledge they possessed to root out systemic racism and strategies to create equity is a reflection of their lived experiences, identity, and values -- a constant driving force of change. We illustrate how the knowledge from underrepresented practitioners can illuminate learning for the field of public interest technology and provide the context for solution making.

Ida B. Wells

Ida B. Wells is known for her journalistic efforts to document and shed light on lynchings and the conditions of Blacks throughout the South. Her published reports and consistent

⁸ Hines, Michael. 2020. [As public trust in the tech industry wanes, support for the field of public interest technology has grown](#).

spotlight brought needed attention to the vigilante and inhumane practice of white southerners. The spirit of investigative journalism motivated by lived experiences, first hand accounts, and empirical evidence is embodied and carried on by several contemporary practitioners like [Mutale Nkonde](#) who started her career as a broadcast journalist before transitioning into the world of tech. Nkonde is working to change the tech neutrality narrative and empower communities to advocate for the development of anti-racist policies to govern the design and deployment of artificial intelligence (AI) systems. In 2019, she and her team introduced both the Algorithm and Deep Fakes Accountability and the No Biometric Barriers Acts to the U.S. House of Representatives; the latter bill would go on to prohibit the usage of facial and biometric recognition in most federally funded public housing buildings.

Fanny Lou Hamer

Fannie Lou Hamer's efforts to reform voting rights can be seen today by many public interest technology practitioners working at the grassroots level. Mrs. Hamer was a sharecropper with little formal education who used her voice to testify at the 1964 Democratic National Convention (DNC) about her personal experience of trying to register to vote in Mississippi. She used television to share her story of loss of employment, abuse, intimidation, and eviction from not only the Mississippi police, but her landlord and employer. Mrs. Hamer shared her lived experience and invited others to do the same in an effort to upend the current voter restrictions and abuse occurring during her time.

Leveraging technology, in this case television, Fanny Lou Hamer utilized this platform to expand the reach of her voice to inform, drive, and change the national narrative around the need for national action and enforcement of voting rights across America. Today, this effort continues with political leaders and voting rights activists like Stacey Abraham and her team of multidisciplinary practitioners of data scientists, community organizers, artists, and others organized by Fair Fight Action who used technology to help register thousands of new Georgia voters in 2020. Other practitioners, like PIT entrepreneur Maria Yuan from

[IssueVoter](#), who's mission is to give everyone a voice in our representative democracy. IssueVoter is an online platform that extends engagement beyond elections on policy that affects our lives, increases communication between constituents and representatives, and catalyzes more informed voters.

August Wilson

August Wilson grew up in Pittsburgh, Pennsylvania and his 1979 play "Jitney", humanizes and brings to the mainstream, the experiences of Black owned and unlicensed cab services (jitneys) that served the predominately African American community of the Hill District in Pittsburgh. The play is based on his own lived experiences growing up in that city and navigating its public transportation system, including taxis, that was designed to discriminate and circumvent Black communities like the Hill District. The innovation of the Jitney service -- a way for Black people to safely get from point A to B - was necessary. In this example, innovative solutions are often birthed out of survival and the lack of public resources for underrepresented communities who have not been considered in the design of mainstream needs. Today, we would consider these Jitney owners to be operating similar to a peer-to-peer ride sharing company such as those developed by PIT social entrepreneur Kiersten Harris, Founder of [HerRide](#), who launched and is now iterating on a more equitable and safe ride sharing experience for women.

Present day, we can see other examples of practitioners who are using tools, some of which are technology based, to address inequities and other social issues that undergird communities of color (see Table 1).

Table 1. Examples of Present Day Tools and Efforts to Address Social Issues

Tool	Social Issue
Online Survey	The creation and use of an online survey to residents of a community to assess issues of availability and access to broadband internet.

Online Platforms	The development of an online platform to help residents of Flint, Michigan pay their water bill as the city addresses lead water issues.
Afterschool STEM Program	The creation of an afterschool program to educate and give exposure to Black and Brown students to STEM programming.
Hip Hop	The creation of shared stories from an artist who paints a picture of overcoming systemic racism in Queens, NY through spoken words over rhythmic beats.

What Will It Take To Ensure Everyone Has A Voice In The Future of PIT?

In this brief, we have explored how underrepresented PIT entrepreneurs and practitioners from the past and present have taken steps to help bring to fruition a future where full participation can be achieved. However, in order to fully achieve this future, we share a guiding value for the field of public interest technology.

Systemic racism is not solved by technology.

As stated, technology can be a useful tool for change, but in many cases technology has perpetuated systemic racism and fosters the narrative that public good must come at the expense of anti-Blackness. For example, the use of police data to justify increased surveillance, more targeting, and policing in poor neighborhoods and communities of color or the creation of public bathroom soap dispensers initially designed not to recognize the skin of darker people of color. Other overt examples include the use of advanced military grade weapons on citizens protesting police brutality. Computer science programs at colleges and universities continue to refine their curriculum to better explore how implicit biases and inherently skewed data often lead to unintended technological consequences --

as this work continues, an opportunity for better methods and frameworks to root out these design flaws should be developed with people from communities impacted by systemic racism.

More representation throughout the field of PIT is needed in order to develop solutions that benefit all communities. While developing solutions with the needs of underrepresented communities in mind, it is consequential that representation is met with value and attribution for their contributions. The unfortunate reality is that there does exist a history where the knowledge and scholarship of underrepresented communities have been largely marginalized, erased, and misattributed.

Call-to-Action for the Field of Public Interest Technology

- **Acknowledge contributions to new practices, innovation, and moonshots from underrepresented communities that aim to make technology more equitable.** Organizational leaders have reached a collective consciousness of the importance of DEI efforts, however, many underrepresented individuals still experience the invisible labor of volunteering their time and knowledge to DEI consultants and chief diversity officers without fully understanding how their input will be developed into new strategies. Developing transparent systems and processes that place value on the origins of knowledge and provide intellectual, social, or material rewards to individuals who contribute to shared goals is vital. Acknowledgement of contributions from underrepresented communities *is* reflective of a more thriving diverse, equitable, and inclusive future of work.
- **Make additional, sizable, and unrestricted investments to underrepresented practitioners to ensure that the knowledge of BIPOC stories are collected, analyzed and systemically used to become a driving force for public interest technology.** The lived experiences of the millions of people impacted by the

problems we hope to solve have actionable knowledge that can help in the development of solutions and policies. It's paramount that these lived experiences, values, and contributions drive the design, development, and use of emerging technology. As Jaime-Jin Lewis, a founder of Wiggle Room, a childcare app company, stated, "It's what has enabled us to set up a hotline in two weeks. Because I hired a parent who's had to cobble together childcare arrangements in four days with \$50 in their bank account. You just hire someone who's done the thing you're trying to do multiple times and they got the solution...Intentionally hiring and trying to pay them well as thought leaders, in the same way people overpay tech bros."

- **Invest in research and development efforts led by underrepresented practitioners to build digital public infrastructure that democratizes knowledge in the field and elevates community wisdom.** The PIT entrepreneurs in our study and other stakeholders who are underrepresented within PIT, face issues and challenges that are interconnected, intersecting, and compounding. Their level of nuance along with millions of others is valuable to keep track of. Fortunately, technologies like AI, machine learning, optimization, and blockchain can facilitate collaborative learning at scale while ensuring the contributions from underrepresented communities are valued in an equitable manner.

So what might a future of public interest technology look like? It depends on what we collectively decide to focus, plan for, and take action on. If investing in solving narrowly defined public interest problems with emerging technology is the goal, then we might give ourselves credit, while missing a crucial moment to stop and excavate what actually lies beneath the technology. Rather, the future of PIT depends on examining and fully incorporating all the people who help build or refine the use of this technology. If we hope to elevate the knowledge of practitioners from these underrepresented communities, we have to begin by asking the questions of *who* defines problems and *whose* perspectives are missing and *what* it might take to incentive co-creation with these missing practitioners. As

we continue taking steps to explore the ethics and values of the use of emerging technology these voices will be preeminent -- driving the field forward and addressing the common good in an equitable manner in doing so.

About the Authors

Raymar Hampshire is a resident social entrepreneur and member of the Public Interest Technology Knowledge Network (PIT-KN) project team at the University of Michigan. Hampshire's research interests include online learning communities, economic equity, and product design. A technologist that is excited about the values, lived experiences, and stories of underrepresented practitioners as key knowledge sources and drivers for the future of tech. Hampshire holds a Master's in Public Policy and Management from Carnegie Mellon University.

Dr. Fallon Wilson is the Vice President of Policy at the [Multicultural Media and Telecommunication Internet Council](#) (MMTC) where she launched a national campaign, Black Churches 4 Broadband to support digital access in black communities. She is also the co-founder [#BlackTechFutures Research Institute](#) which is funded by a Ewing Marion Kauffman Foundation's 2020 Open Knowledge grant. #BlackTechFutures Research Institute builds a national network of city-based researchers and practitioners conducting research on sustainable local black tech ecosystems. Prior to launching the #BlackTechFutures Research Institute, Dr. Wilson was the former Research Director for Black Tech Mecca where she developed the SMART Black Tech Ecosystem Assessment Framework. As a member of the Federal Communications Commission's Advisory Committee on Diversity and Digital Empowerment, Dr. Wilson chairs the Startup Diversity subgroup. Dr. Wilson is a 2019 TEDx Speaker (e.g. [Stop Ignoring Black Women and Hear of Our Tech Prophecies](#)). She is a Board Member of the State of Tennessee's Future of Work Taskforce and Co-Chairs [Nashville's smart city plan, Connected Nashville](#). Additionally, Dr. Wilson's research on first-

generation black college students' alternative tech pathways and black tech ecosystems has garnered notable research grants from Kapor Center and the Ewing Marion Kauffman Foundation. During the pandemic, Dr. Wilson launched Nashville's Digital Inclusion and Access Taskforce to address the effects of the pandemic and the digital divide on communities of color. She raised funding to do a city-wide assessment of Davidson County to ascertain internet connectivity and digital adoption. In seven months, she raised and launched a mixed-method city assessment of digital inclusion in Nashville. Because of her great work to support tech equity, Venture Beat as the modern-day Fannie Lou Hamer for tech equity. Dr. Wilson chairs the Tennessee Higher Education Commission's HBCU Success Board. Dr. Wilson has a BA from Spelman College and MA/PhD from the University of Chicago. As a public interest technologist, she discusses race, gender, faith, and civic tech issues. She is on Twitter @SistahWilson

Melissa Brown is the Co-Founder of the #BlackTechFuture Research Institute and founding member of the Chicago-based Black Researchers Collective. She has over 15 years of experience leading and conducting research and has spent the last three years conducting in-depth research, co-authoring reports, and building the capacity of local black tech innovators, community organizations, educators, and other institutions across multiple cities nationwide. One of her main objectives is to break down the silos between and across cities and institutions so that they can collect data and develop policy recommendations that can ultimately be used to help directly and positively impact their cities and Black communities.

Antonia Sweet has spent the past decade working in the education and youth development sphere focusing on breaking down barriers to people exercising their agency. Her belief in the power of data to make seen the unseen, but recognizes that while data may be neutral, the process by which it becomes useful information is not. Only through understanding the social in sociotechnology can we hope to use technology in an equitable way to serve people and solve problems. She has a bachelor's in anthropology and political science from the University

of Illinois at Chicago and is pursuing a master's of science in information with a focus on data science for social good/public policy.

"Truth Telling: Ensuring The Lived Experiences, Values, and Contributions of BIPOC Communities Remain the Vanguard of Public Interest Technology" is a collaborative effort from the Public Interest Technology Knowledge Network (PIT-KN) team at University of Michigan and #BlackTechFutures Research Institute.

Abstract:

What would a future PIT Knowledge Network space look like that is co-created by black and brown people? How have Black and Brown practitioners historically been situated within public interest technology efforts? What type of pathways could we envision to support BIPOC PIT entrepreneurs and PIT technologists today? This paper looks to explore these existential questions; excavating historical anecdotes of PIT leaders and extrapolating what might the future of the field look like with full participation and support for these leaders.

Community organizing, research, and development efforts with underrepresented practitioners is necessary for the nascent field of public interest technology (PIT). Diversity, equity, and inclusion efforts are strengthened when underrepresented stakeholders within the field of PIT find each other, co-create, and share knowledge -- ultimately developing problem definitions and solutions that better align with all communities and those most impacted by the proliferation of technology. A great deal of community input is needed before one line of code is ever written.

Although it's exciting to imagine the future of public interest technology, it's unclear how communities of underrepresented communities will help shape it. Specifically Black, Indigenous, and people of color (BIPOC) communities, will help shape it. It is also difficult to imagine a future for the field of PIT without critically examining both the past and present.

