

# Strengthening PIT Career Pathways for Persons of Color: A Knowledge Network and Experiential Learning Approach

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## Summary of Key findings

Our objective at the University of Michigan is to build infrastructure, specifically a knowledge network, that will privilege and center the voices of marginalized communities in Public Interest Technology (PIT) with the aim of developing a more inclusive and just tech future for all. The impetus for this objective is driven by a finding from our current efforts where our engagement with marginalized communities reveals that a significant constraint to their growth and impact in PIT has less to do with technical expertise and more to do with contextual issues. These include challenges related to limited or non-existent networks; the discounting of their lived experiences, the lack of a critical mass in PIT that robs them of representation and the inability to sell their agenda given their perceived lean body of work. These issues create a vicious cycle; reversing this trend is a key rationale for our research effort. Specific findings from this Year II project include the following:

1. A hub of knowledge that facilitates learning for marginalized PIT entrepreneurs can enable a more robust, shared understanding of the public interest challenges we face as a society and also provide a roadmap to explore solutions that can better address them.
2. Emanating from sparse networks, marginalized PIT entrepreneurs contend with networking challenges when trying to access funding either to start or to scale up their social ventures. Sharing and developing the tacit knowledge they possess with other practitioners in the field has potential for strengthening new connections, enable learning by codifying this knowledge and creating pathways to funding opportunities.
3. Utilizing storytelling as a design tool for marginalized PIT entrepreneurs can help build empathy and connectivity with other practitioners in the field. Creating a digital safe space and tools where this can take place is a critical and worthwhile exploration for the field of public interest technology.
4. The students that we held two workshops with understood how technology and social issues are related -- for example, they experience how social media has contributed to declining mental health. However, they are unaware of how to meaningfully engage with the PIT field or what a public interest technology career path looks like. Increasing access points and opportunities (virtual and physical) for students to engage and collaborate with PIT entrepreneurs will be crucial as the field of PIT takes shape.

## Background and Problem Definition

This project is an effort to co-create the infrastructure needed to support entrepreneurs and entrepreneurship with a focus on Black, Indigenous, and people of color (BIPOC) public interest technology (PIT) entrepreneurs. Given the increased relevance of technology in making resource allocation decisions, a PIT space that elevates the lived experiences of underrepresented communities and that is inclusive of all voices is a requirement in ensuring fairness and equity within our society. The research team made a deliberate and intentional decision to focus its efforts on BIPOC PIT entrepreneurs to address constraints - for example, how to navigate

unwritten rules; how to access to information and start-up funds; and how to nurture these individuals' informal relationships and networks.

To deliver on this objective, our project developed a product for a public interest technology knowledge network that involves the following:

1. Building on the team's PIT experiential learning course for students and PIT entrepreneurs by leveraging technology to scale participation and collaboration with these groups in the field of public interest technology.
2. Translating our understanding from PIT entrepreneurs, students, and researchers into platform requirements and design elements for the knowledge network.
3. Developing an alpha prototype for a limited number of core users to begin testing how such a digital platform can reduce the friction related to inequities along the career path of underrepresented PIT entrepreneurs and other practitioners.

The overarching challenge that our project aims to address is ensuring the participation of marginalized practitioners within the nascent field of Public Interest Technology as it takes shape.

## Approach

We create a system wide and sustainable approach that addresses diversity, equity and inclusion (DEI) within PIT by building a public interest technology knowledge network ([PIT-KN](#)). The knowledge network will center the embodied knowledge and lived experiences of BIPOC PIT entrepreneurs and use the insights obtained from this effort to drive knowledge sharing, dissemination and learning within the community of BIPOC PIT entrepreneurs. Essentially, the platform will create an environment in which tacit, localized and individual specific insights, knowledge and experiences could be converted to explicit knowledge, thus facilitating learning and knowledge transfer within the community. These will subsequently be used to enable PIT entrepreneurs to navigate the "unwritten rules" that hinder the ability of these individuals to scale their solutions and create broad public impact.

We approach this project with a simple premise - that everyone possesses useful knowledge regardless of their status in life, power and influence. The PIT-KN will privilege these voices and localized experiences that have, hitherto being discounted and relegated to the peripheries. Our approach places value on the embodied knowledge of underrepresented individuals, as a way of knowing and a starting point for further exploration.

We embrace a socio-technical mindset in creating the knowledge network. The socio component emphasizes a series of interactions and engagements with the community of BIPOC PIT entrepreneurs to identify and deliberate on the community's most constraining challenges. The platform specifically aims to incorporate the knowledge originating from PIT entrepreneurs, students, and researchers.

Our overall approach for this effort includes three components:

## 1. Providing the digital space for those proximate to challenges to come together to clarify challenges, collectively propose solutions and test them rigorously.

A key component of our approach involved employing a user-centric approach to understand how different user types (PIT entrepreneurs, students, and researchers) would interact with the knowledge network. Activities on this task builds on lessons learned from our experiential learning course in Year I. These insights were used to design instruments that are particularly suited for incentivizing the community of BIPOC PIT entrepreneurs to be co-creators of the solution. Data gathering activities conducted in Year II include the following:

- Semi-structured interviews with 12 BIPOC PIT entrepreneurs
- Surveys
- Student seminars
- Writing workshops
- System testing

After several rounds of interviews and surveys our development team developed an affinity analysis, comparative analysis, initial wireframes and an [alpha prototype](#) of the PIT-KN. The task also includes creating a structured process by which recruitment and the creation of tailored onboarding sessions for stakeholders could be carried out.

## 2. Leveraging digital and real-life support to build local and global learning communities for PIT entrepreneurs, students, and researchers

Another key component involves approaching the problem of limited social capital by developing platform features that better connect PIT entrepreneurs, students, and researchers to the broader social impact ecosystem in a more human-centric way. Based on our findings that PIT entrepreneurs often work across disciplines and sectors, we have developed a working hypothesis through which relationships that will be seeded by the Knowledge Network can begin building a more supportive and multidisciplinary community of students, researchers, and the broader community, all working in the public interest.

Our Year 1 efforts illuminated funding challenges for PIT entrepreneurs and in Year II the PIT-KN team explored how a user-centric approach that emphasizes the contextual realities and the nuances of the PIT space could utilize storytelling and artificial intelligence to mine for insights related to the PIT space. The team also met with researchers in the field of network theory to

understand how we can better connect the efforts of PIT entrepreneurs with a broader network of resource providers and collaboration opportunities through stories.

### 3. Capturing learning through authentic storytelling and reactions and sharing the insights obtained from the storytelling activities with the community of BIPOC PIT entrepreneurs and other relevant stakeholders

Lastly, our approach included experimenting with storytelling. To do this, the team kicked off a writing workshop with PIT entrepreneurs and writing coaches to better understand the dynamics related to the process of storytelling. The participants captured their stories and shared their “why” for entering public interest technology, specifically, how their social ventures fit squarely into the field. We partnered with New America to release their stories in a series entitled, [“Elevating the Stories and Knowledge from Underrepresented Lived Experiences”](#).

In addition, the team also contributed to a Stanford Social Innovation Review (SSIR) series on Public Interest Technology sponsored by the Ford Foundation entitled, [“Keys to Unlocking an Inclusive and Just Tech Future”](#).

## Challenges

### 1. Limited Full-Stack Development Bandwidth

Over the course of the project, we experienced a number of setbacks during the development phase that impacted our ability to deliver an MVP of the PIT-KN. These setbacks included 1) full-stack developer's limited bandwidth given competing interest related to doctoral coursework and thesis writing and 2) bureaucratic issues related to the transference of visa sponsorship when attempting to hire an additional full-stack developer from a University of Michigan satellite campus.

### 2. Delay in onboarding PIT-UN members onto the PIT-KN

The team has held several conversations with PIT-UN members including CUNY, Miami-Dade, and Georgia Tech, which have revealed interest in using the PIT-KN as an online hub where students, researchers, and PIT entrepreneurs in their programs can share reflections, stories, and create learning communities. These conversations have been helpful in understanding and converting their needs into design elements (storytelling prompts, defining the scope of users, etc.). However, given the delays with development of the PIT-KN prototype we have not been able to perform rigorous testing with these potential partners.

### 3. Valuing the time commitment and knowledge of marginalized practitioners engaged in public interest technology efforts.

In Year 1, we offered stipends and pushed up the timeline for distribution during the start of the Covid-19 pandemic. The pandemic exacerbated the economic challenges these practitioners were already facing. The PIT entrepreneurs in our studies are representative of a larger population who experience a persistent lack of funding to sustain their ventures and themselves. Existing forces of wealth inequality have resulted in an unequal playing field where only a small percentage of underrepresented PIT entrepreneurs are able to access capital. In year 2, we continued to offer compensation in the form of Amazon gift cards and honorariums to cover the time associated with participating in human-centered design research and our writing workshop. As our project transitions to the PIT-KN, we strongly believe in continuing to value the time commitment and knowledge of marginalized practitioners engaged in public interest technology co-design efforts occurring on the platform. A key challenge is delivering the right mix of acknowledgement and recognition, badges, and rewards, and/or direct funding to value knowledge sharing efforts of users who help to develop better problem definitions and solutions in the field. We intend to use the fully operational PIT-KN to address some of these issues by making individuals' contributions visible to the community.

## Lessons Learned

### 1. Interest in the PIT-KN has been validated by PIT entrepreneurs and students.

There is interest from the group above to gain exposure to the field of public interest technology; empowering them to share and develop knowledge while building connectivity and meaningful collaboration with practitioners across sectors and disciplines. This initial interest has been incorporated into the design of the alpha prototype, however more direct usability testing of the prototype with these groups is needed to better understand how exactly they can best derive value from the PIT-KN.

### 2. Mixed perceptions of (social) entrepreneurship as an endeavor within the field of public interest technology exist.

While we have established the importance of representation and the value of PIT entrepreneurs in the field of public interest technology in our report “Building Career Pathways for Diverse Public Interest Technology Entrepreneurs”, we have learned that there is hesitancy from a minority of members to fully onboard this cohort of professionals. As other PIT-UN members

begin to adopt the usage of “PIT entrepreneurs” and develop programming at the intersection of entrepreneurship and the public interest, it will be interesting to see how these sentiments evolve.

### 3. The PIT-KN should focus less on self-identification into the field of PIT and more on the knowledge and work that is being accomplished.

The field of public interest technology benefits from a richness of diversity, however the pathways to the field are largely undefined and require practitioners to self-identify into the field. The team’s research efforts have shown that unless practitioners are already knowledgeable or have connections into the field they will likely not self-identify into the field of PIT. Further, there’s a perception that the field of public interest technology is only for practitioners with explicit backgrounds in technology. We think there’s validation in the PIT-KN creating a more inclusive space where practitioners choose how they identify while focusing on sharing their knowledge, learning, and building collaborative relationships with other practitioners working to create a more inclusive and just tech future. Our understanding of PIT as “*that aims to design, implement, and advocate for tech-enabled solutions with the goal of advancing the common good in an equitable manner*” is a reflection of this mindset and the conversations we had with PIT entrepreneurs during the funding cycle buttresses this view.

### 4. Students are largely unaware of PIT but are interested in using tech for good.

Our engagement with Public Policy & International Affairs (PPIA) fellows demonstrated that students could offer important perspectives and bring fresh knowledge, ideation, and problem-solving lenses that are valuable for the field of public interest technology. During our PPIA sessions, students were able to connect the implications of technology to a variety of their policy interests such as education, criminal justice, community organizing, and health. For example, one PPIA student discussed their skepticism of facial recognition software in their community and how community organizing could help push back on the implementation of the project. Another asked a question – how do we respond if we are being asked – what do we have against algorithms given that they are objective by design and inherently fair?

The initial lack of awareness of the field was also confirmed by the University of Michigan’s School of Information and Public Policy graduate students working on the PIT-KN team – who have since been able to connect their understanding of the field with the work they are doing. We think increasing and facilitating these touch points and opportunities for students to engage and collaborate with public interest technologists will be invaluable in shaping and nurturing the nascent field of PIT.

5. PIT entrepreneurs understand the value of sharing their stories in order to create knowledge for practitioners working in the field of public interest technology but are also time- constrained and often unsure what is useful to share.

During our writing we partnered with Damon Young, a bestselling author and columnist for the Washington Post who volunteered to provide writing coaching for PIT entrepreneurs participating in our project. This partnership demonstrated a mutual value that exists between writers and PIT entrepreneurs who have similar goals of achieving social justice and economic equality but are pursuing these goals through different approaches. Ultimately, this experience provided us with the wherewithal to expand the PIT-KN user personas to include writers who might be interested in supporting PIT entrepreneurs as they commit to developing their storytelling skills through the PIT-KN

## Possibilities for further investment and replication

The design and development of the PIT Knowledge Network (PIT-KN) and similar community driven and user-centric systems that elevate and streamline public interest knowledge from marginalized practitioners can be further supported by the PIT-UN. In our [SSIR publication](#), we share design principles that technologists and funders should consider when supporting similar platforms.

We are motivated by the possibility of furthering development of the PIT-KN platform and are looking to collaborate with partners to help us achieve the following goals:

- Developing a repository of personalized knowledge across multiple public interest topics generated by short stories from a community of multidisciplinary users
- Developing a data and network analytics module that can ingest story content and codify learnings at scale while facilitating local and global network connections
- Continuing design and development of the existing prototype to evolve from alpha to a publicly available beta version

Our roadmap to achieve these goals are as follows:

- Conducting ongoing outreach, onboarding sessions, storytelling support, and user testing for individuals and groups
- Securing data engineers and data scientists to develop a data engine for the beta version of the PIT-KN
- Adding additional support from full-stack developers



## Products

1. Stanford Social Innovation Review (SSIR) article on Public Interest Technology sponsored by the Ford Foundation entitled, [“Keys to Unlocking an Inclusive and Just Tech Future”](#)
2. PIT in Practice Profiles – showcased on [pitcases.org/portfolio](https://pitcases.org/portfolio) a series of stories that details the unique career pathways of a selected number of BIPOC PIT entrepreneurs titled [“Elevating the Stories and Knowledge from Underrepresented Lived Experiences”](#).
3. [Alpha prototype](#) of the PIT-KN
4. Resources (including blogs) at the [project's website](#)

## Certification

All [University of Michigan (UM)] activities were and are consistent with charitable purposes under Sections 501(c)(3) and 509(a)(1), (2) or (3) of the Internal Revenue Code, and [University of Michigan (UM)] complied with all provisions and restrictions contained in this Agreement, including, for example and without limitation, those provisions related to lobbying and political activity.

## General Information

Other information on the PIT-KN is available at the project’s website at <https://midas.umich.edu/pitkn/>. In addition, the project’s Principal Investigator can be contacted at [Fabusuyi@umich.edu](mailto:Fabusuyi@umich.edu) for any further information on the project or on this report.