

Philanthropic Informatics
Dr. Amy Volda
School of Informatics & Computing & Lilly Family School of Philanthropy
Indiana University-Purdue University Indianapolis

I conduct research in human-centered computing with a focus on the challenges faced by the nonprofit and voluntary sector in using information and communication technologies. I conduct research in partnership with organizations in my local community, using the world as a living laboratory for identifying fundamental principles about the use of technology for philanthropy and civic engagement and for designing new technology to meet the needs of those individuals and organizations working toward the public good. The emphases and impacts of my research are threefold:

- First, I conduct empirical studies of technology use within nonprofit organizations and translate these findings into key challenges for core areas in computer science. Over the past three years, for example, I have been working with volunteer coordinators to understand their information management needs, yielding insights about fundamental flaws in database usability that impede adoption—from the interface all the way down into the infrastructure. My research has found that schema-based databases are simply too inflexible for the dynamic information needs of nonprofit organizations. In addition, my empirical studies have shown a need for information management tools that support “little data,” enabling small businesses to adopt these technologies early and learn how to use them as their information needs expand. I have built collaborations with database and semantic web researchers and we are preparing to deploy and evaluate alternate paradigms of information management systems within a select number of these nonprofit organizations.
- Second, I conduct empirical studies of how individuals who work as volunteers, advocates and donors use technologies to form productive partnerships with nonprofit organizations and work toward the public good. There is a burgeoning ecology of technologies being deployed in this domain, including the Red Cross’ TXT2HELP, Google’s One Today, Facebook’s Causes, DonorsChoose.org, VolunteerMatch.com, etc... yet little research has been conducted to understand the impact of these new technologies on either nonprofit organizations or members of the public. In this research, my theoretical focus is in understanding the ways that various forms of context influence civic engagement, including social, physical and temporal context. My study of technologies used for nonprofit giving, for example, found that a stronger synthesis of social and temporal context were needed to create a feedback loop between organizations and donors, and we are working to design new technologies that reflect such novel fusions of context.
- Third, in all of my empirical work, I surface (where relevant) the mismatches between the philosophies and values underlying technology that has frequently been designed in the private sector and the philosophies and values that motivate civic engagement and much work in the nonprofit sector. For example, my empirical studies of social media use in nonprofit organizations has identified fundamental mismatches between the design and infrastructural trajectory of social computing (trending towards crowdsourcing and micro-volunteering) and the philosophical belief of many volunteer coordinators that individuals need to have sustained interactions with a cause for the experience to be impactful for the organization and meaningful for the volunteer. This mismatch presents numerous challenges for the design of social computing technologies and we are currently engaged in design research exploring ways to bridge between differing value systems.

The nonprofit sector represents a unique and under-considered focus for the design of computing and information systems. Not only do nonprofit organizations operate under significant resource and expertise constraints that fundamentally influence technology use, they also chronically underutilize technology when they don’t see a direct connection between their mission and the technology. Nonprofit organizations are additionally under extraordinary social pressure to become more technically sophisticated. Several prominent new media scholars have argued that technologies such as text messaging enable people to organize themselves without the formal structures of traditional organizations, rendering traditional organizations increasingly irrelevant. If, however, we value the social role played by the nonprofit sector, then we need to address some significant technical and design challenges in order to ensure the future of formal organizations in the changing technological landscape of public civic engagement. These are the challenges that I confront in my research.