Name of the project: **Training Future Librarians for Civic Engagement and City Collaboration**
Lead Faculty: Dr. Cliff Lampe
Lead Institution: University of Michigan

Civic technology is an emerging set of practices in using information and communication tools to foster civic engagement in local geographic areas. Public libraries could play a valuable role in the civic technology movement by working with city governments to foster civic engagement. This could help improve civil society, create community social capital, and help librarians build even stronger relationships with their constituents. While many public libraries do work in civic engagement, education for librarians has not kept up with this trend. There is a scarcity of educational materials for public librarians interested in doing civic engagement.

This proposal encompasses four components to be conducted over a three-year period. First, we will develop projects tailored to graduates students in the library program in the Citizen Interaction Design studio courses. This will give library students a chance to work on civic engagement problems supported by an interdisciplinary team and trained university staff. They will also have the opportunity to work with diverse populations, as the partner cities of Jackson, Ferndale and Lansing in Michigan all represent populations who are diverse across many criteria. Second, we will offer mentored opportunities, including credit-based, paid internships, for graduate library students, in addition to other co-curricular activities. This will give students an opportunity to work under the direct supervision of city staff on civic engagement projects, while being mentored by professional librarians. Students will be recruited to enroll in our masters degree residential library program specifically with these opportunities in mind. Third, we will assess these two courses via external feedback and design an easily accessible package of teaching materials for other graduate library programs to use. This would include schedules, reading lists, detailed assignments, and rubrics that could be adopted and adapted in residential library education. These materials will be released under a Creative Commons license and marketed via an alumni network, as well as other channels, including the iSchool consortium. Lessons in this content would include how to build sustainable relationships with cities, how to help students work with diverse populations, and how conduct participatory research that is core to most civic engagement efforts.
Fourth, we will develop two Massive Open Online Courses (MOOCs), one oriented to public librarians and one to people working for city governments, in theories and methods relevant to civic engagement. As students in the engaged learning courses conduct their projects, they will record their experiences, which will be supplemented by professional videographers and used as core content for the online course. This will allow online learners to have a stronger sense of civic engagement than they would if only exposed to lectures and assignments. Previous experience teaching MOOCs at the University of Michigan indicates they are an effective way to reach a broad, diverse, and global audience. The project will be informed by an external advisory board who will provide feedback on the educational products being created. It will also use measures of content downloads supplemented by surveys of consumers of the educational products to assess the impact of this effort for fostering more civic engagement education among public librarians and the graduate programs that train them.

Name of the project: **Training Librarians for Civic Engagement and City Collaboration**

Statement of Broad Need

Public librarians, concerned over stagnating budgets, are always looking for ways in which they can support their community and demonstrate return on investment to voters, politicians, and other stakeholders. Local governments report that the combination of emerging digital communication tools and the collapse of local news has created both a new need to interact with citizens though digital communication, data sharing, and design processes that include open data initiatives, modernization and digitization of feedback initiatives. Public librarians could be exceptional partners with local governments to meet these challenges, but they often do not have experience in how to effectively work with city officials and staff. Today's public librarians could and should be leveraging their coursework in database and information management; information literacy; organization of information; community, family, and individual engagement; and fluidity with social media and web tools to assist in these initiatives -- yet most have very limited interactions with civic government despite government's impact on library budgets and viability. As public libraries evolve, their community engagement skills and their ability to solve real information problems can be a powerful lever. New public librarians bring powerful technology and community engagement skills to city governments. However, learning to bridge between information skills and a governmental environment requires explicit training and guided practical experience, for both pre-service and experienced librarians.

Civic Technology

Civic technology is the application of information and communication technology to the process of local governments interacting with citizens (Vlachokyriakos et al., 2016). While it is no longer a brand new phenomenon, neither has the practice reached the full extent of its development. McNutt et al. articulate civic technology as the combination of social media and Web 2.0, open civic data, and social practices of technology-enabled collaborations (McNutt et al., 2016). Civic technology shares values with other participatory or e-government efforts. First, participants are empowered to focus on ideas to improve their communities. This can be focused on improving government services, but is also capable of encompassing any relevant issue being faced in the local community (Foth and Brynskov, 2016). An example beyond public ideation in a crowdsourcing format is the formation or neighborhood research initiatives that combine community mapping, sensors, and local data to better understand and improve the area (Kontokosta, 2016). Second, participants have access to government information to inform deliberation or problem solution. This standard of available data was formally articulated by the Memorandum of Transparency and Open Government where government organizations should be transparent, participatory and collaborative. However, a difference between e-government and civic technology is that civic technology has more of a focus on innovation and collaboration through *technology* in addition to the streamlining and efficiency efforts of e-government (Gilman, 2017). Engagement through civic technology is also slightly different than community engagement, which is usually more broadly scoped around quality of life in a geographic community (Coward et al., 2018)

New opportunities in civic technology are coming from multiple sources (Schrock, 2016). First, the economic crash of 2008 was detrimental to city budgets, especially for medium-sized and smaller cities. Issues like civic engagement and information dissemination became secondary to the maintenance of infrastructure services. Second, local newspapers have significantly reduced budgets or collapsed since the early 2000s (Luengo, 2014), leaving a gap in how people in many small and mid-sized cities receive information and communicate publicly. Third, collaboration and social media tools have given citizens a strong sense of agency in how they can address civic problems (LeDantec & Fox, 2015).

Civic technology is unique from other forms of public participation with governments. Civic technology has a focus on problem solution through projects or collaborations, rather than other forms of participation which focus on information retrieval or sharing comments (Schrock, 2018). Hackathons are

an example of civic technology where technologists, interested individuals and groups, and often both, work in brief, time intense collaborations to build tools or proposals to either improve society or address a societal problem (Hou & Lampe, 2017). Nonprofit organizations like Code for America have established programs, tools, events, and partnerships to improve society through digital coding and innovation improvements (Schrock, 2016).

Libraries and Civic Technology

Libraries have a long history as centers of information excellence in communities, as exemplified in the work on community informatics (Williams and Durrance, 2009). Originally focused on ensuring equity in access to information in a geographic region, community informatics evolved to include other societal benefits like a strong democracy, social capital, a sense of community and economic development opportunities (O'Neil, 2002). Community informatics has traditionally focused on diverse partners, including non-profit organizations and community groups, and more rarely on direct collaboration with different units of government. Blending the traditional focus of community informatics with more targeted partnerships with cities opens new opportunities for digital civic engagement.

Public libraries benefit from becoming centers of civic technology because they can leverage traditional roles as information experts and community anchors to positively impact their communities. Increasingly, the access to information at the heart of the civil society mission of public libraries is about expertise and literacy around the quality of information, not about direct access to it. More importantly, librarian expertise might be most importantly used as a "force multiplier" for city governments and other groups that deal with social problems. Kranich (2012) makes compelling points about the benefits of libraries for committing to public engagement, a goal she relates back to the first lending libraries established by Benjamin Franklin and core to the theories of community inquiry proposed by Dewey. By being involved in public engagement, she argues, and doing work that involves researching the needs of people in cities, libraries stay close to the needs of their patrons and remain relevant. She also argues that public libraries are essential to an informed citizenry, and working directly on citizen needs can amplify the role of the library in democratic processes. This role for public libraries is increasingly important globally.

In "Public Libraries as Platforms for Civic Engagement," Coward, McClay and Garrido (2018) describe a meeting of public librarians and civic engagement experts from multiple geographic regions. They highlight the importance of the public library not just for providing space for civic engagement, but in being central actors in helping city governments and the public in understanding data, conducting participatory research, and promoting community agency. The participants of this meeting agreed that there is high potential value in public library participation in civic technology, including fostering the access to information and literacy necessary for a healthy democracy. However, they also identified some key issues to overcome for libraries to fill this role: **Professional challenges:** discomfort working outside of traditional roles, challenges of "scope creep" added by these activities. **Difficulty measuring success:** civic engagement is hard to measure in general, and measuring a library's unique contribution can be especially challenging. **Marketing challenges:** the difficulty in creating a narrative to explain this role of libraries to the communities they serve. Most salient to our project, a lack of civic skills among librarians: current LIS curricula do not have a wealth of educational materials to help emerging library professionals work with cities. This quote from the report is particularly salient to this proposal:

"As noted previously, several participants raised the issue of librarians lacking training in civic engagement. If skills and competencies in civic engagement were to be built in to library and information science curricula, new librarians would gain the skills; however, it would take a significant amount of time for academia to shift in this direction and even longer for the impacts to be felt. Meanwhile, those who have already entered the profession would still lack the skills. Swift development and deployment of a civic engagement curriculum for working professionals would be needed. " (p.18)

To realize benefits from more involvement in civic engagement, there needs to be a change in the educational opportunities for students studying library science. This proposal addresses that gap identified by Coward et al. (2018).

Examples of public libraries doing civic engagement: While it's not currently a systematic part of public library efforts, several public libraries have been involved in civic engagement activity. These few examples serve to highlight the types of civic engagement envisioned by this proposal.
On the Table (http://cct.org/about/) For several years, Chicago Public Library system has participated in On the Table, an effort to bring Chicagoans together to discuss city issues in an inclusive way. The CPL made librarian facilitators and meeting space available, including neighborhoods where the library was the only public meeting space available. In 2016, On the Table brought together over 55,000 people to discuss important city issues.
Red Hook Public Library The Libraries Transforming Communities team at Red Hook Public Library hosted community conversations using the Harwood model of "community aspirations" in 2014 (ALA, 2014). They found that people were concerned about several civic projects (like a stoplight that needed replacement) in a way that had had been missed by a traditional city needs assessment. Compellingly, this work was conducted at a library with only 5 FTEs.
Towson Library of Baltimore This library held a series of 8 conversations entitled "Voices of Government" in collaboration with the League of Women Voters in the fall and summer of 2016, focused on the 2016 election. The libraries in the area hosted these discussions and had between 40 and 80 attendees at each event.

Similar stories are available via the Urban Libraries site (https://www.urbanlibraries.org/innovations/). While clearly exceptional libraries and librarians are doing civic engagement work, the gap is in the systematic education of library professionals is the core of this program. Current programs in information and library science graduate programs do not systematically teach this type of activity.

Project Design: We need a new generation of librarians who are mentored, educated, and experienced in leveraging cutting-edge "library skills" in civic settings. The University of Michigan School of Information (UMSI) proposes a program to embed library students in city governments where they will work with city staff to solve real problems faced by the community, followed by the creation of educational materials suitable for both public library and city government staffs. Masters-level library students will develop capacity and leverage their skills and knowledge in civics, community engagement, user-centered practice, information management, and IT in collaboration with established UMSI partnerships with city governments in Jackson, Ferndale, and Lansing, Michigan (see citizeninteraction.org), in order to create new information tools and services that connect people to their local governments in novel ways. These may include understanding how to present open data so that citizens understand how to use it or creating new tools for people to provide feedback about a local issue, among other civic needs. The proposed solution will make resources available to develop new project opportunities that are specifically designed to help library students engage with city governments, working closely with staff in problem-based, design-oriented experiential learning opportunities. These opportunities will include both classroom and co-curricular civic projects that will develop effective, impactful relationships with city and county officials. In turn, the ability of library students to manage information will help inform government officials of often-unseen capabilities of libraries. This model is similar to one proposed by Wolske, Rhinesmith and Kumar (2014) wherein students learn community informatics through courses that combine studio-based education with field work. Select library students will have the opportunity to continue the work created in the class in nine-week summer internships where they will be embedded as full-time staff in the community to further develop their skills as librarians who collaborate with city governments.

Following these engaged-learning courses, we will create two types of resources for disseminating civic engagement education to others interested in library education. First, a package of educational resources such as a syllabus, case studies and detailed assignments will be made available under a Creative Commons license. These course materials will be designed for both residential and online library education settings. These resources will be shared broadly through conference presentations at related conferences such at the American Library Association, ALISE, the Michigan Library Association, the Michigan Municipal League, Civic Learning and Democratic Engagement Meeting, and the annual iSchool Conference, for example. Second, two Massive Open Online Courses (MOOCs) will be created to share content and rich examples of civic engagement to a broad audience. MOOCs are online, video-based courses available for free auditing or, for a small fee, to earn a certificate. The University of Michigan has a developed unit, Academic Innovations, that partners with the major MOOC platform providers, which will provide a resource for marketing of the MOOC broadly. UMSI has had broad success with library-based courses for librarians delivered in this format. Details are later in this proposal.

To guide this process, we have recruited an external advisory board who will be asked to provide feedback and evaluation on the different educational components described in this proposal. Details on the external advisory board can be found in the supplemental materials. The budget includes resources for remuneration of the advisory board to account for their term reviewing materials and providing feedback.

Our community manager works closely with partner city governments to identify civic problems that are suited to information solutions, and partner those needs with student teams who design information tools and services that address those problems. Cities often work with organizations like local non-profits and other levels of government to accomplish goals, so students have a diverse set of projects to work on. The proposed program will create opportunities targeted to students intending to work in public libraries or other cultural institutions in the future. The opportunities will be supported by an ongoing program at the School of Information called Citizen Interaction Design (CID). This project will support people interested in library careers. Students will:

- **Enroll in engaged learning classes in which they will work with local governments to create new forms of engagement using information and communication technology.**
- **Extend course-based work in civic contexts.**
- **Develop and distribute templates and curricula in order to replicate our students' experiences in other library science and information schools.**
- **Create MOOCs to enable library and city professionals to learn more about successful collaborative civic engagement.**

Citizen Interaction Design

Training students to work with city governments requires a new pedagogical approach to academic collaborations with communities. Several years ago, the University of Michigan School of Information launched CID as a new way to train Masters students studying user experience to work effectively with cities. While the original program was oriented to graduate students planning a career in User Experience Design, a component of this proposal is to extend engaged learning programs in CID to professional Masters students in Library Science as well. LIS students will learn about how to work with "data in the wild," how to engage in design thinking and lead co-design workshops in communities, how to work effectively with city governments, and how to build coalitions around common "real world" issues that communities face. The core of what makes CID different than other engaged learning courses is the type of relationships we build with community partners. CID focuses on long-term, stable relationships with city governments. This enables projects to be more consistently adopted by city departments and increases relevance for students working on those projects. In CID courses, students work in a studio environment, focusing on civic problems presented by the city and engaging in rapid iteration of design solutions that receive peer critique and revision. Another core difference of CID courses is that the students are

responsible for launching an information tool or service to resolve their civic problem, rather than following the more common but less impactful model of making recommendations to the city for future action. They work closely with their civic partners to understand the limitations and needs of the city staff, who agree to own the solution after the course has ended. Increasingly, the student teams are trying to assess the "aspirations" of their stakeholders as opposed to "needs," as the former perspective has been argued to create more room for bottom-up creativity and fuller expression of the problem space (Toyoma, 2018). Students often work in interdisciplinary teams, which helps them to learn how to translate their special expertise to partners, and have to focus on professional communication as they are often interacting directly with citizens and city staff. Graduate students intending to work in libraries often have other practical engagement experiences in the program. The CID experience specifically offers the following things *on top of* what our library students already learn in the program: how to work effectively within city government, not just in a nonprofit; how to solve problems through design thinking; how to advocate for design thinking to others; and how to work with multidisciplinary design teams.

Engaged learning classes

There are currently multiple CID studio courses available for students. This proposal will create projects in these courses that are specifically tailored to the needs of emerging library professionals. Funding is required for two major elements that make the program successful: a dedicated engaged learning specialist and fieldwork support. The dedicated engaged learning specialist maintains relationships with cities and scopes projects for the maximum benefit of the student team. They also bridge curricular and co-curricular projects and facilitate learning outcomes. Field support includes travel and materials funding necessary to create mature products and services that enhance engaged learning outcomes. In order to make sure this plan is met, and that our goals are objectively measured, we have an advisory board comprised of professionals from both libraries and government.

As proof of concept, we have recently piloted library-focused projects in CID courses. Led by a student in the library specialization of our school, a team of students worked with the city government of Traverse City and a coalition of nonprofit agencies in northwest Michigan to address a problem of regional housing inequality. Northwest Michigan is a popular tourist and retirement destination, and the rise of applications like VRBO and AirBNB have exacerbated an affordable housing crisis for year-round residents. The students conducted field research of both residents and agencies. After multiple iterations, they created a homeshare toolkit that facilitated citizens (especially the elderly) renting space in their homes to younger people at a reduced rate in consideration of services provided in the home. For example, a young person could rent a room in a house of an elderly person, and they would provide cleaning and transportation services. This solution has become widely popular in the region, and has been adopted by other rural regions in the state.

Another project that had a team that included both library and user experience masters students worked with the Ella Sharp Museum in Jackson. The museum tasked the students with finding a way to broaden the public awareness of their collection. Working with the museum staff, the city arts council, and the city communication team, the students conducted surveys and interviews, eventually launching two efforts. First, they had postcards printed with images from the museum's collection and mailed them to thousands of homes in the city. People could mail them back after sharing their own experiences of living in Jackson on the back of the card, and those postcards them became part of the museum's collection. People came to visit the museum to see their postcard on public display, resulting in increased visits to the Museum following the activity. The second strategy was to create a Pinterest pin board for museum content. The students worked closely with the city communication staff to broadcast that new channel to people in the city, and the museum had good success with getting people to follow their account.

These are two examples of projects chosen as pilots to meet the needs of library graduate students. With supported effort, city partners would be able to generate more projects that would be enriched by

library student participation. The library students learn several valuable skills. First, learning the methods of measuring community needs in an effective way and iterating on communication design are a benefit to every potential professional librarian, whether they decide to pursue civic engagement or not in the future. Second, library students in the course learned about the organizational cultures and limitations that are peculiar to cities. For example, cities often worry about negative press around any new activity and become risk averse. Library students in this course could learn how to understand the needs of civic partners and respond to them.

The effectiveness of the engaged learning classes will be evaluated through several mechanisms. First, we will work with the Center for Research on Learning and Teaching (CRLT) on campus to conduct evaluations with library students at the midterm and final portions of each class. These evaluations focus on how students perceive their progression in terms of awareness, competency and mastery in the concepts delivered in the class. As part of this, these courses will be evaluated with and against other engaged learning courses at the School of Information based on a developed questionnaire that aligns with university-wide engaged learning objectives. Both students and the partner organizations will engage in these evaluations, providing holistic feedback from all engaged parties. Second, the courses will receive an annual evaluation by our advisory board, focused on the long-term career benefits that library students in the class might receive. Third, the products created by students in the class will be evaluated by an external panel of experts for their effectiveness and adoptability.

Co-curriculars in a civic context

Residential professional education depends on co-curricular experiences to supplement in-class education. These co-curriculars can range from short-term events like hackathons, to more long-term experiences like internships. Through the city relationships developed by the CID program, there are multiple ways to support co-curriculars for library students. A major co-curricular activity for our professional Masters programs is the internship program. Masters students are required to complete an internship between there first and second years in the program. This project will create several paid internships to place library students under direct supervision by city staff, with an emphasis on projects that will be in collaboration with public libraries in our partner cities. Projects will be developed by the program manager in consultation with city staff to ensure experiences that meet the training goals for the library students. The students will be mentored by the program manager, with an emphasis on helping them navigate the conduct of their internships with a focus on future leadership in civic engagement.

Evaluations of the co-curricular activities will be conducted by the Office of Professional and Community Engagement in the School of Information. This group has expertise in evaluating the outcomes of internship experiences, which focus on student perceptions of professional efficacy. The head of that department is listed as a cost-share from the university to account for that evaluation time.

Open Education Resources (OER) for civic engagement classes for library schools

A product of this proposal would be a package of course materials that would enable faculty in other universities to more easily adopt this pedagogical style for their own purposes. Open Education Resources (OER) are materials design by one educational institution and made available to others (Brown and Adler 2008). Although the practice needs to be carefully managed, these materials can be valuable as a way for educators to "kick start" their own classes in a topic area. The components of this learning package would include a **detailed syllabus**, including readings appropriate for library students and focused on the diversity of authors; documented **assignments,** including grading **rubrics; case studies** of projects that would help provide illustrative examples of civic engagement and productive collaborations with cities; **supplemental documents** that help faculty navigate the formation and curation of relationships with cities, including a guideline for scoping civic projects in a way that's appropriate for this style of course. These materials are intended to facilitate the adoption of the studio course in a way that minimizes faculty burdens. The advisory board will have access to drafts of the material to provide feedback on its relevance

and quality. Materials would be made available via Web access and released under a Creative Commons license for reuse. Michael Stephens in particular has agreed to share his library education expertise in the development of our open education materials. To disseminate these materials, we will do multiple things. Our college social media and email channels can reach a wide network of alumni now working in the library profession, and we will leverage that network. Additionally, we will prepare a presentation of materials for ALISE, to access concentrated group of library educators. We recognize that online course delivery has distinct affordances and constraints from our residential ALA-accredited model; therefore, we will also collaborate with experts in library education (see attached documents for board members with this expertise) to adapt residential course materials into a viable online course shell. We would also make available links to MOOC video content for integration in classes (details below). Course materials will be evaluated by the external advisory board, as well as through a survey attached to the materials to enable consumers of those materials to provide feedback on their utility.

Massively Open Online Courses (MOOCs) in Civic Engagement

In addition to sharing content with ALA-accredited library and information schools, this project broadens to include professional continuing education for practicing public librarians. The University of Michigan is committed to low-cost, high-quality instruction alongside our competitive formal education programs. Therefore, its Office of Academic Innovation (OAI) has established partnerships with EdX.org and Coursera, the two dominant platforms for MOOC education. A MOOC is an online, asynchronous, self-paced continuing education course where instructors are video recorded, learners engage with one another online, and projects and assessments are designed for completion in individuals' own communities. We choose MOOCs for disseminating professional development for practicing librarians because we gain access to a team of OAI online pedagogy specialists, professional video equipment, closed-captioning of content for those with disabilities, international promotion of content, and an established brand. Both of the faculty participating in this project have taught several successful MOOCs. PI Lampe has taught courses in User Experience and PI Fontichiaro is the faculty coordinator and principal instructor in the in the Public Library Management Certificate program, which has had more than 25,000 people enrollments.

We will design two project MOOCs. The first will be targeted to city staff and will focus on how to work effectively with local libraries to identify, explore, and solve information problems related to civic engagement. Our three city partners will be involved in the creation of this MOOC to ensure the content is tailored to the needs and incentives of professionals in local and city governments. The second MOOC will be tailored to library professionals and those interested in libraries as a profession. The MOOCs will be marketed via the EdX platform, which has channels for disseminating new content, as well as through University channels to ensure a broad reach. The School of Information and our academic partners in the university have significant experience in recruiting participants to our MOOC content through email promotions, established advertising relationships, the distribution channels of the platforms themselves, and traditional mailers to our significant alumni network. We are confident we can disseminate the MOOC opportunity broadly.

While the two MOOCs will have different audiences with distinct motivations and incentives for civic technology adoption the core content will come from the same sources. Shared modules for the MOOCs will include:

- **Defining civic technology**, including the pros and cons of the civic technology movement.
- **Methods for eliciting citizen needs and preferences**, with a focus on **participatory design** techniques.
- **Examples of successful civic technology implementation**, with an emphasis on projects that resulted from a collaboration between city governments and their local libraries.
- **Case studies** of library students working with city partners.

The case studies will be critical components of the MOOCs. As library students in the engaged learning classes are conducting their work, some of our local student teams will be recruited to participate in a longitudinal video series that will eventually be shared as course content for the MOOC. Students will be specifically recruited to participate in the video series. Videos will be created by a mix of student "vlogging" where they capture their work as it is happening, and via professional videography provided by the School of Information. UMSI has a staff of professional videographers as part of our Marketing and Communication team, which has been added as a cost share in our budget. These professionals can provide equipment and expertise to enable high quality video capture in the field. The students in the engaged learning class will be supported by professionals who will help with tasks like video production and graphic design.

These case studies will focus on the *progression* of learning as students record their early experiences with the civic engagement problem they will work on, move on to the user research and participatory design elements of the class, and then to the creation and implementation of their civic engagement solutions. This approach is unique given that many professional development workshops, conference sessions, and practitioner publications for librarians take a retrospective approach, which can disguise the challenges of forging new relationships, adopting roles and norms, and dealing with ambiguity inherent in project-based work. The modules created from these case studies will provide an experiential view to online learners of the civic engagement process in action. The two MOOCs will differ in terms of the framing of the benefits and risks of civic engagement. Approximately a third of the content will differ between the two courses, including differences in the education modules and the assignments presented to learners.

MOOC Evaluation: The MOOCs will be evaluated using multiple methods. First, EdX provides data to evaluate the use of the MOOC. This data includes completion rates, time spent on modules, scores on assignments in the MOOC, demographics of learners, and evaluations of the course by people who have taken it. Second, the online content will be evaluated before and after launch by the external advisory board. Third, the MOOCs will include a survey beyond the typical evaluation conducted by EdX to learn more about the needs and goals of the people who took the courses, and how to better meet those needs in the future. Finally, the Office of Academic Innovation has learning specialists on staff who provide evaluations of MOOC content as part of the service of the office.

Diversity Plan

We plan to promote diversity and inclusion in our work from two directions: community-level diversity and student-level diversity.

Community-level diversity: Program staff will develop student engagement opportunities and projects in Lansing and Ferndale, Michigan. These cities were selected because of their shared history built on manufacturing tied to the auto industry and shared challenges that such "Rust Belt" towns face from the decline of good-paying manufacturing jobs across the state and the country. As a result, Lansing has significant low-income populations, and a significant population without college degrees. Lansing also demonstrates racial diversity with African Americans making up over 20% of the population, concentrated in low-income, higher-needs neighborhoods. These communities also provide contrast. Ferndale takes pride in their well-earned reputation as an LGBT-friendly community. Lansing, the state capitol (pop. 112,000) is much larger than Ferndale (pop. 20,000). These two cities represent a diverse cross-section of the population of Michigan across many dimensions including race, income, and level of urban concentration.

The citizen-centered approach facilitates students' exploration and consideration of a broad range of citizen perspectives. Previous CID projects have developed information tools with the community with disabilities, neighborhood associations and community centers in low-income neighborhoods, and a broad range of nonprofit advocacy groups. Program staff will work with community partners to develop projects

and partners that represent the breadth of diversity in the community. Geography, demographics, and vulnerable communities will be contributing factors to project selection. Students in this program will work with a variety of populations to understand and apply their unique perspectives to the creation of information tools, resources, and systems that engage them in their community. Evaluation of the final projects includes feedback from the community on their perceived value of the tool and how well it addresses the problem from their perspective.

Student-level diversity: The University of Michigan and its School of Information place a strong emphasis on diversity, equity, and inclusion in their mission to disseminate knowledge and serve the Michigan community. The School of Information has developed a Diversity, Equity, and Inclusion (DEI) Strategic Plan (available in Supporting Documents) that addresses the identified eight DEI objectives with related measures for success. This proposal reflects and benefits from this framework for addressing diversity. There are two major methods by which we'll address bringing this type of training to a diverse group of emerging and current library professionals: through recruiting diverse students to our residential program and through reaching diverse populations via our MOOC content.

In our residential program, there has been a long-term goal and set of practices for recruiting diverse students. In particular, the need for diversity in librarianship, and for the recruitment of a more diverse population of students in library programs, is widely recognized within our professional program. The overrepresentation of white people in the librarian professions presents challenges in working with the more diverse populations that they serve. The UMSI Plan specifically addresses a goal of "increasing the number of racial and ethnic minority applicants in all degree programs". Our strategies for recruiting more diverse students to our residential program include marketing our work to more diverse programs from which to draw students, including a recent emphasis on community colleges and Historical Black Colleges. We also work closely with university inclusion efforts to make sure our programs are attractive to diverse students who apply.

The availability of the MOOC content is particularly compelling in its ability to reach a diverse group of people. As noted above, the University of Michigan has been investing in MOOC production, partnering with the EdX and Coursera platforms. The previous experience of teaching on the platforms has given us some information about the reach of those classes. For example, Fontichiaro taught several MOOCs on Public Library Management on the EdX platform. Over 25,000 people have signed up for classes since January 2017, and the diversity of the population was very encouraging. Participants were diverse on the following dimensions:

- Age: Average age 34, with participants ranging from 12-79.
- Race: About 47% of participants identified as non-White.
- Geographic region: 47% of participants reported being from outside the U.S.
- 97% of participants had no previous affiliation with the University of Michigan.
- 45% reported having a Masters degree or higher in their education. This indicates learners renewing their skills via this method as well as to library staff who do not have an ALA-accredited professional education.

The diversity of this audience compared to the residential training program is remarkable, but not surprising. The ability and access to residential professional training is expensive both in time and cost. MOOCs allow people to learn new skills and advance their jobs without having to drop out of the workforce or to move their lives to a university with a professional library graduate program. We believe there is a strong value in the residential program, but that the MOOC education broadens the reach of our content to professional and non-professional library staff alike. To increase this potential, we will work with the EdX platform, which has marketing specialists, to ensure that the content is marketed to a diverse audience as well.

Broad Impact

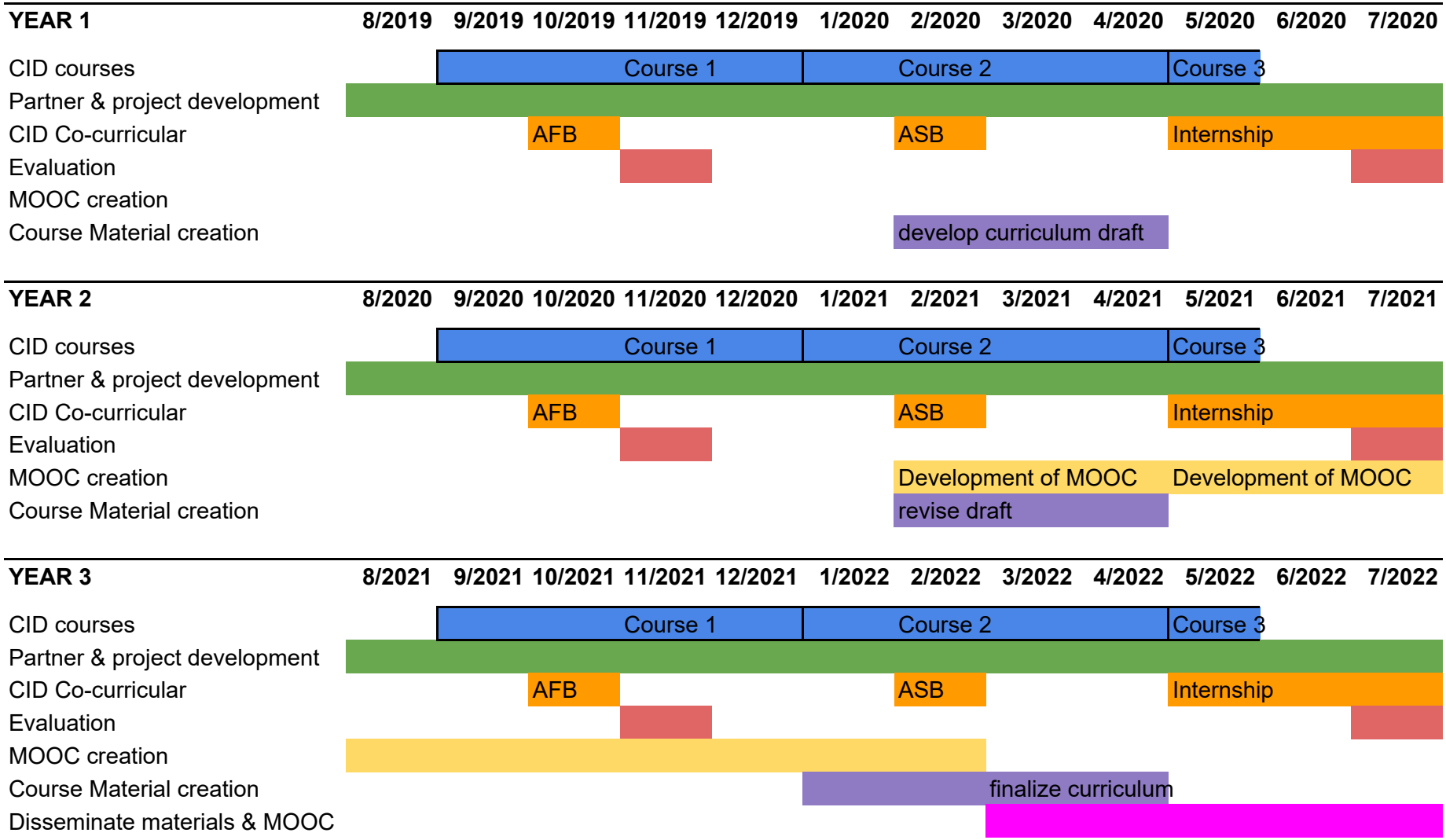
Focusing on training emerging library professionals in civic engagement will help both those students and the cities in which they are working. From the perspective of the students, the effects of our program will be to teach potential leaders to work effectively with city governments by understanding their processes and needs. We will also be teaching emerging library professionals how to specifically address problem-based civic problems. We intend to make our materials and program evaluations public, so other training programs could adopt our models - reinvigorating focus on civic technology as an essential skill for professional librarians. From the city's perspective, the goal is to show city staff that their local libraries could play a broader role in community engagement than they might have previously considered.

As noted in the Statement of Defined Need, the crisis in city budgets combined with the weakening or collapse of other local institutions like local newspapers has created a crisis of information in many cities. Civic engagement that used to be part of a city's regular operation, or was facilitated by now-shuttered local newspapers, has too often been abandoned entirely. This creates an opportunity for public librarians to redefine their roles, in contexts where it makes sense, as information experts who can work with cities to increase civic engagement. Too often, the role of public libraries in civic life has been relegated to the space provided by libraries for civic meetings. Public librarians more importantly are trained in skills of needs assessment and information curation that can also play a role in helping cities foster new forms of civic engagement. At the same time as an information gap has come to exist in civic life, people's expectations of the information available through digital environments has also grown. Again, librarians are the types of experts suited to help cities navigate these expectations.

To realize the benefits of public library involvement in civic engagement, new models of education need to be considered. This proposal intends to have broad reach through four integrated pieces. First, developing specific engaged learning experiences for residential and online library students where they will gain practice in working on civic engagement. This will also allow us to pilot and test materials targeted specifically to library students. Second, we will develop co-curricular experience for library students where they will have rich experiences directly with city governments, learning about the specific features of those types of organizations. Third, we will take materials developed in the first two educational efforts and make them available to a wide audience. This would have a broad impact on library education, allowing more programs to more easily adopt and adapt their own civic engagement programs, both residential and online. Finally, we will create two MOOC courses that will use video content and lessons from the engaged learning classes to highlight the possibility of public libraries and civic engagement to a substantial national and international library audience. Our previous experience shows that the MOOC format reaches a diverse, global group of learners and librarians.

For the dissemination of materials and the reach of the MOOCs, we will use a combination of server statistics and surveys to measure success. While it's reasonable and expected to measure "downloads" of the course material, and attendees of the MOOCs, it's hard to correlate consumption with impact. To supplement those rough measures of access, we will include survey instruments to measure other outcomes for people who consume the content created via this project. That will include validated measurements of efficacy and willingness to return to the subject in the future.

Schedule of Completion



INSTITUTE of Museum and Library SERVICES

DIGITAL PRODUCT FORM

Introduction

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (e.g., digital content, resources, assets, software, and datasets). The products you create with IMLS funding require careful stewardship to protect and enhance their value, and they should be freely and readily available for use and re-use by libraries, archives, museums, and the public. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

Instructions

All applications must include a Digital Product Form.

☐ Please check here if you have reviewed Parts I, II, III, and IV below and you have determined that your proposal does NOT involve the creation of digital products (i.e., digital content, resources, assets, software, or datasets). You must still submit this Digital Product Form with your proposal even if you check this box, because this Digital Product Form is a Required Document.

If you ARE creating digital products, you must provide answers to the questions in Part I. In addition, you must also complete at least one of the subsequent sections. If you intend to create or collect digital content, resources, or assets, complete Part II. If you intend to develop software, complete Part III. If you intend to create a dataset, complete Part IV.

Part I: Intellectual Property Rights and Permissions

A.1 What will be the intellectual property status of the digital products (content, resources, assets, software, or datasets) you intend to create? Who will hold the copyright(s)? How will you explain property rights and permissions to potential users (for example, by assigning a non-restrictive license such as BSD, GNU, MIT, or Creative Commons to the product)? Explain and justify your licensing selections.

Three types of products are created via this project: 1) student work in project courses and internships, 2) learning materials for reuse of the course in other institutions, and 3) MOOC content.

Student work is owned by the student, with the students encouraged to release the IP via a Creative Commons license for easy adaptation by their city partners. In all pilots of this course, the students have agreed to that arrangement. All projects created by students has the IP requirements attached to the meta-information of the project when turned over to city partners.

A.2 What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

The package of learning materials will be released under a Creative Commons license. Details of the CC license will be attached as a supplemental document in the package of educational materials.

MOOC content IP is governed by the university contract with the platform EdX. This has two major components. First, the university retains copyright of materials with a license granted to EdX for distribution rights. Second, people must be allowed to view the content freely, though fees may apply for certification and additional services. Details of the IP requirements are attached to the login process for all students who take the MOOC.

A. 3 If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

Part of the MOOCs will use videos of students and their partners describing their process. All participants who appear on video or provide quotes in text will be asked to sign releases, and content without release will not be used.

Part II: Projects Creating or Collecting Digital Content, Resources, or Assets

A. Creating or Collecting New Digital Content, Resources, or Assets

A.1 Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and the format(s) you will use.

We will create multiple print documents for the learning package in Adobe’s PDF format, with additional software to make the documents accessible to people with disabilities. The MOOCs will use video of instructors and students. Approximately 150 hours of video will be collected, and 25 hours will be used in MOOC modules, given past experiences. Video will be captured in MP4 format, and translated into multiple formats for distribution.

A.2 List the equipment, software, and supplies that you will use to create the content, resources, or assets, or the name of the service provider that will perform the work.

The creation of the educational materials (both the package and the MOOC) will require graphic design software, video editing software, sound production software, and Web resources for dissemination. All of these tools are available via licenses already held by our institution.

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG) you plan to use, along with the relevant information about the appropriate quality standards (e.g., resolution, sampling rate, or pixel dimensions).

We will use PDF for print documents in high resolution with accessibility features added to each document. Video will be primarily in MPEG format at a high quality resolution.

B. Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan. How will you monitor and evaluate your workflow and products?

Our program manager will be responsible for the overall timeline and workflow of the project, as well as task assignment. The quality control of the digital products will be managed by professionals in the Marketing and Communication department and Office of Academic Innovation.

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period of performance. Your plan may address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

The teaching package will be stored on our project website for a period of two years following the end of the project. After that, it will be stored on a project Github repository. Metadata for use of the materials and creation details will be included as supplemental documents in the package of materials. These resources will be maintained by the School of Information.

MOOC content will be stored and shared on either the EdX or Coursera platform. These resources are disseminated and documented by EdX and the Office of Academic Innovation per our university contract. Our university uses both.

C. Metadata

C.1 Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata. Specify which standards you will use for the metadata structure (e.g., MARC, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

The major metadata attached to this product will be related to the teaching package. Metadata will include details of the how the package was created, IP information, and evaluation materials. The MOOC content does not include metadata.

C.2 Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.

Metadata will be compiled as packages with all main products. The preservation of the metadata will be contingent on the preservation of the main products.

C.3 Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

All metadata will be attached to the main products as they are distributed.

D. Access and Use

D.1 Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content).

Teaching tools will be assembled as a single repository for download from a project website. MOOC content will be made available via either the EdX or Coursera platform.

D.2 Provide the name(s) and URL(s) (Uniform Resource Locator) for any examples of previous digital content, resources, or assets your organization has created.

http://citizeninteraction.org

Part III. Projects Developing Software

A. General Information

A.1 Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

No software will be created for this project.

A.2 List other existing software that wholly or partially performs the same functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

B. Technical Information

B.1 List the programming languages, platforms, software, or other applications you will use to create your software and explain why you chose them.

B.2 Describe how the software you intend to create will extend or interoperate with relevant existing software.

B.3 Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

B.4 Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

B.5 Provide the name(s) and URL(s) for examples of any previous software your organization has created.

C. Access and Use

C.1 We expect applicants seeking federal funds for software to develop and release these products under open-source licenses to maximize access and promote reuse. What ownership rights will your organization assert over the software you intend to create, and what conditions will you impose on its access and use? Identify and explain the license under which you will release source code for the software you develop (e.g., BSD, GNU, or MIT software licenses). Explain and justify any prohibitive terms or conditions of use or access and detail how you will notify potential users about relevant terms and conditions.

C.2 Describe how you will make the software and source code available to the public and/or its intended users.

C.3 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

Part IV: Projects Creating Datasets

A.1 Identify the type of data you plan to collect or generate, and the purpose or intended use to which you expect it to be put. Describe the method(s) you will use and the approximate dates or intervals at which you will collect or generate it.

No datasets will be created via this project.

A.2 Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

A.3 Will you collect any personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information? If so, detail the specific steps you will take to protect such information while you prepare the data files for public release (e.g., data anonymization, data suppression PII, or synthetic data).

A.4 If you will collect additional documentation, such as consent agreements, along with the data, describe plans for preserving the documentation and ensuring that its relationship to the collected data is maintained.

A.5 What methods will you use to collect or generate the data? Provide details about any technical requirements or dependencies that would be necessary for understanding, retrieving, displaying, or processing the dataset(s).

A.6 What documentation (e.g., data documentation, codebooks) will you capture or create along with the dataset(s)? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the dataset(s) it describes?

A.7 What is your plan for archiving, managing, and disseminating data after the completion of the award-funded project?

A.8 Identify where you will deposit the dataset(s):

Name of repository:

URL:

A.9 When and how frequently will you review this data management plan? How will the implementation be monitored?