2024 IMLS NLG Proposal: National Forum to Connect and Advance Library Makerspaces

Project Justification

The Board of Trustees of the University of Illinois and the Champaign-Urbana (C-U) Community Fab lab are requesting $149,995 with no cost share for an eighteen-month National Leadership Forum project, in partnership with American Library Association, Nation of Makers Library Makerspaces Working Group, and Library Makers. The project addresses the need to (a) solidify and leverage current networks, projects, and expertise in library makerspaces and (b) chart future directions for advancing library makerspaces. Key stakeholders involved in this initiative encompass library maker professionals (ranging from administrators to staff), prospective library maker professionals, and library and information sciences educators and researchers in higher education. A series of online and in-person Forum activities will serve as a platform for stakeholders to engage in dialogue, reflect on and consolidate existing knowledge, and collectively envision the future of library makerspaces. The intended project results will be a collaboratively developed vision and strategic direction for library makerspaces. The Forum will foster systemic collaboration and offer sessions that inspire innovative perspectives and approaches to library makerspaces. In doing so, the project will enhance the capacity of library makerspaces to meet the evolving needs of their communities while advancing the goals of the maker movement on a national scale.

Program Goals and Objectives

This project addresses the IMLS National Leadership Grant for Libraries grant program *Goal 1: Build the workforce and institutional capacity for managing the national information infrastructure and serving the information and education needs of the public* and Objective 1.2: Collaborate with formal and/or informal learning organizations to incorporate promising practices from allied domains into library and archives services. Specifically, the National Forum to Connect and Advance Library Makerspaces will build libraries' institutional capacity to implement promising practices that have been identified by library makerspace professionals and researchers over the past decade and identify future directions to better serve the needs of the public going forward.

Identification of Need

Since the debut of the first 21st-century U.S. public library makerspace at Fayetteville Free Library in New York in 2011, the growth of library makerspaces has been consistently remarkable for over a decade. Once viewed as a trend in libraries, makerspaces now transcend various types of libraries—public, school, academic, special, rural, and urban—and manifest in diverse forms, such as dedicated physical spaces, flexible maker programs and kits, mobile maker trailers, or online resources. As of 2024, a substantial number of libraries in the U.S. have embraced makerspaces as regular

integrated services, akin to reference or interlibrary loan services, rather than mere add-ons. This development is not surprising, as library makerspaces strongly uphold and also reconceptualize the core mission and values of contemporary librarianship, such as access, community, learning, diversity, and more, as underscored by researchers, practitioners, and community members (Knox, Koh, & Zalot, 2022; Koh, Abbas, & Willett, 2018).

Based on a review of existing literature and federally-funded projects, as well as a series of discussions among leaders in this field, the project team has identified the following needs to:
1. Facilitate systematic coordination and collaboration among various maker groups and leaders to align efforts toward shared goals of fostering sustainability and growth in the area of library makerspaces
2. Reflect on, synthesize, and leverage accumulated knowledge and expertise in library makerspaces
3. Chart the future direction of library makerspaces and identify necessary resources and opportunities.

1. Need to solidify current networks and a systematic coordination of efforts and strengths

Recognizing the growing need for library makerspace professionals to connect and share resources, several networks have emerged. These include ALA Core Maker Technology Interest Group, Nation of Makers Library Makerspaces Working Group, Library Makers, and a newly proposed ALA Library Makerspace Round Table, as well as regional and local groups. (Explanations for each national group are detailed in the Project Personnel section). This juncture offers a valuable opportunity to strengthen these existing networks and harness their expertise. Leaders of these groups, who are spearheading this proposed National Forum, recognize the unique strengths, resources, and challenges of each group. Systematic coordination will be crucial and immensely beneficial for solidifying, leveraging, and further interconnecting the existing networks.

2. Need to synthesize and leverage the accumulated knowledge and expertise on library makerspaces while navigating the cycle of research, practice, and theory

The present moment also underscores the critical need for reflecting on the achievements and advancements within the maker movement in libraries over the past decade. During this time frame, a number of individuals, teams, and organizations have received federal, state, local, and private funding to research or implement best practices for library makerspaces. Each project has played a pivotal role in advancing both theoretical understanding and practical application in this domain. A review of IMLS-funded projects from the Office of Library Services reveals approximately 36 initiatives focused on makerspaces between 2012 and 2023. These endeavors have spanned a diverse array of objectives and scopes, including the development of makerspaces, evaluation methodologies, considerations for physical and online spaces, responses to post-pandemic challenges, accessibility issues, and the integration of makerspaces in various library settings, including schools, public libraries, academic institutions, and rural and urban environments. Some projects have even culminated in the creation of makerspace toolkits and guidelines, as documented by Chang et al. (2019), the Children's Museum of Pittsburgh & IMLS (2016), Knox, Koh, & Zalot (2022), and Makers in the Library (2021). Additionally,

NSF-funded projects on library makerspaces have further contributed to this body of knowledge, focusing on the STEM aspect of makerspaces. See Supporting Document 1 for a working list of IMLS- and NSF-funded projects on library makerspaces.

However, amidst these achievements, three significant challenges have emerged. Firstly, there exists a notable gap between research and practice. Opportunities for collaboration between researchers and practitioners are limited, resulting in research findings that may not be effectively translated into practice, practices that fail to capitalize on research insights and applications, and a lack of research that addresses problems encountered in practice. Secondly, ensuring awareness and coordination among projects poses a considerable challenge. Without adequate communication channels, there is a risk of duplicated efforts, with each team inadvertently reinventing the wheel or working on similar initiatives simultaneously. Thirdly, there is a pressing need for collective reflection and synthesis of the accumulated knowledge to date. Such reflection is essential for discerning the implications of past achievements for the future trajectory of library makerspaces.

3. Need to chart the future direction of library makerspaces: Crafting a shared vision, mission, and strategic goals

The library maker community is ready to flourish even more as we come together to achieve our shared goals of sustaining and advancing library makerspaces for the greater good of the public and society. It is crucial that we seize this time-sensitive opportunity to bring stakeholders together, reflect on past achievements and current situation, and strategically envision the future of library makerspaces. Given that the previous convening, the IMLS National Forum on Research and Assessment in Library Makerspace, took place in 2019, prior to the pandemic, we believe the time is ripe to convene another national forum in 2025 to chart strategic directions moving forward.

The Target Group and Ultimate Beneficiaries

The target group for this National Forum is the current library makerspace community. This includes library maker professionals (ranging from library administrators to makerspace staff), students and prospective library maker professionals, and library and information sciences educators and researchers in higher education. This group will receive the direct benefit of improved networks and collaboration within the library makerspace community and a shared vision for future directions for advancing library makerspaces.

The target group includes the members of each national group who are partners in this project, including: American Library Association (ALA), Nation of Makers Library Makerspaces Working Group, and Library Makers. (Explanations for each national group are detailed in the Project Personnel section.) One current and one pending ALA member group focus on makerspaces. The ALA Core Maker Technology Interest Group has 157 members. The establishment of a new ALA Library Makerspace Round Table was petitioned by 159 current ALA individual members. The Nation of Makers Library Makerspaces Working Group has 227 members in its Slack channel. The membership of Library Makers, a free online community, is quickly growing; as of March 2024, there were 608 librarymakers.org community members, 1600 Library Makers Facebook group members, and a newsletter mailing list of 725 individuals. The target group also includes members of the library makerspace community who will participate in the Makerspace Research-Practice-Theory Symposium (see description below). In addition

to members of our partner groups, we will invite the 96 individuals listed as key personnel or advisors on federally funded library makerspace projects and the additional 33 individuals who participated in the 2019 IMLS-funded IMLS National Forum on Research and Assessment in Library Makerspaces (see Supporting Document 1 for a list of these individuals). The National Forum at the ALA Annual Conference (see description below) will be open to all conference attendees, which could range, approximately, from 15,000 to 25,000. Finally, the National Forum Listening Sessions (see description below) will be open to all of the individuals listed above, as well as other professionals, students, researchers, and educators with an interest in library makerspaces.

Results of this National Forum will be disseminated broadly. As a result, the ultimate beneficiaries of this project will be staff and leaders in public, school, and academic libraries nationwide and the publics they serve. These individuals and communities will benefit from the coordinated activities of the library makerspace community, progress toward the shared vision that is identified, and the new knowledge and best practices generated by strengthened research-practice partnerships.

Project Work Plan

Project Activities

To address the identified needs, we propose a National Forum that includes working group meetings, a symposium, listening sessions, and Forum gathering over eighteen months (8/1/2024-1/31/2026). The activities have been designed to reflect on, synthesize, and leverage accumulated knowledge and expertise by beginning with core groups that provide leadership in library makerspaces and expanding in widening circles to include the broader library community (see Figure 1 for a diagram of activities). The distinctive feature of the Forum lies in its deliberate design to build upon past accomplishments and harness current resources and expertise in shaping the future of library makerspaces. Through fostering systematic coordination and connections, our objective is to establish a collective vision, goals, and effective strategies.

Working Group Meetings (Sep 2024, Nov 2024, Jan 2025, May 2025, Aug 2025, Oct 2025). Working group meetings will engage 5 core groups that provide leadership in library makerspace services, professional development, and research. A total of 6 working group meetings will be centered around the question: How might we coordinate efforts and strengths among maker groups towards common goals? Each partner group will have the opportunity to lead a meeting, sharing its mission, strengths, challenges, required resources, and desired support from other groups. The last meeting will focus on synthesis, reflection, dissemination, and sustainability issues. The project team represents the following groups:
- ALA Makerspace Round Table
- ALA Core Maker Technology Interest Group
- Nation of Makers Library Interest Group
- Library Makers
- Makerspace researchers and educators

The working group meetings will be held on Zoom, with the option of a hybrid meeting using both Zoom and the ALA LibLearnX conference for the January 2025 meeting.

Makerspace Research-Practice-Theory Symposium (February, 2025. Online)**.**
This symposium will expand the working group conversations to engage additional professionals, researchers, and educators. The symposium will feature expert presentations including keynotes and lightning talks showcasing federally funded research on library makerspaces, as well as published research and best practices. Interactive discussions will engage attendees in ideation sessions focused on facilitating the cycle of research, practice, and theory in library makerspaces.

National Forum Listening Session 1, 2, & 3 and an Asynchronous Platform (March 2025).
These online open listening sessions will further expand the conversation to engage library professionals, researchers, educators, and students who are interested in library makerspaces in envisioning the future of library makerspaces and top key priorities for the next decade, along with the resources and opportunities required to achieve these priorities. There will be three identical listening sessions to accommodate participants' varying schedules. Team members will be assigned to lead individual sessions, with the option to participate in all sessions if they choose to and are available. At each listening session, the project team will present progress and findings to date, gather input from attendees, and facilitate creative brainstorming to collect ideas and generate recommendations. An asynchronous platform will also be used to collect input in order to maximize access and provide ongoing opportunities to provide suggestions and feedback beyond the three live listening sessions.

Release a White Paper Draft for Open Feedback (June 2025)
A draft white paper that synthesizes the results of the working group meetings, symposium, and listening sessions will be released for public review. This draft paper will set forth a vision for the future of library makerspaces in the U.S., including key priorities for the next 10 years and the resources and opportunities that are needed to realize them. The paper will then document the national groups that are currently providing leadership for library makerspace, communicate their missions, describe the shared goals developed through the Forum activities, and discuss groups' areas of overlapping strengths and challenges. The white paper will also provide recommendations for research-practice partnerships that can help realize the vision for the future of library makerspace, including application and facilitation of collaborative, multi-directional research-practice-theory cycles. This will likely include recommendations for topics and structures of future research-practice partnerships that will leverage the enhanced coordination of effort among makerspace groups to move toward the future.

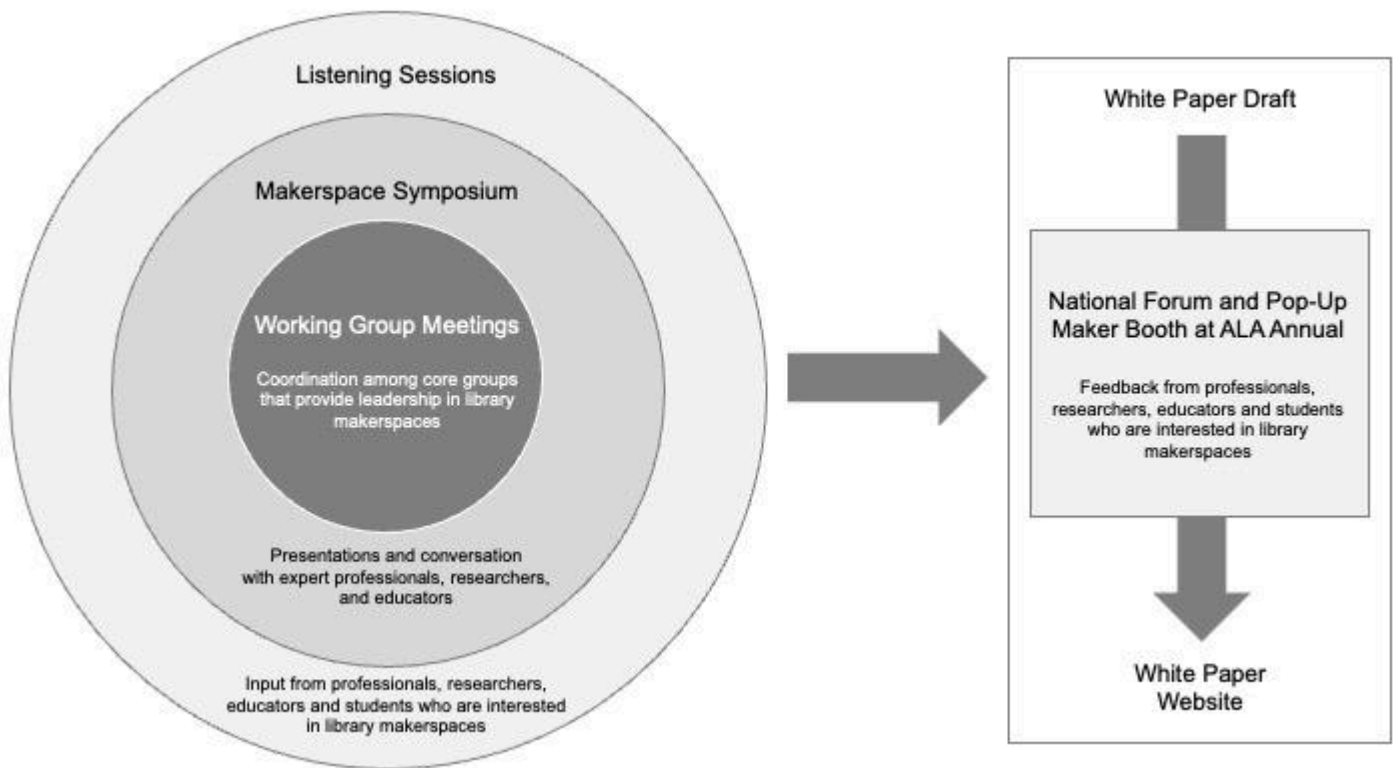**National Forum at 2025 ALA Annual Conference** (June 2025. Chicago).
A 90-minute conference session will be allocated during the 2025 ALA Annual Conference for the project team to present the highlights of the white paper draft, discuss key findings and seek feedback from the audience. Discussions and insights from the session will be thoroughly documented for incorporation into the white paper.

In addition to the conference session, the project team will engage a broader audience at the ALA Annual Conference, which typically hosts between 15,000 to 25,000 attendees, by setting up a pop-up maker booth. Through this pop-up, we envision the National Forum harnessing the maker approach (i.e., hands-on, engaging, and playful) to generate knowledge, solicit feedback, and disseminate information. This temporary makerspace was identified as a way to connect with conference attendees, capture their interest, and solicit feedback on the National Forum in an interactive manner. The pop-up will immerse conference participants in informal and enjoyable maker activities while also promoting the National

Forum. We plan to offer a variety of portable maker activities, ranging from low to high tech. These activities may include options that align with the conference setting, such as buttons and ribbons that can be affixed to attendees' bags and name tags, as well as high-tech activities to captivate the audience and inspire potential initiatives in their own libraries. Highlights from the draft white paper and prompts for feedback will be prominently displayed, the project team will encourage input from attendees, and feedback will be documented for incorporation into the white paper.

Finalize the white paper, website, and dissemination (June 2025- January 2026). The remainder of the project will focus on producing and disseminating quality project results, including a white paper and a website.

Figure 1. Project Activities and Results

Project Personnel, Organizations, and Groups

The primary personnel who will plan, execute, and manage the project include the project director, co-director, and coordinator.
- Project director, Dr. Kyungwon Koh, is an Associate Professor at the University of Illinois at Urbana-Champaign iSchool and the Director of the C-U Community Fab Lab.
- Project co-director is Dr. Rebecca M. Teasdale, an Assistant Professor at the University of Illinois Chicago.

- Emilie Butt, MSLIS, the Instruction and Engagement Coordinator at the C-U Community Fab Lab, will serve as the project coordinator.

The director, co-director, and coordinator will closely collaborate with the following **partner team members**, whose expertises are crucial to the success of this project. The team members represent various maker groups and organizations, with some members exhibiting leadership roles across multiple groups. Team members will actively participate in the working group meetings and all in-person and online forums, provide input and assistance in producing and disseminating project results.

- Cara Kouse, the Innovation and Makerspace Manager at Greene County Public Library, is a Co-Chair of the Nation of Makers Library Working Group and a charter member of Library Makers.
- Sarah Nagel, Creation and Innovation Services Librarian at Miami University in Ohio, is also a co-chair of the Nation of Makers Libraries Working group and the incoming chair of the ALA Core Maker Technology Interest Group.
- Leanne Nay**,** Creative Technologies Librarian at Indiana University, has been leading the Core Maker Technology Interest Group as a chair.
- Dr. Lisa Regalla, the CEO of Regallium Consulting, LLC, is leading the *Library Makers* online community of practice.

The following organizations and groups will lead the National Forums and be represented in the Working Group Meetings:

The American Library Association, the world's oldest and largest library association, provides leadership for the nation's library and information services, and it has a far-reaching impact on libraries and their communities. One current and one pending ALA member group focus on makerspaces. **The ALA Core Maker Technology Interest Group**, as part of Core's Technology Section, aims to explore technologies located within makerspaces, content creation spaces, and the management of such areas. Addressing a broader goal of connecting library makerspace stakeholders in a more sustainable, visible, and accessible infrastructure, in January 2024, the project team led the petition for the establishment of a new **ALA Library Makerspace Round Table**. The petition was signed by 159 current ALA individual members, and the ALA Round Table is slated to launch in September 2024 (pending review).

Nation of Makers is a national nonprofit supporting America's maker organizations through community building, resource sharing, and advocacy within the maker movement and beyond. The Libraries Working Group within the Nation of Makers supports a network of library professionals who develop and deliver maker programs and support makerspaces in school, academic, and public libraries. The group shares resources, holds virtual meetings, provides opportunities for collaboration and idea exchange, and conducts research on the state of library makerspaces.

Library Makers is a community of library makerspace professionals, made possible through the IMLS grant program. They apply innovative approaches to create and cultivate an online community and support its members, offering a free online platform, newsletters, happy hours, webinars, and other member engagement programs.

Requested Financial Resources

To ensure the successful implementation of the National Forum, the project requests salary support for the project director, co-director, and coordinator; honorariums for partner team members; travel costs for

team members; maker tools and supplies for the ALA Annual Pop-Up Maker booth; and marketing and promotion costs to create professional-quality final products, such as websites, white papers, infographics, and other promotional items, as well as benefits and indirect costs. (See the IMLS Budget Form and Budget Justification for detailed budget information.)

Progress Monitoring and Project Evaluation

We will track and assess our progress in several ways throughout the 18 month Forum (see Performance Measurement Plan for additional details). On a quarterly basis, we will examine effectiveness and efficiency. To assess effectiveness, the Project Director, Project Co-Director, and Project Coordinator will compare the actual results of the project against our intended results and make adjustments to ensure the project is on track to achieve the intended results. The Project Director will also gather feedback from the project partners about the effectiveness of project activities. To examine efficiency, the Project Director, working with the university's Research Services department, will assess the alignment between our actual expenditures and the proposed budget and make adjustments to ensure the project is using resources as intended. We will examine project quality in three ways. On a semi-annual basis, the Project Director will gather feedback from the project partners about the quality of project activities. Finally, the Project Director, Project Co-Director, and Project Coordinator will examine timeliness each quarter by assessing the alignment between our actual activity completion dates and the proposed Schedule of Completion and making adjustments to ensure the project is on track to be completed within the proposed time frame.

Dissemination

We will draw on the strengthened relationships and new collaborations that are developed through this Forum to disseminate project results. Partner groups will collectively leverage their websites, listservs, social media channels, and events to announce the publication of the Forum white paper and direct their members to the project website. The website will offer the white paper as a freely available download, along with information and links for all partner groups. After the grant period concludes, we will share key elements of the white paper through journal or magazine articles and conference presentations, adding links and information to the project website. The ALA Library Makerspace Round Table will take on the role of maintaining the website after the Forum project concludes.

Diversity Plan

The National Forum to Connect and Advance Library Makerspaces will advance diversity, equity, and inclusion in multiple ways. First, library makerspaces themselves contribute to the values of equity and diversity in librarianship, by providing access to tools, spaces, expertise, and social opportunities for community members with different backgrounds. These resources may not be readily accessible to them otherwise. Further, library makerspaces challenge exclusionary practices in the broader maker movement that imposed limited conceptualizations of what "counts" as making and who is valued and prioritized in making environments. Literature indicates that library makerspaces have expanded and diversified the range of maker projects and embraced user groups who may not have previously identified themselves as a maker or had access to making environments that valued and prioritized their involvement.

This National Forum will also attend to diversity, equity, and inclusion in terms of the libraries and library professionals we engage. Forum activities are designed to provide multiple, low-barrier opportunities for engagement (e.g., online listening sessions, opportunities to provide asynchronous feedback) so that participation is not limited to individuals whose libraries can pay for travel to in-person convenings or those who have gained recognition in the field as a result of opportunities to present at conferences or partner with researchers. Rather, we will provide avenues for participation for professionals, researchers, educators, and students who are situated in both rural and urban areas, at institutions with higher and lower levels of resources, and those working in well-established makerspaces as well as individuals who have not yet worked in a makerspace. We will foster diverse representation among participants by extending invitations to groups that have been underrepresented in maker culture. For example, we will leverage our partnership with ALA to publicize Forum activities to groups such as the Black Caucus of the ALA, REFORMA, the American Indian Library Association.

This National Forum will intentionally facilitate a discussion on diversity and equity in the maker movement as part of our work to reflect on, synthesize, and leverage accumulated knowledge and expertise in library makerspaces and chart future directions. We will include a focus on equity and inclusion as a key topic in the Working Group Meetings to understand the efforts and accomplishments of each partner organization. We will invite the directors of the makerspace projects IMLS has funded from 2012 to 2023, many of which include a focus on diversity, equity, and inclusion in making, to participate in Symposium to learn from their experiences.

Project Results

The results of this eighteen-month project align with the three goals and guiding questions for the project (see Table 1). The first category of results addresses the goal of coordinating the efforts and strengths of key groups that provide leadership for library makerspaces. Through our Working Group Meetings, the project partners will build understanding of each group's mission, strengths, challenges, required resources, and desired support from other groups. At the conclusion of the Forum, we will identify shared goals and areas of overlapping strengths and challenges, which will be documented in the project white paper. We will produce a project website that will provide information and links for each partner organization and serve as a hub for information, which will be sustainable through the ALA Library Makerspace Round Table and the CUC Fab Lab at the University of Illinois. This new infrastructure will support libraries seeking to identify, locate, and contact groups to support them in providing and enhancing makerspace services to their users and communities.

The second category of results addresses the goal of enhancing the synergy between research, practice, and theory in library makerspaces. Through the Makerspace Research-Practice-Theory Symposium, we will convene expert professionals, researchers, and educators to enable us to review and synthesize current knowledge. At the end of the Forum, we will produce recommendations for the application and facilitation of the multi-directional research-practice-theory cycle, which will be communicated in the project white paper. We anticipate that this will include recommendations for topics and structures of future research-practice partnerships that will leverage the enhanced coordination of effort among makerspace groups. These new partnerships and projects will generate knowledge and yield best practices that libraries can draw on to refine and expand makerspace services for the populations they

serve. Going forward, these will be documented on the project website to provide ready access for libraries, library professionals, researchers, educators, and students.

The third category of results addresses the goal of identifying key priorities of library makerspaces in the U.S. for the next 10 years, as well as the resources and opportunities that are needed to realize them. Through the Listening Sessions, Forum at ALA Annual, and Pop-Up Booth at ALA Annual, we will gather input and suggestions from a broad cross-section of professionals, researchers, educators, and students who are interested in library makerspaces. At the conclusion of the Forum, we will publish a white paper that sets forth a vision for the future of library makerspaces, as well as the resources, activities, partnerships, and support needed to move toward that vision. This white paper will be disseminated through the participating partner groups and via the project website. Key elements will be shared through journal or magazine articles and conference presentations after the grant period concludes. This information will support public, school, academic, special, rural, and urban libraries in meeting the evolving needs of their communities while advancing the goals of the maker movement on a national scale.

Table 1. Mapping the Goals, Questions, Timelines, Project Activities, and Anticipated Results

Guiding questions (Goals)	Timelines	Activities	Results
How might we coordinate the efforts and strengths of maker groups to achieve shared objectives? (Goal 1)	Sep 2024, Nov 2024, Jan 2025, May 2025, Aug 2025, Oct 2025	Working Group Meetings	(1) Systematic coordination of efforts among the maker groups (documented strategies and coordinations)
How might we enhance the synergy between research, practice, and theory in library makerspaces?(Goal 2)	February, 2025. Online	Makerspace Research-Practice-Theory Symposium	(1) Review and synthesis of current knowledge (2) Recommendations for application and the facilitation of the research-practice-theory cycle
What are top key priorities of library makerspaces in the U.S. for the next 10 years, and what resources and opportunities do we need?(Goal 3)	March 2025	National Forum Listening Sessions	(1) Inputs and suggestions obtained by participants (2) Draft of a culminating white paper
	June 2025	National Forum at ALA	The cumulative result of the forums–in a form of white paper and a website [additional product formats will be determined such as infographic, article, presentation, and more]

Schedule of Completion

Year 1												
Activities	Month											
	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025
Working Group Meeting 1		■										
Working Group Meeting 2				■								
Working Group Meeting 3						■						
Makerspace Research-Practice-Theory Symposium							■					
National Forum Listening Sessions 1, 2, & 3								■				
Working Group Meeting 4										■		
White Paper Draft											■	
Final National Forum at ALA Annual											■	

Year 2						
Activities	Month					
	Aug 2025	Sep 2025	Oct 2025	Nov 2025	Dec 2025	Jan 2026
Working Group Meeting 5	■					
Finalize White Paper and Web Contents		■				
Working Group Meeting 6			■			
Disseminate Synthesis Report				■	■	■

Digital Products Plan

This project will produce a project website, white paper, and journal article.

The **project website** will be freely available using a standard web browser and without charge. The website will be maintained for a period of 3 years after the conclusion of the project and will include links to each of the products outlined below.

The **white paper** will be posted and freely available on the project website for a period of 3 years after the conclusion of the project. The public will be able to access, read, and download the white paper using a standard web browser and without charge. The project team will not copyright the white paper.

The **journal article** will be submitted to a peer-reviewed library and information science journal such as [Library and Information Science Research](#) or [The Library Quarterly](#) or professional magazines such as [American Libraries](#). We will post a link to the journal article on the project website for a period of 3 years after the conclusion of the project.