

1. STATEMENT OF BROAD NEED

The Califa Group, in partnership with Regallium Consulting, LLC, and Nation of Makers, respectfully seeks funding from the **Laura Bush 21st Century Librarian Program** in the amount of \$249,940 to develop and launch a new national Collective of library members to share resources and learnings about how library makerspaces have and will continue to shift their services and programming post-pandemic. The *New Face of Library Makerspaces*, a **Lifelong Learning project grant**, builds on the Institute of Museum and Library Services' (IMLS) investments in a three-year Library Services and Technology Act grant through the California State Library that resulted in [*Makers in the Library: A Toolkit for Building a Community-Driven Makerspaces*](#) (referenced in this proposal as the Toolkit).

This project will build on the learnings of *Makers in the Library*, which supported and guided 10 under-resourced public libraries across California in developing community-driven makerspaces. In the project's final year, when libraries across the country were forced to suspend their operations due to the COVID-19 pandemic, these 10 libraries adapted their makerspace programs to meet the new challenges. We now want to apply the experiences and learnings of these 10 California libraries, as well as other libraries across the country, to strategically strengthen and support library maker programming. Through a national Collective, we will not only bolster the connection between libraries that have successfully navigated the pandemic, but also mentor and encourage other libraries that have put their makerspaces on hold or are struggling to get their maker programming off the ground. By welcoming and empowering under-resourced libraries, including those that are small, rural, and/or those that serve predominantly Black, indigenous, and people of color (BIPOC), we can expand access to maker resources and uphold diversity, equity, accessibility, and inclusion (DEAI) principles.

Making in Libraries: Libraries are a safe, accessible, and trusted place in the community where all are welcome. Library programs for children and adults are growing rapidly in popularity with more than 118 million attendees in one year (IMLS, 2020; see Supporting Doc 1 for a full list of references). In response, libraries across the country are expanding hands-on opportunities through makerspace programming, which has been shown to support learning and engagement opportunities for BIPOC youth and adults (Barton, Greenberg, Tan, 2017). The library has always been a gathering place, and maker programming is yet another way to leverage library resources to support growth, learning, and community culture and collaboration. However, many library staff need support in learning how to best engage with their community to co-create a makerspace that is sustainable, responsive, and expands access to new audiences (Moorefield-Lang, 2015).

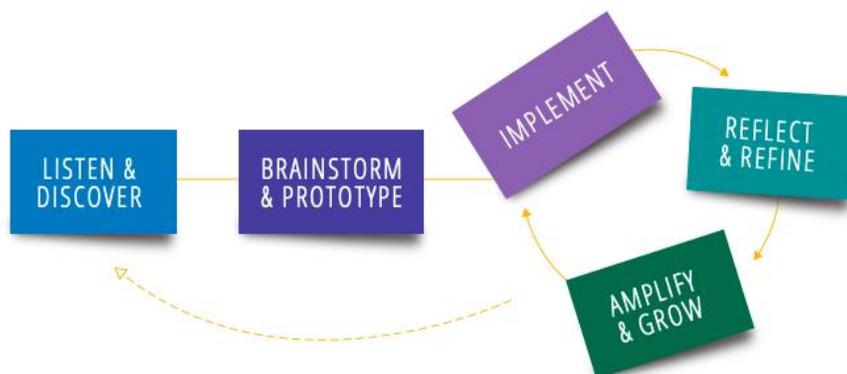
In the early part of this century, the **maker movement** was born from the growing do-it-yourself culture as a response to society's increasing emphasis on mass production and consumerism (Dougherty & Conrad, 2016; Fasso & Knight, 2020). Simultaneously, in education, traditional hands-on classes like woodshop and home-economics were eliminated, leaving a generation without the skills to make things. However, as the maker movement gained popularity, it also left many out of these spaces; the Nation of Makers' 2019 Survey of Makerspaces found less than 5% of makerspace members were African American, and even less were Latinx (Nation of Makers, 2020).

The term makerspace itself can also be misleading. Library makerspaces vary greatly depending on their staff, facility space, and capacity. Across the 10 libraries in the *Makers in the Library* project, a formal evaluation of the project found five types of makerspaces emerge (Burg, 2020):

- **Multi-use space:** A room or area of the library is quickly converted to serve as a temporary space for maker programming. Tools and materials are stored in closets or on mobile carts that can be rolled in when needed and then tucked away.
- **Dedicated space:** A room or area is either specifically designed for or converted into (e.g., underutilized computer room) a permanent space for maker activities and tools.
- **Community events:** Maker programming is brought into the community through an existing event or location (e.g., farmer’s market or community center) or by hosting an event dedicated to making (e.g., Mini Maker Faire). Events are often hosted in collaboration with local makers and/or community organizations.
- **Maker box program:** Tools and materials for maker activities (including activity guides) are housed inside an easy-to-transport box that circulates among branch libraries.
- **Virtual program:** Demonstrations, tutorials, or live interactives are used to engage with patrons online, whether asynchronously (on-demand through archived videos) or synchronously (live demonstration or activity through social media or videos).

Building on *Makers in the Library*: *Makers in the Library* (2018-2020) was a pilot project of the California (CA) State Library developed in collaboration with the initial project team (see Supporting Doc 2). The project was designed to provide training and support for under-resourced libraries throughout the state. A cohort of 10 diverse libraries were selected through an application process, prioritizing libraries with no existing maker program and those that are under-resourced as defined by operating budget per capita, staffing, or the low economic status of the local population they serve. This initiative included rural, urban, and suburban libraries, both small and larger library jurisdictions, and racially and ethnically diverse library professionals (see [Snapshot section](#) of the [Makers in the Library Toolkit](#) for an overview of these libraries). A formal evaluation of the project found that most makerspaces had a positive impact on culture amongst library staff, helped diversify the library’s services, and that patrons were interested in participating and learning more about makerspace activities (Burg, 2020).

The project adopted a design thinking approach of listening, prototyping, and reflecting as participants interacted with fellow staff, patrons, and the community (see image below). Each of the [resulting makerspaces](#) uniquely reflect the community they serve, leverage local knowledge and assets, and are designed for sustainability whether set up as a dedicated space, on a mobile



cart, in a maker program box, or as a virtual program. Quantitative and qualitative evaluation methods were collaboratively developed and implemented,

supporting an ongoing evaluation process itself that incorporated, shared, and valued community insights.

The Toolkit was published on a dedicated website (Makersinthelibrary.org) and is publicly available to all for free download. The resources are backed by current best practices in maker-centered learning and were developed and tested collaboratively in the 10 pilot libraries. The publication includes 21 adaptable tools and a detailed description of a process to follow with examples, quotes, and photographs from participating libraries. These resources are now available to help other libraries take the steps they need to build a sustainable maker program that meets the needs of their local community, even if resources are limited.

Why do we need a Collective? The COVID-19 pandemic caused a dramatic shift in the way libraries operate and serve their communities. Even library staff who were once reluctant to or lacked training to use technology have been forced to find new ways to connect with patrons through virtual programming. These modes of delivery have also shone a light on inequitable access to technology. Additionally, against the backdrop of a nationwide racial and social justice reckoning, libraries must consider how they are serving the full demographic diversity of their communities, and how their histories, structures, and programs have created and perpetuated barriers to participation, especially for low-income communities and communities of color.

As libraries respond to and recover from the COVID-19 pandemic, a makerspace provides a unique opportunity to welcome patrons of all ages into the walls of the library to engage with library staff and one another once again. Making can also serve as a form of healing as people reconnect, share experiences, and use hands-on creation to help move forward post-pandemic. This was demonstrated by the Gilroy Public Library following the tragic 2019 mass shooting at the Gilroy Garlic Festival (see [Reflect & Refine section](#) of the [Makers in the Library Toolkit](#)).

The COVID-19 pandemic has also highlighted the adaptability, creativity, and problem-solving skills of dedicated professionals at public libraries around the country, even as their libraries closed, and staff members worked from home or were reassigned to other roles in their towns. We've seen that makerspace staff didn't act alone or in a silo—they reached out and collaborated, leveraging their local, national, and international maker ecosystems to serve most effectively, including producing PPE and distributing program kits to children (Pichman, 2020).

In February 2021, the project team held focus groups with the original 10 libraries from the *Makers in the Library* project to better understand their needs as they began to emerge from the pandemic. Library staff from smaller, rural communities spoke to the dual challenges of engaging their community through virtual programming because of the digital divide and offering socially distanced in-person maker programming. All participants expressed a desire for support, guidelines, and resources that would help them provide access to their makerspaces and associated programming.

The idea of a Collective was born to support libraries recovering from the pandemic, building on lessons learned from the initial project, promoting DEAI practices for their staff and the communities they serve, and building library professionals' capacity and skill sets. **We define a Collective as a decentralized group of professionals with similar interests who work together to achieve a common objective.** This project will make a unique and essential

contribution to the field through the creation of this Collective and its focus on engaging under-resourced libraries serving underserved communities. The Collective will address new needs librarians are facing and will prioritize helping library staff from under-resourced areas feel confident in establishing effective maker programming for the families they serve, with an impact extending far beyond the lifespan of this grant.

2. PROJECT DESIGN

Building on the learnings of *Makers in the Library*, the *New Face of Library Makerspaces* will establish a Collective of library professionals to share resources and learnings about how library makerspaces have and will continue to shift their programming as a result of the COVID-19 pandemic. Project activities will be accomplished between September 1, 2021 and August 31, 2023. In Year 1, we will research models for the Collective, form a Charter group of libraries to co-create the Collective's structure and serve as leaders, and develop a multi-pronged approach for resource development and sharing. In Year 2, we will focus on expanding the Collective, as we welcome new library members, grow our professional development efforts, and create an addendum for the existing Toolkit that incorporates learnings from Collective members and new approaches to in-person and digital programming. Over the project period, the project evaluator will design and implement a mixed methods evaluation to assess the Collective's formation, health, sustainability, and results.

The Collective will primarily serve libraries that have been overlooked by the maker community, including small, rural, and under-resourced libraries, using local and state data related to poverty, unemployment, and broadband availability to determine communities with greater need. While larger, city-based libraries may serve as models, particularly in their efforts to engage BIPOC and low-income communities, many of these libraries are already networked into the maker community. This project's overarching goal is to give voice to the smaller and under-resourced libraries and encourage, support, and elevate their work.

Our project goals over the two year project period are three-fold:

1. Identify tools, resources, and strategies from library makerspace adaptations during the COVID-19 pandemic and share best practices for maker programming that serves diverse audiences.
2. Form a Collective of libraries and library professionals who support one another and share resources through an online platform and social media channels, and together build new knowledge in service of community-centric maker programs.
3. Update the *Makers in the Library* Toolkit, informed by this new knowledge, and disseminate professional development so other under-resourced libraries can begin building their own makerspaces.

Year 1: Research, listen, and co-create the Collective

In Year 1, we will 1) research how library makerspaces and maker programming have weathered the pandemic, 2) select 6 libraries via an application process to serve as Charter Members of the Collective, 3) co-create the Collective model and systems with Charter Members, and 4) develop a series of webinars on the Toolkit and additional digital resources informed by early findings.

We will first establish a baseline understanding of existing library resources and programs that have occurred during the pandemic and draw upon existing datasets, many of which were

developed through IMLS CARES Act Grants, such as the [University of Wisconsin](#). We will also reach out to our Advisors, partners at Nation of Makers, and various maker and library organizations such as Maker Ed, local and state libraries, and professional library associations such as American Library Association, Public Library Association, School Library Association, Association of Rural & Small Libraries, American Indian Library Association, and National Conference of African American Librarians to survey the field and collect data on the ways that libraries have modified their maker programming due to the pandemic and which, if any, of those changes have been sustained (see Supporting Doc 3).

Through an application process, we will select 6 public libraries from regions across the country to serve as Charter Members of the Collective. At least half of the Charter Members will represent small or rural libraries, and the rest will serve communities that are predominantly BIPOC, low-income, or face technological and/or economic barriers. Over the remainder of Year 1, Charter Members will meet regularly to define shared values, co-create processes, norms, and responsibilities for the Collective, as well as to determine criteria and set strategic goals for the recruitment of additional Collective members. They will also consider what types of content to develop and the best ways to make it available, define the benefits of belonging to the Collective, and goals for the group. Charter Members will receive stipends and recognition for their libraries as a leader in this project via the Nation of Makers' website (see Supporting Doc 4).

Simultaneously, the project team will develop a series of professional development trainings and resources. We will design and offer a series of free webinars hosted by the national platform, [InfoPeople.org](#) (see Supporting Doc 5) on the 5 parts of the Toolkit: 1) Listen & Discover, 2) Brainstorm & Prototype, 3) Implement, 4) Reflect & Refine, 5) Amplify & Grow. All participants will have the opportunity to try out the tools introduced in the Toolkit and provide feedback, which will help inform the development of the new addendum. These trainings will be enhanced by content developed based on surveys and interviews with Charter Members as well as other libraries who sustained maker programs throughout the pandemic. We also will establish a communication platform and internal systems on the Nation of Makers' (NoM) website to serve as a hub for our Collective where we can post information, share resources, as well as provide access to our social media channels. We will utilize the existing NoM's Libraries Slack channel as well the *Makers in the Library* Facebook page, and explore other channels and modes of engagement (e.g., blogs and vlogs, etc.) in partnership with Charter Members. Throughout the first year, we will conduct an ongoing formative process evaluation of Collective formation, management, communication, and policies to share best practices that others can replicate. We will provide registration to the Nation of Makers annual conference in June 2022 for the project team and the 6 Charter Member libraries to attend.

Year 2: Expand national Collective and enhance Toolkit

In Year 2, we will 1) expand the national Collective and welcome new members, 2) evaluate the project model and impact, 3) continue developing resources and professional development trainings for Collective members, 4) create an addendum to the Toolkit based on research and feedback from Collective members, and 5) develop a sustainability plan. While the Collective's form will ultimately be decided in partnership with Charter Members, we anticipate that the structure will include several tiers of leaders and contributors:

- I. **Charter Members:** these 6 public libraries will serve as the leaders of the Collective, co-creating the roles, responsibilities, and structure.
- II. **Ambassadors:** these approximately 20 members will represent a variety of library types and will contribute content for resources and recruit and mentor new members.
- III. **Contributors:** these approximately 80 members will represent a variety of library types and will regularly participate with the Collective at various touchpoints (e.g., Slack, Facebook, webinars, website, conferences, etc.).

Ambassadors and **Contributors** will either be strategically recruited or will arise naturally from those Collective members who are most active on the Collective's online forums. We will prioritize racial, ethnic, and geographic diversity and welcome those from school, academic, and other libraries when selecting both Ambassadors and Contributors. We will support Charter Members and Ambassadors through special professional development opportunities led, in part, by guest speakers on topics including: Designing a Welcoming Environment for Creativity, Fundraising, Mentoring, Cultural Humility, and Marketing and Social Media Strategies.

Ultimately, library staff will be able to register on the Nation of Makers' website to join as Collective members. While all libraries are welcome, we will do specific, targeted outreach to under-resourced libraries to ensure a diverse representation. By the end of the project period, the Collective will welcome 100 geographically and demographically diverse members, at least 60% of whom will represent small, rural, and under-resourced libraries, and/or those that serve predominantly Black, indigenous, and people of color. We will elevate and highlight the contributions of under-represented libraries and create a welcoming community for all.

We will encourage Collective members to collaborate, learn from one another, and share resources to strengthen their individual and Collective capacity to serve their communities in new ways. The project will ultimately have a far-reaching impact beyond participating members, as the Collective's Facebook page, Slack channel, webinars, and webpage will be openly accessible to all. However, joining as a Collective Member will offer certain benefits that could include monthly online meetings, networking opportunities, and opportunities to present at national conferences. We have budgeted funds for Collective members to present at and attend the annual Nation of Makers Conference. Members will convene around topics of interest proposed to the Collective and selected on an ongoing basis. From initial focus groups with participating California libraries, we've heard interest in learning about cleaning protocols for makerspace equipment, designing socially distanced programming, and how digital and in-person programming can work together. As libraries begin to offer more programs post-pandemic, new topics will emerge. The project team and Collective members will continue developing resources (blogs, vlogs, journal articles, social media posts, etc.) and professional development opportunities for Collective members.

The Charter Members and project team will also create a sustainability plan that involves a plan for future funding, continued evaluation to support the Collective's long-term success, and processes for Collective members to continue developing and sharing resources beyond the project period. It will also leverage our partnership with Nation of Makers and other library associations to disseminate resources to their networks. Finally, we will produce and publish an addendum to the current *Makers in the Library* Toolkit reflecting findings from the Collective's launch and continued work. The updated Toolkit will reflect new ways in which libraries are

engaging patrons in makerspace activities, including a section focused on remote and virtual maker programming and DEAI practices.

Project team & collaborators: Paula MacKinnon, executive director of the Califa Group, will serve as authorizing agent for the project. She will manage project finances and contractors and assist with recruitment and distribution of stipends. Lisa Regalla, CEO of Regallium Consulting, LLC, and former Project Director for the *Makers in the Library* project will serve as Project Director of this initiative. She will manage the research into successful models, give input into the evaluation process, lead the design of the addendum of the Toolkit, and ensure that all aspects of the project are completed on time. Pamela Van Halsema, head of P. Van Halsema Consulting, will serve as the Collective Manager and will facilitate administrative and recruitment activities and processes that guide the Collective's expansion. Scott Burg, Senior Research Principal at Rockman, et.al., will serve as the project evaluator and will conduct a formative and summative process evaluation to assess utility and broader impact of the Collective, and provide best practices for replicable Collective development models for adaptation by other libraries.

Advisory Board: The project team will convene an Advisory Board to guide this project over the course of the grant. Members bring a variety of expertise in DEAI practices in library makerspaces and/or coordinating networks of organizations to work together to achieve a common goal. Members of the Advisory Board will participate remotely in four, one-hour meetings over the course of the two year project, be available periodically to answer specific questions over email or by phone, provide advice and guidance on the overarching project plan, and give specific feedback on aspects such as: recruitment and selection of Charter Members, guest presenters, evaluation data, etc. With one spot still to be confirmed through a member of the Association of Small and Rural Libraries, the Advisory Board will include (additionally, see Supporting Doc 6):

- Christina Fuller-Gregory, Principal Consultant, Fuller Principal Consulting
- Maggie Melo, Assistant Professor in the School of Information and Library Science, University of North Carolina at Chapel Hill
- Vera Michalchik, Associate Director and Senior Researcher, Connected Learning Lab
- Rafi Santo, Principal Researcher, Telos Learning, LLC
- Dr. Jerry D. Valadez, CEO/President, Community Science Workshop Network

Evaluation Plan: Scott Burg, of Rockman et al. will assess the effectiveness of the Collective's structure and activities through three primary domains: 1) **Formation**, 2) **Health**, and 3) **Results**. Mixed evaluation methods will focus on Collective activities and processes. Evaluation is key in contributing to shared learning, and all project evaluation activities will be conducted in coordination with Collective members. This participatory approach will build the Collective's capacity to conduct ongoing evaluation of the project as a whole and helps support evaluation activities at the local level for Collective members.

Year 1 evaluation activities will focus on the Collective's formation and those elements critical to development of its purpose, function, management, and organizational roles and responsibilities. Evaluators will also assess development of tools and resources and use of various communication platforms for marketing and dissemination.

Evaluation questions for Collective **Formation** include: Who participates in the Collective? How are the Collective's goals defined? To what extent does this process reflect individual library maker program development, implementation, and community engagement models? How will the Collective's model uphold DEAI principles amongst member libraries, member recruitment, and determining priority functions and activities? What types of outreach and resources (including aspects of the *Makers in the Library Toolkit*) are most critical for meeting the needs of diverse libraries and their patrons? **Specific Year 1 evaluation activities will include:**

- Survey and interviews with Charter Members to identify expectations, areas of interest, maker activity development and implementation models, and perceived challenges.
- A literature review to identify and assess other national and local models of maker Collectives, and related models of Collectives in formal and informal education.
- Collaborative development of a project logic model with core members.
- Observation and documentation of Collective meetings and communications.
- Review of *Makers in the Library Toolkit* for adaptation and broader dissemination.

Year 2 evaluation activities will pivot to an examination of the Collective's Health and Results. Both are critical to the Collective's long term sustainability and relevance, as they reflect the library members' enthusiasm and commitment and ensure their ability to work together to achieve shared goals. Evaluation questions related to Collective **Health** include: How does the Collective support communication and collaboration amongst members? What incentives are necessary to keep Collective members engaged and responsive? How does the Collective support participation by underserved and underrepresented libraries and communities?

Assessment of the Collective's results (e.g., impact on members, impact on the field, focus on virtual vs. onsite maker activities) will be conducted in collaboration with Collective member libraries and their communities. Evaluation questions related to the Collective **Results** include: To what extent do diverse stakeholder groups (libraries, patrons, community organizations) sustain their involvement and commitment to the goals of the Collective? Is the Collective able to build on their successes and failures? Is the Collective making progress on interim outcomes that signal progress to longer-term goals? How have Collective outreach efforts improved access and equity to maker activities? **Specific Year 2 evaluation activities will include:**

- Survey and interviews with Charter Members and other members to understand their expectations and concerns.
- Observe Collective meetings to document and assess core processes such as communication, consensus building, member recruitment and strategic planning.
- Review Collective members' evaluation of their respective maker activities.
- Focus groups with representatives of Collective member library communities (patrons, partner, etc.) to better understand impact of and access to onsite and virtual maker activities, utility of resources, etc.

Charter members will be invited to participate in data analysis meetings to weigh in on the interpretation of findings and methods of report dissemination.

3. DIVERSITY PLAN

We recognize that makerspaces are often created without a racially, ethnically, and socioeconomically diverse community in mind. They are often run by white men and focus on

high tech equipment that is inaccessible to most (Tascha, 2012). Indeed, over 80% of makerspace users are white (Nation of Makers' Annual Survey of Makerspaces, 2019). Through this project, we want to broaden what it means to be a maker and provide opportunities to welcome new community members into library makerspaces. To us, a makerspace is not about the tools, but rather the people and culture of community and creativity that is established. This could involve celebrating traditional activities such as sewing, which has proven particularly popular and engaging for middle school makerspace users (Barton et al., 2017), as well as high-tech tools and devices.

Throughout this project, we will prioritize libraries that serve under-resourced communities, particularly those that serve predominantly Black, indigenous, and people of color (BIPOC), and/or low-income populations that face a digital divide. All Charter Members of the Collective will be public libraries, and at least half will be small and/or rural libraries. We will also prioritize recruiting BIPOC library staff members or those from other underrepresented groups, recognizing that diverse representation in the Collective's leadership, particularly amongst Charter Members and Ambassadors, should mirror our efforts to diversify makerspace users and expand makerspace programming to libraries that serve diverse patrons.

We are also committed to ensuring the Collective is welcoming and inclusive for all. Strategies for cultivating an intentionally diverse, equitable, and inclusive community include ensuring that communications and resources are culturally appropriate and that all members feel safe, respected, and heard. Additionally, we will design processes to ensure we are welcoming new Collective members thoughtfully and intentionally, particularly BIPOC library professionals, including personal outreach to new members, inviting them to "bring a friend" to learning opportunities or Collective events, and elevating their voices within the Collective. Ultimately, our goal is to have at least 60% of the Collective members represent libraries that primarily serve underserved communities as defined by data related to poverty, unemployment, and broadband availability. Throughout the evaluation process, our participatory approach will be responsive to feedback from Collective members and pay particular attention to access issues around technology and racial/ethnic equality.

4. BROAD IMPACT

This project will have a national impact both through the Collective's membership and more broadly, through its online presence and resources that are publicly available to all. The Collective will maintain an online presence beyond the scope of the proposed project timeline. The resources already have their own dedicated website, makersinthelibrary.org, and associated webinars will be hosted and archived in partnership with [Infopeople](http://Infopeople.org), an organization that focuses on providing quality continuing education opportunities that are tailored to library needs and developed by experienced library professionals.

Findings from this project will generate best practices for developing, assessing, and sustaining maker activities in libraries following the COVID-19 pandemic. The Collective itself will serve as a model for organizations to work collaboratively to share and advance knowledge for themselves and the field at large. Opportunities for libraries to work around a shared common goal within a Collective also demonstrates how to maximize limited resources, while providing opportunities for individual members to develop new skills through shared professional

development. The proposed work structure will have a broad impact through the following outcomes:

- The dissemination of freely accessible resources through the Nation of Makers website, MakersintheLibrary.org and InfoPeople.org all of which are accessible to anyone both inside and outside of the library profession.
- Engagement on social media channels such as Facebook, Instagram, Twitter, YouTube, and Slack which can be shared and accessed outside of the Collective.
- A network of support for all participating libraries and their staff which will be sustained through ongoing professional development and mentoring opportunities to support emerging leaders from diverse backgrounds.
- A curation of program models that were developed and tried during the pandemic, and a set of best practices for future program delivery based on this new information.
- Sharing of evaluation reports, lessons learned, and promising practices with library stakeholders and through conferences, blogs, and publications.
- The creation of a sustainability plan by members of the Collective to support the growing membership that will co-create and utilize the resources provided.

Sustainability plan: We are partnering with the established national organization Nation of Makers, whose mission is to support America's maker organizations through advocacy, resource sharing, and the building of community within the maker movement and beyond. We will leverage their network to build the Collective's membership with distributed leadership of active Collective members who continue to help one another, share resources, seek additional funding, and launch follow-up initiatives. Development of a sustainability plan will also be part of the expectations of Charter Members in Year 2 of this grant. We will also build the Collective's web presence and communication methods around the Nation of Makers' webpage and Slack network, where it will remain permanently, and the Infopeople platform, ensuring the Collective's longevity beyond the project period.

Dissemination plan: We are committed to sharing the results of this project including the revised Toolkit, findings from research on best practices for COVID-influenced maker programming, and evaluation with the broader library community through conferences, publications, and outreach to diverse communities of practice. We have already begun to disseminate the results of the *Makers in the Library* pilot program and Toolkit through programs presented at the CLA (California Libraries Association), MIRA (Makerspaces for Innovation and Research in Academics), PLA (Public Libraries Association), NOMCON (Nation of Makers) and Play, Make Learn annual conferences. We will work with Collective members to submit additional applications to share new project results through national conferences, such as: NOMCON, Association for Small and Rural Libraries, and the Capital Maker Faire. Select members of the Collective will be also offered free registration to participate and present at the annual NOMCON where they can meet in-person with other Collective members. In addition, we plan to elevate the voices of Collective members by coaching them to submit articles to print and digital publications such as: [Library Journal](#), [School Library Journal](#), [The Programming Librarian](#), and [Connected Learning's Educator Innovator blog](#). Finally, we will also disseminate project information and results through aligned communities of practice such as the [PLIX](#) (Public Library Information Exchange) out of MIT, the [CoBuild19](#) Facebook group, [Makerspaces and the Participatory Library](#) Facebook Group, [YOUmedia Network](#), the [STAR Library Network](#), and other networks that the Collective and advisors deem relevant.



DIGITAL PRODUCT FORM

INTRODUCTION

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to digital products that are created using federal funds. This includes (1) digitized and born-digital content, resources, or assets; (2) software; and (3) research data (see below for more specific examples). Excluded are preliminary analyses, drafts of papers, plans for future research, peer-review assessments, and communications with colleagues.

The digital products you create with IMLS funding require effective stewardship to protect and enhance their value, and they should be freely and readily available for use and reuse 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

If you propose to create digital products in the course of your IMLS-funded project, you must first provide answers to the questions in **SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS**. Then consider which of the following types of digital products you will create in your project, and complete each section of the form that is applicable.

SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS

Complete this section if your project will create digital content, resources, or assets. These include both digitized and born-digital products created by individuals, project teams, or through community gatherings during your project. Examples include, but are not limited to, still images, audio files, moving images, microfilm, object inventories, object catalogs, artworks, books, posters, curricula, field books, maps, notebooks, scientific labels, metadata schema, charts, tables, drawings, workflows, and teacher toolkits. Your project may involve making these materials available through public or access-controlled websites, kiosks, or live or recorded programs.

SECTION III: SOFTWARE

Complete this section if your project will create software, including any source code, algorithms, applications, and digital tools plus the accompanying documentation created by you during your project.

SECTION IV: RESEARCH DATA

Complete this section if your project will create research data, including recorded factual information and supporting documentation, commonly accepted as relevant to validating research findings and to supporting scholarly publications.

SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS

A.1 We expect applicants seeking federal funds for developing or creating digital products to release these files under open-source licenses to maximize access and promote reuse. What will be the intellectual property status of the digital products (i.e., digital content, resources, or assets; software; research data) you intend to create? What ownership rights will your organization assert over the files you intend to create, and what conditions will you impose on their access and use? Who will hold the copyright(s)? Explain and justify your licensing selections. Identify and explain the license under which you will release the files (e.g., a non-restrictive license such as BSD, GNU, MIT, Creative Commons licenses; RightsStatements.org statements). 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.

Digital products for this project will include webinars with Infopeople, a dedicated webpage on Nation of Makers' website, and an addendum to the Makers in the Library Toolkit that will live on the Makers in the Library website. These products will all be freely and publicly available, and videos will be hosted on the Nation of Makers' website, distributed for free to participants via Infopeople.org, and Makers in the Library website. All work will be attributed to project staff or Collective members, and attribution will be given to IMLS for their support.

Although the project will include several other digital products, including professional development videos and resources for our Charter Members and Ambassadors, and social media channels (Collective's Slack channels, Facebook group, etc.), these will only be available to Collective members rather than the general public.

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 addendum to the Makers in the Library Toolkit will not be copyrighted, and will be assigned a Creative Commons Attribution, Non-Commercial, Share Alike, 4.0 International license, and will be made available to all on our website with no restrictions to access.

Otherwise, the Califa Group, Regallium Consulting, LLC, and Nation of Makers do not assert copyright. There will be no restrictions to access, and one condition of use is that anyone who shares the digital products attributes the product creators and IMLS. This condition will be clearly stated on the Collective webpage on the Nation of Makers' website, Infopeople platform, and the Makers in the Library website.

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.

This project will both curate and create video and narrative content for the website and for professional development workshops. Any recordings, video or photographs gathered from participating libraries that might be used in our project and shared or incorporated into our training will be used with advance permission.

The Collective will develop and host a moderated interactive forum for library makerspace staff in which participants will need to agree to community guidelines which set expectations for civility, mutual respect, kindness, and integrity.

The project team will collect personal and demographic information for those individuals registering as Collective members, including but not limited to their names, the library where they work, race, ethnicity, gender preference, and general information on their library (i.e., how many people they serve, etc.). None of that information will be shared publicly and will only be used for tracking against the project's DEAI goals.

SECTION II: 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.

Both the Nation of Makers and Makers in the Library websites are built on the Squarespace platform, which is built in html and features responsive design and accessibility features. Professional development sessions via Zoom will be streamed live and include both audio and video. Recordings of those sessions will be made available via a link to an mp4 file or via YouTube.

We will collect information from libraries on best practices and maker projects. These will come in multiple formats, but most commonly as photographs and image files (.jpg, .heic, .png), as video clips (mp4 files), written descriptions (MSWord, Google Docs, .pdf files) or online resources from library websites, library social media accounts.

Rockman, et al will be responsible for creating evaluation reports from their findings. Content will be in .pdf format and be drawn from surveys and interviews with Collective members.

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

Both the Nation of Makers website and the Makers in the Library website were created in Squarespace. All Infopeople webinars are created in GoToWebinar or Zoom meetings. Informal

professional development for Charter Members and Ambassadors will be delivered via Zoom. Email subscribers will receive a periodic email newsletter created with Mailchimp. Survey data collected by Rockman, et al will be done using Qualtrics.

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG, OBJ, DOC, PDF) you plan to use. If digitizing content, describe the quality standards (e.g., resolution, sampling rate, pixel dimensions) you will use for the files you will create.

All digital product deliverables will be made accessible via our project and partner websites. PDFs will be print quality (300 dpi) and downloadable for printing. The webinar videos will be delivered via Zoom, shared via YouTube and available as a downloadable mp4 files.

Workflow and Asset Maintenance/Preservation

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

We will follow the workflow described in our Schedule of Completion for the establishment of the Collective the creation of a webpage on the Nation of Makers website, development and delivery of professional development trainings, and creation of the addendum to the Makers in the Library Toolkit. Ongoing systems of communications by the Project team along with periodic accountability to our Advisory Group, will help keep the workflow moving along the timelines and will ensure we can monitor and evaluate our progress on an ongoing basis.

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period. Your plan should 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 two organizations that own and maintain two of the platforms on which digital assets will be hosted (Nation of Makers – Collective website, Infopeople – professional development videos) are committed to maintaining these assets and making them freely available permanently after the completion of the grant. The Toolkit and its addendum will be maintained indefinitely on the Makers in the Library website. During the grant period curated examples of digital media from Collective members will be saved in Dropbox, a cloud based storage system.

Metadata

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

N/A

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

Throughout the grant we will develop a taxonomy for these digital assets related to making and makerspaces and share this information with the Collective.

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).

Digital multimedia content uploaded to YouTube and on the project website will be posted with relevant titles, keywords, tags, and metadata to aid in their discoverability in search engines like Google, Bing, etc.

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, delivery enabled by IIIF specifications).

The Collective webpage, hosted on Nation of Makers website, and professional development videos will be openly available online and accessible via standard web browsers. The Collective will determine which platforms are most accessible for the forum between Collective members, and may include an email listserv via Mailchimp, a Slack channel, or a dedicated forum application that could be embedded on the webpage. The forum will be visible to non-members, but only members of the Collective can contribute information or comments. Additional professional development and resources will be only available to Collective Members and will be accessible via Dropbox on a standard web browser.

D.2. Provide the name(s) and URL(s) (Universal Resource Locator), DOI (Digital Object Identifier), or other persistent identifier for any examples of previous digital content, resources, or assets your organization has created.

<https://www.makersinthelibrary.org/>
<https://www.nationofmakers.us/>

SECTION III: SOFTWARE

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.

N/A

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

N/A

Technical Information

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

N/A

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

N/A

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

N/A

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

N/A

B.5 Provide the name(s), URL(s), and/or code repository locations for examples of any previous software your organization has created.

N/A

Access and Use

C.1 Describe how you will make the software and source code available to the public and/or its

intended users.

N/A

C.2 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

N/A

SECTION IV: RESEARCH DATA

As part of the federal government's commitment to increase access to federally funded research data, Section IV represents the Data Management Plan (DMP) for research proposals and should reflect data management, dissemination, and preservation best practices in the applicant's area of research appropriate to the data that the project will generate.

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

N/A

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?

N/A

A.3 Will you collect any sensitive information? This may include personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information. If so, detail the specific steps you will take to protect the information while you prepare it for public release (e.g., anonymizing individual identifiers, data aggregation). If the data will not be released publicly, explain why the data cannot be shared due to the protection of privacy, confidentiality, security, intellectual property, and other rights or requirements.

N/A

A.4 What technical (hardware and/or software) requirements or dependencies would be necessary for understanding retrieving, displaying, processing, or otherwise reusing the data?

N/A

A.5 What documentation (e.g., consent agreements, data documentation, codebooks, metadata, and analytical and procedural information) will you capture or create along with the data? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the data it describes to enable future reuse?

N/A

A.6 What is your plan for managing, disseminating, and preserving data after the completion of the award-funded project?

N/A

A.7 Identify where you will deposit the data: N/A

Name of repository:

URL:

A.8 When and how frequently will you review this data management plan? How will the implementation be monitored? N/A