1. STATEMENT OF NEED

1.A. Problem Definition: In the early 2000s, several expert reports predicted that digital media would soon transform research and scholarly communication, and recommended that academic societies, funding agencies, and higher education should strongly support emerging digital modes of scholarly inquiry and collaboration. Less than a decade later, these predictions have proved true within many research disciplines. Technology has enabled a rich variety of new forms of scholarly and creative expression that can combine and present information in new and interactive formats to encourage deeper exploration and understanding by readers. This proposal focuses on better understanding such works and identifying appropriate responses to some challenges they present. Our focus is primarily (but not exclusively) on the broad domain of digital humanities scholarship, using the definition provided by the NEH:

“'The term 'humanities' includes, but is not limited to, the study and interpretation of the following: language, both modern and classical; linguistics; literature; history; jurisprudence; philosophy; archaeology; comparative religion; ethics; the history, criticism and theory of the arts; those aspects of social sciences which have humanistic content and employ humanistic methods; and the study and application of the humanities to the human environment with particular attention to reflecting our diverse heritage, traditions, and history and to the relevance of the humanities to the current conditions of national life.” (see www.neh.gov/about)

Early works of humanities digital scholarship demonstrated the power of amassing large and varied quantities of data, primary sources, and other resources to guide exploration. See www.iath.virginia.edu for links to surviving examples of such works. Newer works of humanities digital scholarship also build upon the power of large amassed digital archives, but often also feature more advanced tools, interfaces, and collaborative or interactive features. The scholarly nature of such works is more apparent in many contemporary works, as authors have grown more comfortable with the media and use it to present arguments and provide supporting evidence. Some examples of these newer works include:

<table>
<thead>
<tr>
<th>HyperCities [hypercities.ats.ucla.edu/]</th>
<th>Mapping The Republic Of Letters [republicofletters.stanford.edu/]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital History [<a href="http://www.digitalhistory.uh.edu/">www.digitalhistory.uh.edu/</a>]</td>
<td>Tunnel Vision: [hyperrhiz.net/issue09/rieder/tunnel/tunnelvision.html]</td>
</tr>
</tbody>
</table>

New peer-reviewed publications also are emerging, that better accommodate such works. Examples include:

<table>
<thead>
<tr>
<th>Hyperrhiz: New Media Cultures [<a href="http://www.hyperrhiz.net/">www.hyperrhiz.net/</a>]</th>
<th>Vectors [vectors.usc.edu]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Humanities Now [digitalhumanitiesnow.org/]</td>
<td></td>
</tr>
</tbody>
</table>

The concurrent emergence and growth of organizations such as the Center for History and New Media and the Maryland Institute for Technology in the Humanities (see chnm.gmu.edu and mith.umd.edu) further indicate an ongoing maturation and growing recognition of digital scholarship. However, the transition is far from complete. Traditional text and image based monographs and journal articles remain the dominant publishing formats in many humanities fields. Because criteria are not yet well established for evaluating the merit of new formats like digital works, and because the traditional humanities peer review and rewards systems remains a “one–author–one–work” paradigm, the creators of digital works often face difficulties. Creating and maintaining digital scholarly works frequently involves specialized teams, “partnerships that individual scholars forge with programmers, sysadmins, students and postdocs, creators and owners of content, designers, publishers, archivists, digital preservationists, and other cultural heritage professionals.”

Another important challenge is the extreme vulnerability to breakage or loss for many complex digital scholarship works. Dr. David Ayers, an early leader in the digital humanities, recently commented on the implications of such vulnerabilities:
“To be recognized and rewarded as scholarship in the traditional sense, digital scholarship must do the work we have long expected scholarship to do: contribute, in a meaningful and enduring way, to an identifiable collective and cumulative enterprise [emphasis added].”

In other words, to be a viable part of research and the advancement of knowledge within a domain, scholarly works must be preservable and referenceable. Ayers’ sentiments echo Lynch’s explanation of the problem a decade earlier, that “preservability is an essential prerequisite of any claim to scholarly legitimacy.” Other scholars need to be able to cite, locate, and retrieve an accurate copy of a scholarly work into the foreseeable future. Otherwise, a system of scholarly communication becomes unreliable. Presently, many complex digital works, especially those works with multiple technology interdependencies and component interrelationships (often the most interesting examples of digital scholarship), cannot be effectively preserved and made accessible for use over a long term. A digital preservation expert recently blogged about her experiences with this widely recognized problem:

“I saw groundbreaking collections built, and was witness to both the beginning and the end of the life cycle for many projects. As I have seen projects reach a transition point – moving between institutions when a key person moves, or ending development upon a retirement or end of a grant – I have seen the sometime panicky look when someone realizes that something has to happen with their digital resource. It may have to be packed up to be moved and installed in another environment, or frozen in its current state, or perhaps shut down entirely.”

No study has yet empirically assessed the scope or extent of such problems, but many practicing digital scholars can recount similar experiences when their complex digital work broke or became inaccessible. Noteworthy recent efforts like Bamboo Project have produced some useful guidance and tools for digital humanists, but preserving and ensuring access to digital works is still a major problem.

1.B. Proposed Response: The challenges described above are part socio-cultural and part technical. Using the premise that “infrastructure is both social and engineered” the University of Maryland - Baltimore County and its partners propose a part-social and part-technical response, “Providing Improved Library Repository Services with Digital Scholars” or PILRS+DS. Major project goals and activities will include:

Goal One: Build and sustain a cohesive statewide community of practicing digital scholars
- Create new communication channels to connect Maryland’s digital humanities scholars
- Sow the seeds for a community of practice by supporting interdisciplinary subcommunities
- Create, deliver training for humanities scholars on creating and sustaining complex digital works
- Explore strategies to improve institutional support for digital scholars & digital publishing

Goal Two: Test & evaluate strategies for improving library-based IR services to digital scholars
- Create sustainability case studies & test web archiving practices as a way to improve IR services
- License a shareable hosted IR service for testing and analysis of a multi-institution IR approach
- Document and broadly disseminate project activities and findings to target audiences & beneficiaries

Improved institutional repository (IR) services were selected as a focal point for the project work because they are a convenient potential point of service provision on many campuses between libraries and scholars, and because IRs originally were conceived for just this purpose:

“Institutional repositories can encourage the exploration and adoption of new forms of scholarly communication that exploit the digital medium in fundamental ways... by opening up entire new forms of scholarly communication that will need to be legitimized and nurtured with guarantees of both short- and long-term accessibility.”

Unfortunately, the brief history of IRs indicates that this idea has not yet been a major driver for most IR implementers. Academic libraries, often the organizational home for IRs, generally have accepted the idea of an IR as “a set of services” and library-managed IRs are still proliferating across a variety of educational and research institutions. However, IRs were conceptualized in the era immediately preceding the growth of digital
scholarship, and many IRs today still focus on capturing what are essentially just digital versions of the familiar, traditional products and by-products of research and scholarship. Smith’s 2007 assertion that “there is no consensus on what institutional repositories are for”\(^\text{14}\) still rings true for many institutions that want to offer IR services, but are still looking for true, demonstrated, and unmet needs which their IRs could fulfill. The PILRS+DS initiative is focused on a specific need, and will combine multiple activities to **explore and produce reliable guidance on ways libraries and scholars can work together to shape better IR services supporting digital scholarship.** We believe our approach is innovative in its focus and incorporation of new partnerships, and that our efforts will extend and yield new understanding relevant to digital preservation, digital curation, effective IR strategies, and scholarly communication.

### 1.C. Project partners: The following organizations will formally partner for PILRS+DS:

<table>
<thead>
<tr>
<th>Institution</th>
<th>Major Roles</th>
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<tbody>
<tr>
<td>University of Maryland - Baltimore County (UMBC)</td>
<td>UMBC Libraries and a humanities faculty team will coordinate all project activities; build &amp; maintain a one-stop project information website; serve as 1 of 5 sites for training scholars; continue work of convening and coordinating a multi-institution group considering shareable IR infrastructure; and lead a statewide discussion on a shared multi-institution digital scholarly press.</td>
</tr>
<tr>
<td>University of Baltimore (UB)</td>
<td>UB Libraries will participate in outreach and engagement with digital scholars at UB and with scholars and libraries at other campuses of the public university system; participate in all IR-related activities. UB Office of Academic Innovation will lead statewide discussion of academic transformations needed to support digital scholars; serve as 1 of 5 sites for training scholars.</td>
</tr>
<tr>
<td>Loyola - Notre Dame Library (LNDL), serving Loyola University Maryland and Notre Dame Maryland University</td>
<td>LNDL will participate in outreach and engagement with digital scholars at its home universities, and with scholars and libraries at other private/independent colleges and universities; participate in all IR-related activities; serve as 1 of 5 sites for training scholars; and as a major point of connection with organizations like the Maryland Digital Library and the Maryland Independent College and University Association.</td>
</tr>
<tr>
<td>University System of Maryland’s Center for Innovation &amp; Excellence in Learning and Teaching (CIELT)</td>
<td>CIELT will use existing connections within public universities/colleges and develop new relationships with private/independent institutions to promote faculty development (training) opportunities; and support the UB Office of Academic Innovation in advancing a statewide discussion of academic transformations needed to better support digital scholars.</td>
</tr>
<tr>
<td>Maryland Humanities Council (MHC)</td>
<td>MHC will advise the team on a project communications strategy and will use its existing communications channels to supplement other PILRS+DS dissemination activities.</td>
</tr>
<tr>
<td>Center for History &amp; New Media (CHNM)</td>
<td>CHNM will develop and deliver technical training; work with a paid consultant to curate examples for complex digital works; conduct sustainability case studies for these works; and test ways to integrate web archiving to improve IR services; and other tasks.</td>
</tr>
</tbody>
</table>
Maryland Institute College of Art (MICA)  
MICA will provide access to a broader range of digital scholars and works to inform our work and test our findings and recommendations; and will participate in all IR-related activities.

University System of Maryland & Affiliated Institutions (USMAI) Library Consortium  
USMAI will contribute expertise and assistance in building IR policies, workflows, participation requirements, and infrastructure selection; and will help coordinate project evaluation, reporting, and outreach.

Beyond the core project partners, PILRS+DS will involve many more individual libraries and scholars statewide, some of whom we will recruit once the project commences. As demonstrated in letters of commitment attached to this proposal, other collaborators who are already “on board” include Goucher College, Towson University, Salisbury University, St. Mary’s College of Maryland, Maryland Institute for Technology in the Humanities, and the Internet Archive.

1.D. Target Audiences: Although not all humanities scholars work for colleges and universities, Maryland’s public and private higher education institutions are the home to many of our target audiences. The state’s 41 four-year universities and colleges (including 14 public and 22 nonprofit private) are a diverse mix. Exact numbers of digital scholars (or more specifically in the humanities) at these institutions is not fully known, but available data indicate that:

- 10% (about 1,600 FTE) of the total faculty in the public university system work/teach in humanities fields.
- If the percentage is similar at private four-year institutions, this equals 600+ additional scholars.

This data and feedback from numerous contacts gives us confidence that we will find, engage, learn from, and bring benefit to a sufficient critical mass of practicing digital scholars in the humanities and other fields. We will simultaneously engage and build productive alliances with libraries, faculty, and administrators from many of the state’s higher education institutions. Project partners UB and CIELT will reach out to both public and private institutions to continue work initiated when “academic transformation” emerged as a major theme for the public university system in 2010 and will encourage greater shared understanding of the challenges facing Maryland’s digital scholars, and possible solutions. PILRS+DS also will yield a greater number of libraries coordinating and sharing information about their IR efforts. We hope this will lead in the long-term to more institutions sharing IR infrastructure.

2. IMPACT

2.A. Anticipated Impacts: The project’s major impacts will be:
- Test a new model for reaching and connecting a statewide community of practicing digital scholars;
- Leverage innovative partnerships to reach, engage, and sustain the community of practice;
- Provide training and discussion venues to help digital scholars create, manage, and share their work;
- Build new collaborations around academic transformation efforts at the state’s universities and colleges;
- Collect, analyze and produce case studies about local digital scholarship and its related challenges;
- Connect more Maryland libraries wishing to provide better IR services in support of digital scholarship;
- Engage more librarians and practicing digital scholars in a bi-directional shaping of IR services;
- Test and evaluate web archiving’s potential as a way to extend the capabilities of IR services;
- Document and share project information with national audiences to increase shared understanding of the problem and to promote improved IR services in a wide variety of small, medium, and large institutions.

2.B. Evaluation Strategy: With input from a Steering Group, UMBC and partners will create a full evaluation strategy that will be in place before major project activities commence. We’ll use the following starting points:

2.B.1. Training activities - Use tools like the four-level training evaluation model to analyze impacts:
2.B.2. Communication and outreach activities - Gauge effectiveness with proven evaluation techniques\textsuperscript{18}:

- Establish measurable goals (e.g., increased awareness, more supporters/champions, influencing changes)
- Create communications channels metrics (e.g., # of users, type of usage for channels, etc.)
- Track spillover and impact into external press, social media, conference presentations, etc.
- Results - was message effective, were desired goals met, and what could improve effectiveness?

2.B.3. Build & support communities of practice - Use “Purpose-People-Policy” categories\textsuperscript{19} to evaluate results:

- Purpose: Were the goals of each group clear? Did participants agree with these goals? Did changes occur over time? Who made those changes? Which purposes were most important and enduring?
- People: Did participants join the groups? Did groups operate differently? Who did not join, and why?
- Policies: Did participants take ownership of the communities of practice? Did key supporters emerge?

2.B.4. Identify strategies to improve IR services to digital scholars

- What was learned about applying web archiving practices and workflows to improve IR services?
- Were other strategies identified or explored,? Were any promising?
- What was learned during the use of a shared IR infrastructure to support humanities digital scholars?
- Did project activities help increase the number of institutions working together, and/or the ways in which they work together? What was learned about making shared approaches more effective?
- Were any lessons learned about trying to involve digital scholars in shaping improved IR services?
- Which parts of these project activities are most likely to be sustainable and valuable over time?
- What was learned regarding a shared digital press? Did new insights emerge about roles for libraries?
- Were new works deposited into a shared repository? What types of works?

2.B.4. Summative Evaluation of Overall Project Accomplishments

- Were all project deliverables completed?
- How well did the project leverage and apply external expertise and project findings?
- Were recommendations produced, and will they be useful for other libraries and organizations?
- Do the recommendations work equally well at medium and small institutions?
- Were there other benefits to connecting faculty and other stakeholders from the statewide group of four-year public and private institutions? Is there a need to do more of this work?

3. PROJECT DESIGN

A. Project Management and Guidance

<table>
<thead>
<tr>
<th>What: A.1 Project Steering Group</th>
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<tbody>
<tr>
<td><strong>Who:</strong> In addition to leaders of the partnering organizations, the Steering Group will include external advisers:</td>
</tr>
<tr>
<td><strong>Jerome McDonough</strong>, University of Illinois</td>
</tr>
<tr>
<td><strong>Kathy Tomajko</strong>, Georgia Knowledge Repository</td>
</tr>
<tr>
<td><strong>Trevor Munoz</strong>, MITH</td>
</tr>
<tr>
<td><strong>When:</strong> The Steering Group will be active throughout the entire two-year project.</td>
</tr>
<tr>
<td><strong>How:</strong> The full Steering Group will meet quarterly - twice per year virtually using web conferencing and twice</td>
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</table>
per year face-to-face - coinciding if possible with other relevant events in the DC/Baltimore region.

**Why:** The Steering Group will monitor progress on all goals & activities; identify opportunities to connect PILRS+DS to other external work, including using knowledge gained from other projects; advise on work plan changes that may be needed; and assist with the overall project evaluation strategy. The Steering Group also will help ensure that project information and outputs are widely shared with target audiences.

**Associated Direct Costs** = $59,096 (Requested from IMLS = $32,076 ; Cost sharing = $27,020)

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<thead>
<tr>
<th>What: A.2 Full Project Management</th>
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<tr>
<td><strong>Who:</strong> UMBC Libraries will provide a project director to oversee and manage all aspects of project execution, and coordinate activities among all organizational and individual partners. A second project co-director from the UMBC humanities faculty will coordinate activities exploring a shared digital scholarly publishing infrastructure within Maryland (see Section B.4). The co-directors will lead twice-monthly meetings of all partners. The USMAI Consortium Director will assist in project management, outreach, and evaluation.</td>
</tr>
<tr>
<td><strong>When:</strong> UMBC Libraries staff will oversee project management throughout the life of the grant.</td>
</tr>
<tr>
<td><strong>How:</strong> Project co-directors Flinchbaugh and Saper will work with partners and participants in the early weeks of the project to develop a fully articulated project management plan using a tool such as Microsoft Project or DotProject, a meeting schedule and other calendar events such as locking in dates for the first year’s training events, assigning major project responsibilities to specific team members, establishing project team communication channels such as email lists, a team website, and beginning coordinated outreach with partners to get the word out to target audiences. A half-time project assistant will assist Flinchbaugh and a graduate research assistant will assist Saper in support roles ranging from using a shared wiki to capture and manage project information; receiving regular progress reports from partners; assisting with logistical planning and communication to target audiences; and other duties as assigned.</td>
</tr>
<tr>
<td><strong>Why:</strong> We anticipate the project could grow more complex as new opportunities arise, and are dedicating a significant percentage of both co-directors’ time, plus the additional administrative support described above.</td>
</tr>
<tr>
<td><strong>Associated Direct Costs</strong> = $127,857 (Requested from IMLS = $59,031 ; Cost sharing = $68,826)</td>
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<thead>
<tr>
<th>B. Goal One: Build &amp; sustain a cohesive statewide community of practicing digital humanities scholars</th>
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<tbody>
<tr>
<td><strong>What:</strong> B.1. <em>Create new communication channels to connect Maryland’s digital humanities scholars</em></td>
</tr>
<tr>
<td><strong>Who:</strong> UMBC Libraries + Maryland Humanities Council + other partners and Steering Group</td>
</tr>
<tr>
<td><strong>When:</strong> Design and deploy January-March 2015, then maintain and update in coordination with partners.</td>
</tr>
<tr>
<td><strong>How:</strong> UMBC Libraries will build, maintain, and sustain a PILRS+DS website and social media presence (Facebook, Twitter) within its existing infrastructure and capabilities. The website will contain relevant news, details of regional events such as offline meetups, spotlights on researchers and projects, announcements of training opportunities and other events, reports and recommendations, links to useful tools, tutorials, and other resources, and information on available services for digital humanists (such as a maintained registry of institutional repository service providers within Maryland). MHC will supplement UMBC efforts as a paid communications consultant and service provider, using its own communications channels (radio, social media, email, and news site). The UMBC humanities faculty team also will use other existing channels already used by our primary target audiences, such as the <em>Humanist</em> listserv for scholars. The project team also will establish a PILRS+DS presence in the <em>Voice of the Shuttle</em> (see vos.ucsb.edu/) database, and the <em>Bamboo DiRT</em> registry (see dirt.projectbamboo.org/), as appropriate.</td>
</tr>
<tr>
<td><strong>Why:</strong> Reaching targeted and potentially interested audiences, are a critical foundation for building a</td>
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</table>
community of practice. MHC is a highly credible partner with high name recognition within the target audiences, and can leverage its existing communications network and capacity to effectively spread the word.

**Associated Direct Costs** = $36,330 (Requested from IMLS = $22,150 ; Cost sharing = $14,180)

### B.2. Sow the seeds for a community of practice by supporting interdisciplinary subcommunities

**Who:** UMBC, UB, MICA, and LNDL will oversee recruiting conveners for subcommunity meetup groups; Individual scholars will serve as meetup groups conveners or co-conveners for at least 4 groups.

**When:** Meetup groups will form in the first quarter of 2015 and be minimally grant supported through the life of the project. Their utility and future (after grant funding) will be analyzed as part of the project evaluation.

**How:** Four “meetup” subgroups will be formed as a bottom-up approach to identify and draw in practicing digital scholars. Subgroups will be formed by combining related humanities fields into clusters, and around disciplines and/or topics such as digital publishing. UMBC, UB, MICA, LNDL and others will reach out to key faculty allies and contacts to spread the word and recruit participants. Campus libraries across the state will be central contact nodes for reaching digital scholars. We will broadcast news about the meetups via mailing lists, social media and the website. Each group will convene at three times yearly in locations around the state where at least 15-20 people can attend each. Librarians will be encouraged to attend these events. Meetup events will combine work and social activities. Paid conveners for each group will coordinate and publicize events, facilitate discussions, and report on activities.

**Why:** The primary purposes of these groups are to 1) spread awareness of PILRS+DS efforts / opportunities; 2) connect scholars with similar interests and needs; 3) cultivate a community of practice and shared solutions to shared problems; and 4) gain feedback for the project team on needs, challenges, and best opportunities for joint investments. Conveners will submit reports and give input on needs, challenges, and opportunities.

**Associated Direct Costs** = $37,600 (Requested from IMLS = $19,600 ; Cost sharing = $18,000)

### B.3. Create, deliver training for humanities scholars on creating and sustaining complex digital works

**Who:** Host Sites: UMBC, LNDL, and UB + two regional sites will host and handle registration, logistics, etc. Promotion: CIELT, MHC & other partners will promote training as faculty development opportunities. Training Development & Delivery: CHNM + contracted trainers + other selected experts

**When:** Design and promote January - May 2015, then deliver five training events June - December 2015. Actual training dates will be selected to best coincide with the typical college/university academic calendar.

**How:** Focusing primarily on training digital humanities scholars in Maryland’s public and private colleges and universities, CHNM will utilize both internal and external experts to develop and deliver a two-day training workshop to be offered five times at distributed geographic locations across Maryland. Training will focus on helping digital scholars make good choices for creating sustainable digital works. Our goal is to train 100+ participants representing a diverse range of disciplines, institutions, and researchers. Qualified registrants will be accepted on a first-come basis. If possible, a limited number of graduate students, non-academic digital humanists, and others will be allowed to register for training. CIELT will promote the workshops as faculty development opportunities, through campus contacts already established at the public institutions, and through developing new contacts at the private and independent institutions. Workshops will be hosted by project partners. UMBC, UB, LDNL and other libraries will help CHNM local faculty to serve as co-trainers and/or mentors for trainees. Curricular materials developed will be made freely available via the project portal.

**Why:** Training may encourage behaviors that lead to more persistently accessible digital scholarly works. The training program also will be useful for creating cohorts of trainees, identifying researchers who are practicing or interested in new modes of digital scholarship, and learning more about scholars’ varied needs.
**Associated Direct Costs** = $174,833 (Requested from IMLS = $129,288; Cost sharing = $45,545)

### What: B.4. Explore strategies to improve institutional support for digital scholars & digital publishing

**Who:** A faculty team from UMBC + UB + CIELT + other allies & participants recruited during the project

**When:** July 2015 - August 2016

**How:** Partners will create, promote, and deliver a two-part forum at three locations for up to 50 attendees per event. Organizers will recruit presenters & attendees from public and private institutions within the state.

**Morning Event:** A training/discussion forum for digital scholars on the challenges of publishing their works, led by UMBC digital humanists. This event will expand a current UMBC electronic publishing initiative, into a statewide effort to train/inform digital scholars, and discuss opportunities for a shared digital scholarly press.

**Afternoon Event:** Led by UB Office of Academic Innovation and other allies to be identified, it will combine mini-presentations, panel discussion, and open facilitated discussion of needed changes in academic rewards systems to support digital scholars. The events will be a unique opportunity to involve administrators, scholars, librarians, and others in discussions of needed academic transformation and supporting services.

As part of the larger digital publishing exploration, UMBC also will engage with the Library Publishing Coalition (www.librarypublishing.org/), CLIR/NITLE Anvil Academic Press (see anvilacademic.org), and other organizations to conduct needs and feasibility analysis, consider partnership opportunities, and conduct business planning on how a multi-institution digital press might be financially sustained. A separate public report will summarize findings and make recommendations about next steps in both efforts.

**Why:** The forums will be important opportunities to connect not only peer scholars and librarians, but also senior administrators and others who can provide insights and advice on viable strategies for turning ideas into actions. The project team will use the forums to compile information on current activities statewide, help identify new allies and resources, and formulate next steps for the two separate but related topics.

**Associated Direct Costs** = $122,713 (Requested from IMLS = $47,451; Cost sharing = $75,262)

### C. Goal Two: Test, evaluate strategies for improving IR services to digital humanities scholars

**What:** C.1. Create sustainability case studies & test web archiving practices as a way to improve IR services

**Who:** CHNM + Web archiving consultant + Authors of digital works

**When:** January - June 2015

**How:** CHNM and a paid consultant will reach out through the project portal and MHC channels, through word-of-mouth, and in consultation with the libraries at UMBC, UB, LNDL, and others to select a group of 10+ diverse examples of digital scholarly works from within Maryland. CHNM will gather information from the creators of these works about how they were created, their longevity, and challenges faced in keeping them accessible and usable. This information will be used to create case studies that will be available on the PILRS+DS website. The consultant will further analyze these works and devise and test a web archiving strategy for each, using current web archiving processes, practices and tools. In consultation with scholars and libraries the consultant also will write several scenarios explaining if and how web archiving techniques might be integrated into IR services, with clear identification of any gaps that would need to be addressed, and recommendations on roles and responsibilities for each stakeholder.

**Why:** Little data exists on the scope or extent of loss of complex digital scholarly works. The case studies will provide examples of what the problem looks like for Maryland’s digital humanities scholars. The case studies
and expert analysis on viable web archiving strategies for such works, will directly serve the project goals of seeking ways to improve IR services. The connection between IRs and web archiving is still very young, and we expect the guidance and recommendations produced during this project will be of high interest to national and international audiences.

**Associated Direct Costs = $37,500** (Requested from IMLS = $35,000 ; Cost sharing = $2,500)

<table>
<thead>
<tr>
<th>What:</th>
<th>C.2. License a shareable hosted IR service for testing and analysis of a multi-institution IR approach</th>
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<tr>
<td>Who:</td>
<td>UMBC Libraries will license a shareable hosted IR service and make it available for other libraries.</td>
</tr>
<tr>
<td>When:</td>
<td>A grant-funded licensed shared repository will be available July 1, 2015 - June 30, 2016 and will continue as a repository depending on its assessed utility to multiple libraries.</td>
</tr>
<tr>
<td>How:</td>
<td>UMBC Libraries already convenes and coordinates a multi-institutional IR committee to learn more about existing IRs in all of Maryland’s colleges and universities, to gauge interest in establishing new IRs, and to explore shared IR infrastructure. Many of these libraries are interested in moving beyond the current landscape of many distributed repository silos, and to new relationships and interoperation that bring added value for both contributors and users of deposited content. The committee already has talked with multiple major IR services and generally found that the idea is unfamiliar to them, as most of their customers want their own stand-alone repository. The idea of a shared multi-institutional repository is underexplored. UMBC will work with the existing committee and others to select, license, and make available a shared hosted repository for use by institutions willing to work. UMBC and partners will develop a Memorandum of Understanding Template, establish core requirements (including dedicated staff effort) and policies, and establish workflows, contacts and responsibilities. The shared blended IR will be a work-in-progress and will require ongoing evaluation and flexibility to find the right recipe for success. The project team will document this work via regular public reports and presentations. We anticipate a shared IR can be combined with community-building activities described earlier to generate new understanding of ways to structure and promote IR services, and to better integrate them into scholarly communication and publication workflows for digital scholars. LNDL Director Barbara Preece will contribute time and leverage her extensive experience in consortial leadership and vendor negotiations. USMAI Consortium Director Chuck Thomas will participate and leverage a background in creating shared digital infrastructure and related services, policies, and workflows.</td>
</tr>
<tr>
<td>Why:</td>
<td>Roles and relationships between IRs, subject repositories, publishers, and other scholarly communication agents are still a subject for exploration. Some academic consortia already share IR infrastructure to varying degrees, but the innovation in our activity will be the creation of services akin to a subject repository that is governed by and serves a distributed network of academic libraries and institutions. We are aware that some current hosting services may not support complex digital works, but a shared IR will provide a common reference point for participants to work together, discuss needs with service providers, and allow more academic libraries in Maryland to understand what is required to offer and sustain IR services.</td>
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**Associated Direct Costs = $94,274** (Requested from IMLS = $35,000 ; Cost sharing = $59,274)

<table>
<thead>
<tr>
<th>What:</th>
<th>C.3. Document and disseminate project activities and findings to target audiences &amp; beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who:</td>
<td>UMBC + UB + LNDL + other project participants</td>
</tr>
<tr>
<td>When:</td>
<td>Throughout and beyond grant period, depending on value to scholars, institutions, and libraries</td>
</tr>
<tr>
<td>How:</td>
<td>UMBC and MHC will use the project portal, social media, mailing lists, and other tools to help the PILRS+DS team reach and serve digital humanists and other interested audiences within the state. All project resources and documentation will be openly available on the web and via other paths. MHC’s supplementary work will help us reach secondary and tertiary audiences, including other state humanities agencies, national funding agencies such as NEH, and others who can spread the word about PILRS+DS to a wider world. Also,</td>
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participating organizations will be use their own communications tools and networks to reach scholars, administrators, funders, and potential partners or supporters. Our desire to improve support for digital scholars will be a useful starting point for discussions and will attract statewide attention, but it will require visits to individual campuses and libraries, meetings, briefings and conference presentations, and other travel. The budget includes $3,100 per year to accommodate these types of in-state dissemination. The need we have identified also extends beyond Maryland and is an important challenge relevant to digital scholars and libraries nationally and internationally. The project team will promote PILRS+DS to scholars and libraries via listservs, partnerships with organizations such as CHNM and MITH, events like webinars and conference presentations, and through publications such as newsletters and journals (e.g., D-Lib Magazine, the Digital Humanities Quarterly). The Steering Group will help to select an appropriately diverse range of publication and presentation venues (e.g., Digital Humanities Conference, Open Repositories Conference, CNI, LITA annual conference, etc.) The budget includes $5,000 per year for small project teams to travel and present at several relevant venues. When possible, these funds will be used in coordination with other existing organizational travel budgets. We also consider partners and allies, and communities such as the meetup groups, to be part of our communications plan to share project news among colleagues and peers, and to make new connections. Other tactics, such as encouraging use of a project hashtag of #pilrs in all social media posts about the project by anyone, will hopefully generate easily-harvestable secondary indicators of the impact and reach of our communications strategy.

Associated Direct Costs = $16,200 (Requested from IMLS = $16,200; Cost sharing = $0)

4. DIVERSITY PLAN (Not Applicable - not required for this proposal)

5. PROJECT RESOURCES: PERSONNEL, TIME, BUDGET

These details are provided in the preceding sections, and in supporting documents such as the Budget Form and the Budget Justification, the List of Key Project Staff and Consultants, and Resumes of Key Project Staff.

6. COMMUNICATIONS PLAN

Please see the Project Design, Section 3.C.4 above, for details of a communications strategy.

7. SUSTAINABILITY

This proposal will test, evaluate, and report on multiple activities related to known scholarly communication problems. We cannot know if all efforts will be successful or worth sustaining, but we can commit to open sharing of project information, reports and recommendations, documentation, and other outputs. We believe openness will greatly increase the chances of others learning from our experiences, and sustaining the effort by replicating or expanding upon the model we will test. Web-based project resources will be sustained as long as possible and useful, but no less than three years after the grant ends. Inter-organizational and interpersonal connections established during this project will be valued assets worth sustaining. A report at project’s end to appropriate institutional and other administrators will make specific recommendations on which shared infrastructure, groups, and practices should be perpetuated with permanent funding. This proposal requests and allocates resources to build new and needed partnerships and infrastructure (such as the IR and digital press initiative), because we believe well-timed external support will accelerate finding solutions that might otherwise take much longer. In exchange for such support, UMBC and its partners will make every good-faith effort to sustain, grow, and broadly disseminate the results of these IMLS and local investments.