born-digital | OPEN SOURCE *digital repository solutions*

LASIR: Tasks Report [DRAFT-FINAL]

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Task 1: Search engine optimization (SEO) and Google Scholar integration

Summary of Task

Improve discoverability of a repository's holdings for both end users and external, third party indexing services such as Google Scholar, Open Access Theses and Dissertations, SHARE, BASE, or figshare. While Islandora already employs excellent SEO strategies, such as the XML Sitemap module, it is difficult to provide the same level of Google recognition that commercial software provides. Because Google dominates the search ecosystem, and our faculty report that Google Scholar is critical to their services, we will examine ways to better integrate our campus-generated, curated open-access collections into this system to provide discoverability on par with commercial vendors' IR solutions. Additionally, this work will be a step towards batch discoverability, a key recommendation from the Confederation of Open Access Repositories (COAR) "Next Generation Repositories" report (Nov. 2017). The COAR report defines batch discoverability as "uniform, global, cross-repository discovery of resources," and notes its importance in securing a viable role for repositories in the broader scholarly communication ecosystem. As the report explains, "Batch discovery generally supports search, but also use cases that require content transfer such as text mining and preservation. The better resources in repositories are surfaced using batch discovery mechanisms, the more likely they are to be found by users and applications alike. Supporting batch discovery to enable specialized services avoids the problem of 'if it did not appear near the top of a results list, it does not exist.'"

Use Cases - Steering Committee

- General Search Engine Inclusion
    - As a repository administrator, I want the system to take care of SEO best practices for me so that I can have maximum coverage in external systems like Google Scholar without having to manually set anything up.
    - As a repository manager I want Islandora to automatically generate a sitemap.xml file that can be utilized by search engines.
- Google Scholar Inclusion
    - As an author, I want my works to appear in external systems, most importantly Google Scholar, so that I can broaden my impact.
    - As a researcher, I want to feel confident that relevant content from Islandora IRs will be indexed in external search systems (most importantly Google Scholar).
    - As a repository manager I expect Islandora meets Google Scholar's inclusion requirements.
    - As the manager of an Islandora-based IR, I expect that the Islandora community has provided documentation on SEO and inclusion in Google Scholar.

Task Direction

- Some use cases ultimately request reach beyond Google Scholar (e.g. "external systems like Google Scholar"). This should be taken to mean systems that can be populated passively through adherence to Google Scholar's best practices.

- Similarly, the rest of the use cases are covered by ensuring that Islandora is well-configured for general SEO right out of the box.
- Finally, it should be acknowledged that that this task's scope is only to integrate better with systems that PULL from repositories by crawling them, as opposed to requiring you PUSH to them via a platform-specific API.
    - This provides a useful differentiation from Task 5, which enumerates specific repositories that may require pushing.
    - It is also worth mentioning that this task does not extend to ALL pull-based mechanisms. For example, OAI-PMH is not relevant to SEO nor Google Scholar inclusion

Optimal Solution(s)

- Extend and optimize the Islandora Google Scholar submodule to provide all the meta tags requested by Google Scholar to deliver as "turn-key" an experience as possible.
    - In addition to expressing object metadata, create a set of views conforming to Google Scholar's basic requirements:
        - **Less than one thousand papers:** For small collections (e.g., papers written by a single author or a small group), list all articles on a single HTML page, such as www.example.edu/~professor/publications.html, and include links to the full text PDF.
        - **Thousands of papers:** For medium-sized collections, provide a way to list them by the date of publication or the date of record entry. Other forms of browse interfaces, such as browse by author or by keyword, often generate more URLs than your website can deliver to the search robots in a reasonable amount of time.
        - **Over one hundred thousand papers:** For very large collections, create an additional browse interface that lists only the articles added in the last two weeks. This smaller set of webpages can be recrawled more frequently than your entire browse interface, which will facilitate timely coverage of your recent papers by the search robots.
- Extend and optimize the Islandora XML Sitemap module as necessary to ensure adherence to general SEO best practices, especially for typical IR content.
- Provide instructional documentation regarding best practices for Islandora repository managers regarding:
    - Configuration of the robots.txt file
    - Configuration of the XML Sitemap via Drupal's XML Sitemap module as well as the Islandora XML Sitemap module
    - Ensuring excellent visibility to Google Scholar through existing and newly developed functionality within Islandora Scholar's Islandora Google Scholar submodule
        - Model/example: DSpace's SEO/Scholar documentation

Phase 2 Deliverable Specifications

✔ Deliverable: Islandora Google Scholar submodule optimization

Optimize existing submodule Islandora Google Scholar to ensure that all relevant MODS fields are mapped to fields indexed by Google Scholar. When possible, automatically generate Google Scholar's required views for indexing. Optionally, pull out the submodule so it can be utilized independently of Islandora Scholar.

Reference documents:

- https://github.com/Islandora/islandora_scholar/tree/7.x/modules/islandora_google_scholar
- https://scholar.google.com/intl/en/scholar/inclusion.html#indexing
- https://wiki.duraspace.org/display/DSDOC5x/Google+Scholar+Metadata+Mappings
- https://partnerdash.google.com/partnerdash/d/scholarinclusions#p:id=new

Success measures:

- For Islandora citation/thesis objects, all expected metadata appears in appropriate <meta> elements in the object's HTML <head> element.
    - This may need to happen at the Islandora object level, not specific to Scholar objects. A pull request to Islandora Core may be necessary.
- No errors are produced when object URLs are fed to https://search.google.com/structured-data/testing-tool
    - Ideally, a JSON-LD feed is created and referenced within the HTML so that Google can harvest. This goes beyond the <meta> tag or XML Sitemap to ensure high-quality indexing.
    - Fetch as Google may be useful as a debugging tool.

✔ Deliverable: Islandora XML Sitemap module review

Review existing Islandora XML Sitemap module to ensure it creates sitemap.xml files optimized for inclusion in Google

- See also Documentation: Improve documentation to include process for submission of sitemap.xml file to Google via Google's Webmaster Tools.

Reference documents:

- https://github.com/Islandora/islandora_xmlsitemap
- https://support.google.com/webmasters/answer/183668?hl=en

Success measures:

- Repository administrators are able to configure Islandora XML Sitemap
- Sitemap is successfully submitted to Google (Search Console > Crawl > Sitemap)
- Google Search Console (Search Console > Google Index > Status) reports content as indexed.

✔ Deliverable: Documentation

Provide documentation and processes to validate SEO.

- Create a baseline robots.txt that repository administrators can apply to their installation
- Document the processes that repository administrators can leverage to improve SEO.
    - E.g., https://developers.google.com/speed and how best to resolve issues within an Islandora install.
- Document steps for inclusion in Google Scholar's Scholar Inclusions interface so that Google Scholar recognizes an Islandora IR as a valid data source (https://partnerdash.google.com/partnerdash/d/scholarinclusions#p:id=new).

Scope Evaluation: Estimation + Prioritization

- **Initial/current Phase 2 budget:** 75 hours
    - **Deliverable:** Islandora Google Scholar submodule optimization
        - Proposed Budget: 40 hours, highest priority
    - **Deliverable:** Documentation
        - Proposed Budget: 15 hours, second priority
    - **Deliverable:** Islandora XML Sitemap module review
        - Proposed Budget: 20 hours…, third priority

Task 2: Usage stats/impact factor/metrics, including system-generated visualizations of usage/content

Summary of Task

Enable granular tracking of user interaction (views, downloads, etc.) and visualization of that data to better communicate audience engagement with repository holdings for stakeholders (authors, administrators, etc.). Reports from a recent Oberlin Group meeting of library directors revealed that faculty contribute more work and maintain significant interest in institutional repositories when they can understand their readership in clear ways, for example by seeing a readership map that shows where and when downloads occur. We propose to provide visualizations like readership maps and topic analysis of the repository, as well as easy-to-access reports on usage.

Use Cases - Steering Committee

- As a repository site end-user, I expect that I can opt out of statistical tracking if I want.
- As a repository administrator, I want to be able to track usage of resources in multiple ways in order to express the value of the repository, including:
    - Aggregated numbers for views/downloads per author and department
    - Aggregated numbers for views/downloads across collections (recursive for sub-collections)
    - Aggregated numbers for views/downloads based on internal search path
- As a repository administrator, I want to be able to see where my faculty's works are being viewed/downloaded. Same at a departmental level.
- As an author, I want to be able to see the total number of views & downloads for all of my works, as well as an aggregated number, in order to see the impact of my work.
    - As an author, I want to be able to see how my readership has risen/fallen over time
    - As an author, I would like to get a monthly "readership report" email showing my views/downloads for all my works for the last month, as well as for all time.
- As an author, I'd like to see a map of where my work is being viewed/downloaded.
- As a departmental stakeholder, I want to be able to see an aggregated number of views/downloads for all works associated with my department.
- As a departmental stakeholder, I want to be able to see where my faculty's works (meaning "all works tagged to my department, ever") are being viewed/downloaded.
- As a repository administrator, I want to see search metrics:
    - Search terms which resulted in views and downloads
    - Overall stats on search terms

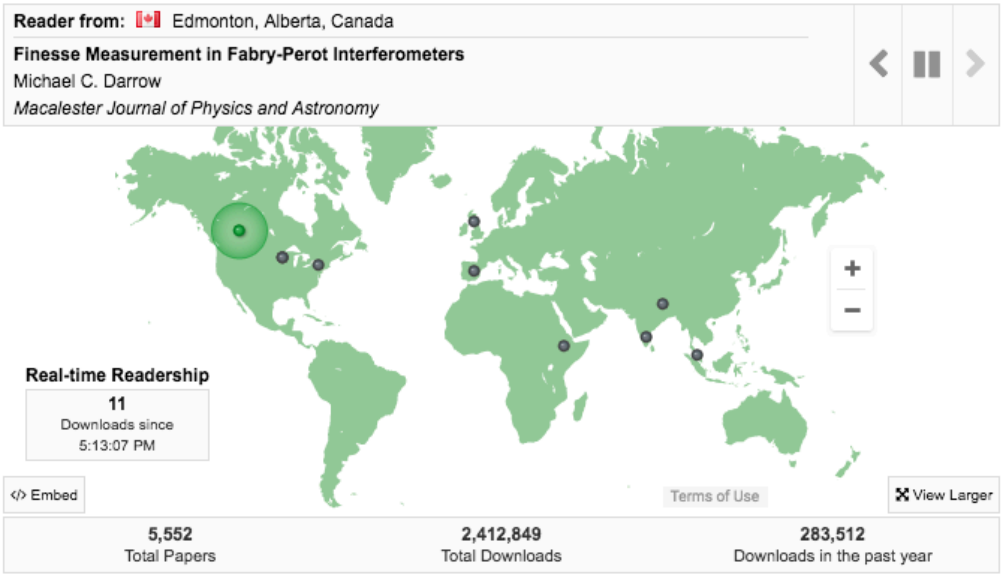
Task Direction

- This task assumes the use of Matomo for all analytics data collection and reporting. Overviews of included functionality (including geo-location lookup, privacy opt-out capabilities, etc) may be found on matomo.org.
- This task defines "readership" as views (of an object page) and downloads (of OBJ datastream, and/or of full metadata export in any offered format).

  - Use of "impact factors" in task title should not be taken to connote any external data source, but rather only what is measurable from within Islandora and Matomo.
  - Ideally, different "download" options/formats would be tracked. We expect that Task 5 will define a new UI for metadata export options, which will be recorded alongside file downloads and views.
  - Documentation will need to set expectations in a human-friendly way around what data is tracked, and how. We don't need to account for every possible edge case, but we do need to acknowledge known caveats in our data collection and reporting methods.
- Desired dashboards:
  - All views/dashboards must be date filterable. Matomo will provide this functionality.
  - **Specific dashboards/admin views:** full repository; by author (if configured by Task 3); by department (if configured); by collection; by object.
  - Include Admin specific (with aggregated reports) Dashboards and allow them to be embedded as D7 Blocks. Inform on the options (settings) users will have.

Optimal Solution(s)

- Deliver relevant data to Matomo via an enhanced and updated version of Diego's "Islandora Piwik" module
- Create Matomo dashboards for administrative access:
  - Overall repository dashboard
  - Departmental reports/dashboards
  - Author reports/dashboards
- Create public widget offering same behavior as BePress real-time access widget



  - Object metadata display: author, title, collection.
  - Visitor metadata display: location, time.
  - Global statistics: total papers, total downloads, yearly downloads.
- Extend the Islandora Piwik module further to construct and deliver readership reports by email (requires integration with Task 3, assumes "Author Profiles" exist)

- Desired report structure:

Monthly Report for: Diego Pino Navarro, PhD

	Monthly Downloads	Monthly Views	All Time Downloads	All Time Views
Article 1, [link]	5	122	55	1222
Article 2, [link]	4	199	44	3322
Total	9	321	99	4544

Click here to explore the data further, including geographic information.

Phase 2 Deliverables:

✔ Deliverable: Islandora Matomo Module

Optimize and extend existing Islandora Piwik module (renamed "Islandora Matomo Module" to collect the following statistical data:

- "View" events when viewing individual object pages
- "Download" events when downloading binary datastreams and/or full metadata records/exports
- For each event, record (as custom dimensions in Matomo):
  - Islandora PID
  - Islandora Collection
  - Author(s)
  - Department(s)

Create Matomo Dashboards or Reports providing easy access to data of primary interest:

- Statistics for the repository as a whole, including:
  - Statistics for individual "departments"
  - Statistics for individual "authors"
-

- Allow these Matomo Dashboards / Reports to be made visible within Drupal, allowing authors to see their personal dashboard, and Departmental administrators to see their department dashboards.

- Create and deliver readership reports for User Profiles which contain a contact email and which are opted-in to receiving reports. These should include a list of authored materials, displaying monthly and all-time downloads and view information.

Reference documents:

- Existing Islandora Piwik module
- Preliminary sketches for "Reports"/"Dashboards"

Success measures:

- Matomo install available through ISLE

- New module collects relevant data within Matomo
- All required reporting available in Matomo
- Reporting as allowed by role visible from within Drupal
- Readership report emails are generated and sent by Drupal

✔ Deliverable: Real-time Map widget for Matomo
Replicate the functionality of the BePress real-time access widget, shown above, by modifying Matomo's included real-time geographical access plugin. This will include the following customizations:

- Removing the click event which currently generates a "visitor profile" popup
- Adding repository meta statistics at the bottom of the embed
- Possibly changing the rollover function (currently a tooltip) to show as a persistent overlay
    - Showing "author" and "collection" information in the rollover/overlay

Reference documents:

- Existing real-time Matomo plugin

Success measures:

- New widget displays relevant information in near real-time
- New widget able to be embedded in public (un-authenticated) pages
- New widget does not allow users to access private / protected Matomo information

✔ Deliverable: Documentation
Documentation must cover:

- How to add Matomo to your ISLE installation
- How to initially configure the Islandora Matomo module for data collection
- How to hook up and enable readership reports to your Scholar Profiles content type
- How to install, configure, and embed the public real-time map widget

Scope Evaluation: Estimation + Prioritization

- **Initial/current Phase 2 budget:** 89 hours (estimate from Diego)
    - **Deliverable:** Updated PIWIK module (26 hours)
    - **Deliverable:** Matomo Deployment (6 hours)
    - **Deliverable:** Real-time map widget + documentation (26 hours)
    - **Deliverable:** Readership reports (31 hours)

Task 3: Enhanced author profiles for university and college faculty members

Summary of Task

Enhance the current author profile functionality in Islandora Scholar through creation of a separate Islandora Scholar Profiles module to provide a scalable and strong "out of the box" solution for Scholar users that has both visual appeal and strong data connections. *Building upon author profiles that already exist within the Islandora community, enhanced author profiles will consolidate submitted repository items with biographical and professional information about the contributor that will facilitate professional networking. The profiles will be accessible and editable by the contributors.* A robust metadata profile submission form will be part of this work to ensure scalable data input and retrieval. Documentation will also focus on best practices for metadata input and Open Researcher and Contributor ID (ORCID) profile association for scholars. This work will blend LASIR's efforts to enhance the user experience (UX) with our continued focus on Islandora Scholar services as resource-centric (making resources the focus of a repository's services and infrastructure), a defined functionality in the COAR "Next Generation Repositories" report (Nov. 2017).

Use Cases - Steering Committee

- As an author, I want a "go-to" bibliography of my publications that is easy to maintain and, ideally, links out to the full-text.
- As a faculty member, I want a single public page that brings together my publications, a description of my research/teaching, my CV, etc. in an ATTRACTIVE format with good graphic design, available from a human-readable URL.
- As a user I would like to be able to explore researchers in the IR that are involved in similar research, based on the built-in research classification taxonomy (NCES).
- As a user, I want to be able to sign into my profile using campus authentication.
- As a user, I want to be able to edit my profile (self serve).
- As a repository administrator, I want to ensure that each faculty member is assigned a unique identifier as part of their metadata record.

Task Direction

- This revised task seeks to allow institutions adopting Islandora Scholar to add "out of the box Scholar Profiles" similar in style and function to the scholar profile pages provided by UPEI's Island Scholar repository (example).[1]
- UPEI's Scholar Profiles bring together "scholar objects" and "citation objects" to display biographical and professional information about a faculty member alongside an inventory of their scholarly output.
    - "Scholars" are Islandora Entities which can be related to a Drupal login for self-management.

[1] Note that in Digital Commons, the "Scholars" module is a paid add-on.

    - Citation objects (e.g., articles, dissertations) must be linked to at least one valid Scholar via a unique identifier.
    - Citations and Scholars are cross-listed: scholars are named on each citation page (example), while objects are listed on each scholar page (example).
        - Note that the scholar links on object pages perform a search for the author's name, rather than linking to their profile, which is only accessible through the profiles directory landing page. Ideally both links would be present.
    - Scholars and citations can also be affiliated with "Departments/Organizations" (another type of Islandora Entity).
    - UPEI offers a default schema for Scholars (MADS) and for research classification (custom taxonomy), but it will be possible to override these defaults in the setup process.
- The setup/installation process is likely to require some level of developer skill set if any customization is desired.

Optimal Solution(s)

- Create a Drupal module with a few key dependencies (Islandora Scholar, etc) which includes a setup script which will configure scholar profiles with a few points of customization, including:
    - selection of schemas for personal information (e.g., MADS) and research classification (e.g., NCES)
- Create ingest forms for scholars that:
    - allow repository administrators to create and manage profiles on behalf of scholars, and allow scholars to create and manage their own profiles by affiliating their scholar entity with a Drupal log-in;
    - include a persistent identifier field to link scholars and citations.
- Create templates for Scholar Profile pages that:
    - are customizable by repository administrators;
    - are accessible via a human-readable URL;
    - are visually appealing;
    - display biographical and professional information about the scholar alongside a list of their publications (using a unique identifier to affiliate the scholar with citation objects);
        - documentation will be provided on adding content beyond traditional citation and thesis objects (such as awards and grants)
    - display a list of related scholars from the institution.
- Link to Scholar Profile from author field in search results and citation pages.
- Allow Scholars to sign into their profile using campus authentication.
    - User registration process includes email lookup to associate a user with an existing Scholar Profile (if applicable) and allow write access

Phase 2 Deliverables:

✔ Deliverable: Islandora Scholar Profiles Module

New Islandora Scholar Profiles Drupal module, including a setup script to configure scholar profiles, templates for Scholar Profiles pages, and Scholar and Citation ingest forms.

Reference documents:

- UPEI Island Scholar module code
    - Theme
    - Example template used in the display of profiles
    - Customizations
        - Customized search
        - Customizations - mapping genres
        - RefWorks importer
- UPEI Scholar Profiles back-end workflows

Success measures:

- Repository administrators can customize the appearance of scholar profiles to meet their institutional needs, but these changes may require developer assistance to modify templates.
- Repository administrators can create profiles on behalf of individual scholars affiliated with their institution.
- Scholars affiliated with the institution can create and manage their own profile.
- Repository administrators and users can affiliate citation objects with a scholar's profile.
- Repository administrators can ingest citation metadata from a DOI. Islandora supports batch ingest via PMID and DOI amongst other formats.

✔ **Deliverable: Documentation for Scholar Profiles**

- Installation instructions
- Configuration options for metadata
    - ORCID and other integrations
    - Research taxonomies

Reference documents:

- UPEI ORCID integration: https://github.com/roblib/upei_roblib_orcid

Scope Evaluation: Estimates + Prioritization

- **Initial/current Phase 2 budget:** 110 hours

Task 4: A generalized and simplified self-deposit workflow

Summary of Task

Add functionality that allows unmediated self-deposit to Islandora repositories. Currently, community deposits to Islandora require the approval of a repository administrator, which is a difficult workflow for institutional repositories due to the potentially high number of participants (all faculty and students) and the domain-specific knowledge required to successfully complete a valid, minimally-mediated self-deposit. Ideally, individuals should be able to deposit materials for which they own copyright directly into the repository, rather than relying on a more circuitous offline process that requires more library staff time. This need is most apparent for student scholarship, where it is often the case that hundreds or thousands of students are submitting their senior theses at the end of the academic year and librarians are not able to process them fast enough. LASIR Phase II will standardize and instill a generalized and usable self-submission workflow, lowering the bar for student and faculty interaction. Additionally, newly developed automated workflows will integrate copyright and other rights management checks (e.g., against SHERPA/RoMEO, when applicable); enable authors to upload directly with pre-mapped metadata fields; and provide users the ability to associate items with other types of objects (e.g., a preprint of a peer-reviewed article with an accompanying data set), all without the need for administrative intervention.

Use Cases - Steering Committee

- As an author, I want an easy way to submit my works to the repository
    - As an author, I want to submit just a DOI and have essential metadata and ShERPA/RoMEO [status/color] harvested and filled in for me, when available.
- As an author, I want to be able to submit simple and/or multi-part works (journal article w/ supplemental [data] files) to the repository.
- As an author, I want to submit multiple works to the repository without waiting for previous submissions to be accepted.
- As a repository administrator, I want to be able to create submission workflows which facilitate submission of different categories of objects (i.e. different forms/workflows for faculty publications, student theses). Ideally this could be accomplished within a single workflow, or with multiple specific workflows.
- As a repository administrator, I want to be able to control what types of files are acceptable for upload for specific submission types (ETDs should only ever be PDFs, etc).
- As a system administrator, I want all uploaded files to undergo a security check to make sure they are not malicious.
- As a repository administrator, I want to be able to create submission workflows which allows me to easily see all submissions in queue and separate them by various criteria, such as status or type.
- As a repository administrator, I want to be able to customize submission workflows to support my institution's unique needs by:
    - Adding new fields

    - Editing existing fields
    - Removing existing fields
    - Restricting vocabulary on specific fields
    - Choosing which fields are required or not
    - Choosing which fields display to submitters and which are only visible to reviewers
    - Configuring different possible status that can be applied to submissions
    - Configuring automatic actions that happen at various points in a workflow, such as:
        - Sending submission acknowledgement emails to submitters
        - Sending new submission notification emails to reviewers
        - Sending object publication emails to submitters when object is public
    - Customize the mapping of submission form fields to MODS elements
- As a repository administrator, I want the Islandora objects that result from the submission process to automatically have whatever kinds of access restriction required (ie IP Embargo, Scholar Embargo, etc) applied at the time of object creation so that there is no time in which restricted access objects are ever publicly available.

Task Direction + Expected Outcomes

- The ICG has previously developed a toolkit which is directly applicable to these use cases: the Islandora Webform (IWFM) module, including the Islandora Webform Ingest sub-module.
- This task will create comprehensive documentation regarding appropriate use of the IWFM for the purposes of creating both mediated and unmediated self-deposit workflows, as well as developing the necessary extensions to cover all stated use cases. We expect these to be:
    - User authentication (via federated/Drupal login)
    - Definition of user roles, including eligibility to deposit:
        - to certain collections,
        - With or without administrative mediation, or
        - on behalf of other users.
    - Single and batch object upload and validation, including:
        - selection of appropriate destination (typically an Islandora Collection) from list of those available to selected identity/role;
        - selection of embargo settings (from those currently available in Islandora Scholar);
        - filetype and file size checking;
        - virus scanning;
        - automatic creation of compound objects from multiple file attachments based on type; and
        - MD5 hashes constructed for parity/fixity check after ingest.
    - Metadata creation, including:
        - (where possible) fetching citation metadata and RoMEO color via DOI; and
        - ability to select from controlled vocabularies drawn from Drupal taxonomies.
    - Review/moderation (optional)
    - Ingest/creation of Islandora Objects
    - User and administrator email notifications upon upload, moderation, and ingest

Phase 2 Deliverables

✔ Deliverable: Islandora Webform Module Enhancement + Demo
Enhance existing Islandora Webform Module to enable the full range of desired workflows for mediated and unmediated deposit.

Reference documents:

- Full requirements consolidation document
- Existing IWFM code repository: https://github.com/commonmedia/islandora_webform
- Existing Islandora Scholar ShERPA/RoMEO import capabilities

Success measures:

- Workflows listed above are all supported by IWFM and any necessary ancillary applications, as demonstrated by a set of large sample workflow(s) pre-configured by Born-Digital.

✔ Deliverable: Documentation
Provide documentation of best-practices for creating robust self-deposit workflows covering use cases identified for this task. This includes process guidance as well as working examples, where possible.

- Structure likely to be taken from the step-by-step functional requirements for the previous deliverable.

Scope Evaluation: Estimates + Prioritization

- **Initial/current Phase 2 budget:** 75 hours
    - **Deliverable:** IWFM Enhancements + Demo
        - Proposed Budget: 55 hours, highest priority, seeding documentation in progress
        - Integration with DOI Importer (15-20 hours)
        - Automatic mapping to compound objects functionality is needed (20-30 hours)
        - Access restriction enhancements (15 hours)
    - **Deliverable:** Documentation
        - Proposed Budget: 20 hours, second priority

Task 5: Facilitate the ability to contribute repository-deposited materials to additional scholarly networks. (revised)

Summary of Task (revised)

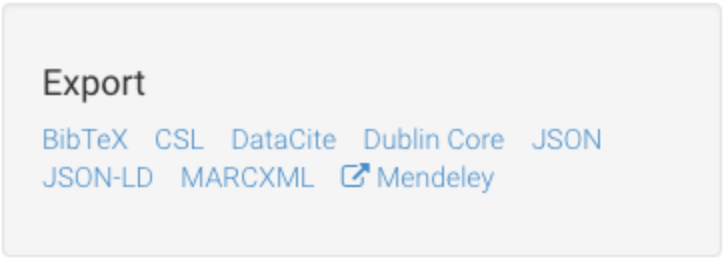
Ensure that scholarly objects and metadata contributed to an Islandora Scholar repository can be streamlined for reuse in other recognized scholarly networks through development of data export features and documentation.

Core Use Case

- As _*anybody*_ using an institution's Islandora-based IR, I expect that I can easily export an IR object's full metadata in several streamlined and standardized formats for the purposes of data portability and/or delivery to an external repository.

Task Direction

- The goal for this task is to simply and easily offer an "export block" similar in style to the one available in the bottom right corner of https://zenodo.org/record/1492766#.XAlXBBNKjUI:



    - Clicking the link for each format will automatically generate a file download.
    - It would be ideal to show e.g. "Compatible with __, __, __" on hover, since we intend to label export options by format, not by primary software compatibility.
- We expect the module to support the following export formats:
    - BibTex
    - EndNote
    - MARC
    - MARCXML
    - MODS
    - DublinCore
    - RIS
    - JSON / JSON-LD
- Implementation mechanism:
    - This task will likely require a new module which generates a widget when embedded on an object page. Code is likely available from the existing Islandora Bookmark module (without admin session cookie which prevents caching), among other places.

- Admin configuration needed to allow formats to be enabled or disabled.

Optimal Solution(s)

Phase 2 Deliverable Specifications

✔ **Deliverable: Metadata exporter**

Design and develop a metadata exporter tool that provides a streamlined mechanism within Islandora to export object metadata for use in other repositories, as well as in citation management tools. The metadata exporter tool will:

- provide a clean and simple user interface that can be embedded on any object page;
- allow users to export and download a metadata file in a selected format;
- recording "download" events to Matomo, ideally including recording the export format as part of the event (*see Task 2*);
- allow repository administrators to enable/disable supported export formats; and
- allow Islandora community members to submit extensions to the exporter to support additional citation formats

Success measures:

- Repository administrators are able to offer a robust "object export/download" interface for users.
- Downloads are valid in the formats requested.
- [Additional Task 2 success measure] Download events are recorded along with their format.

Scope Evaluation Estimates + Prioritization

- **Original budget:** 45 hours
  - [Quick review: fine for initial work]