Product RoadMap

The version number of the DSpace-CRIS platform refers to the DSpace version against which it is built. Support for all DSpace versions accepted by the Community is provided. The new functionalities are currently developed for both DSpace-CRIS 5.x and DSpace-CRIS 6.x.

The first open-source release of DSpace-CRIS was based on DSpace 1.8.2. Current releases are DSpace-CRIS based on DSpace 5.10 and DSpace 6.3 (official tags not yet done). DSpace-CRIS on DSpace 4.3 and DSpace 3.2 are still also available.

Below there is a detailed release plan covering all the known features that will be contributed by 4Science or other community members that would like to be involved in supporting the enhancement of this open-source extension of DSpace.

A visit to the community page maintained by DSpace-CRIS users is also recommended: [https://wiki.duraspace.org/display/DSPACECRIS/New+Features](https://wiki.duraspace.org/display/DSPACECRIS/New+Features).

Plans for version 7

We plan to release the first production-ready DSpace-CRIS 7.0 before Open Repositories 2020 (June 1-4). The version will support the key use cases and the most demanded features of DSpace-CRIS according to the priorities defined by the community of users ([DSpace-CRIS User Group](https://wiki.duraspace.org/display/DSPACECRIS/New+Features)).

Estimation of effort for remaining tasks is currently underway. The goal of DSpace-CRIS 7.0 release is to address at least priorities 1 and 2 with contributions (resource effort and/or funding) from supporting institutions and volunteer work by 4Science (1,000 hours).

As 7.0 version is based on DSpace 7 that is still under development (see: [DSpace Release 7.0 Status](https://wiki.duraspace.org/display/DSPACECRIS/New+Features)), changes will be periodically merged from the upstream. With regard to version 7, the two roadmaps will be still separated due to the significant amount of extra functionalities that is not possible to give back to plain DSpace yet.

We are working on

- Angular UI for DSpace-CRIS 7
- REST webservice toward DSpace-CRIS 7 (Angular-based)
  - test site for DSpace 7 REST API already available at [https://dspace7.4science.it/](https://dspace7.4science.it/)
  - the [DSpace-CRIS master branch](https://dspace7.4science.it/) now contains the REST 7 API webapp with support for the CRIS JAVA API
- Entities: active participation to the Entities Working Group to ensure contribution of DSpace-CRIS experience and compliance of DSpace-CRIS with the Entities support in DSpace 7
- Short-medium term goals:
  - Support UI sorting of nested CRIS objects (i.e. sorting of affiliation by date, by role, etc.)
  - Support for granular edit permissions on DSpace-CRIS objects
  - Update of researcher profile from ORCID in near-realtime (webhooks)
  - Automatic import of new publications from ORCID (webhooks)
  - Improved publication claiming: e.g. list of potential matches and bulk claiming
  - Script to merge duplicated CRIS Objects (Researcher profiles, etc.) - merge of duplicate publications is also already available in UI since version 3
  - Improve documentation including new released features
  - Port features from DSpace-CRIS 5.10 to DSpace-CRIS 6.3
  - Tag official 5.10 / 6.3 release

Several features are already on the maintenance branches in untagged releases (please check the coming 5.10/6.3 release notes below)

We are interested in (deadline TBD - looking for interested partners):

- DBLP publications import and feeds
- Periodic feed from Scopus, WoS, PubMed, etc. at the level of individual researcher (already available for a backoffice user and as manual lookup process for researchers)
- CERIF compliance test / REST API (CERIF via OAI-PMH implemented in the OpenAIRE Guidelines for CRIS manager)
- Harvesting of CRIS entities via the CERIF XML OpenAIRE profile over OAI-PMH

2018/2019

[DSpace-CRIS 5.10](https://wiki.duraspace.org/display/DSPACECRIS/New+Features) (not official released but our recommended version: please use the snapshot - 5.9 skipped)

*** These features are already available on the 5.x.x maintenance branch ***

- Alignment to the latest official minor releases of DSpace
- Functional alignment between versions 5.x --> 6.x
- International Standards:
  - ResourceSync enabled out-of-box
  - Compliance with the OpenAIRE guidelines supporting the Datacite Schema 4.1 for Data Archives to better disseminate the datasets*
  - Compliance with the OpenAIRE guidelines for CRIS Manager v1.1.1
- CRIS Objects management:
  - Delegation of the Administrative UI for the edit and deletion of CRIS entities. To delegate the creation of new CRIS entities it is needed to setup a special collection and a ItemFiller mapping that will convert items to CRIS object upon submission see [How to collect data about CRIS entities](https://wiki.duraspace.org/display/DSPACECRIS/New+Features)
  - Concept of CRIS Owner to allow delegation on edit (PI of a project, Journal Director, etc.)
  - Support for granular edit permissions on DSpace-CRIS objects
  - Improved procedure to update data model configuration
* Light support for multilingual attributes in DSpace-CRIS entities
* Support UI sorting of nested CRIS objects (i.e. sorting of affiliation by date, by role, etc.)
* Script to identify and merge duplicated CRIS Objects (Researcher profiles, etc.) - merge of duplicate publications is also already available in UI since version 3
* Add linked objects from the CRIS detail page (publications to a project, projects to a researcher profile, etc.)
* Submission-related features:
  * Integration with Grobid providing automatic extraction of metadata from PDF file (using computer vision not limited to properties in the PDF file)
  * Import of multiple records at once in the StartSubmissionLookup
  * Import and feed publications from ADS (Astrophysics Data System)
  * Project Lookup and import from OpenAIRE via REST API*
  * Journal Lookup and import from ZDB database (journal database maintained by Staatsbibliothek zu Berlin, Preußischer Kulturbesitz and Deutsche Nationalbibliothek)
  * Ability to import data from linked entities in the item during the submission to provide suitable default (i.e. nested affiliation of authors as appear in the publication prefilled with the current affiliation)
  * Fix: Scopus, Pubmed & Crossref can be used as a search provider (title, authors, year) other than lookup by identifier
* Researcher profile management features:
  * Improved publication claiming: researchers are able to claim their role in existing publications (manually or via list of potential matches and bulk claiming)
  * Several improvements & fix to the full (push/pull) ORCID integration, including:
    * switch to v2.1 (from 2.0)
    * Automatic import of new publications from ORCID (webhooks)
    * a new script to pull biographic update from the ORCID registry
* End user features
  * Login in page
  * Support for the Dimensions badge
  * Improved Altmetric badge (supporting also the ISBN identifier)
  * Statistics improvements (including the unknown category in region, country, city)
* New statistics about the workflow process

* these developments have been funded by OpenAIRE, as result of a public CFP in February 2018, see the announcement here

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DSpace-CRIS 6.3 (not official released, please use the snapshot)

* Alignment to the latest official minor releases of DSpace (still in progress)
* Functional alignment between versions 5.x --> 6.x (still in progress)

2017

5.8 (released on September 15th, 2017) - see the full announcement here: https://www.4science.it/en/2017/09/14/dspace-cris-5-8-and-orcid-v2-api-support-release-announcement/

* Switch to the ORCID API v2, see https://members.orcid.org/api/news/xsd-20-update
* bug fixes from DSpace 5.8

5.7 (released on August 8th, 2017) - see the full announcement here: https://www.4science.it/2017/08/09/dspace-cris-5-7-release-announcement/

* Hierarchy metadata support for DSpace items (new addition from the RC): It is now possible to configure one or more metadata as child of another one. If the parent metadata is repeatable, adding an additional value for the parent metadata will allow to input values also for the linked child metadata. Currently only text-based (onebox) metadata can be used as child metadata but support for the other input types will be added in subsequent minor releases.
* Signposting support: DSpace-CRIS is more machine friendly than never. It supports now the following signposting patterns: Author, Identifier, Publication Boundary
* The CORE Recommender Engine integration: Display documents that are semantically similar. Powered by CORE https://core.ac.uk/. You can take a look at our example here: https://dspace-cris.4science.it/handle/123456789/102
* Authority Lookup based on Getty Vocabularies: For more information about Getty Vocabularies please check https://www.getty.edu/research/toolsvocabularies/index.html; DSpace-CRIS implementation involves both the "Getty Thesaurus of Geographic Names Online" (https://www.getty.edu/research/toolsvocabularies/tgn/index.html) and "The Union List of Artist Names" (ULAN - https://www.getty.edu/research/toolsvocabularies/ulan/index.html)
* Authority Lookup based on Viaf service: The VIAF® (Virtual International Authority File) combines multiple name authority files into a single OCLC-hosted name authority service. More info at https://viaf.org/
* Import ORCID publications via Submission Data Loader: During the submission process, users can choose an ORCID and check which publications to import
* Cookies Policy Popup: This feature allows easy compliance with the EU legislation on cookies
* Other minor improvements: It is now possible to clean Solr statistics entries via WebUI; to upgrade Hibernate and Spring to the minor versions; we have improved the automatic calculation of derived metrics and the creation of CRIS objects as part of the submission process
* Other minor fixes: the out-of-box DSpace OAI Harvesting in DSpace-CRIS; the DSpace-CRIS SOAP web-services; the DSpace-CRIS Network when users try to show many graphs
The CORE Recommender Engine integration: Display documents that are semantically similar. Powered by CORE https://core.ac.uk/. You can take a look at our example here: https://dspace-cris.4science.it/handle/123456789/102

Authority Lookup based on Getty Vocabularies: For more information about Getty Vocabularies please check https://www.getty.edu /research/tools/vocabularies/index.html; DSpace-CRIS implementation involves both the "Getty Thesaurus of Geographic Names Online" (http s://www.getty.edu/research/tools/vocabularies/rgn/index.html) and "The Union List of Artist Names" (ULAN - https://www.getty.edu/research /tools/vocabularies/ulan/index.html)

Authority Lookup based on VIAF service: The VIAF® (Virtual International Authority File) combines multiple name authority files into a single OCLC-hosted name authority service. More info at https://viaf.org/


Import ORCiD publications via Submission Data Loader: During the submission process, users can choose an ORCID and check which publication to import

Cookies Policy Popup: this feature allows easy compliance with the EU legislation on cookies

Other minor improvements: it's now possible to clean Solr statistics entries via WebUI; to upgrade Hibernate and Spring to the minor version; we have improved the automatic calculation of derived metrics and the creation of CRIS objects as part of the submission process

Other minor fixes: the out-of-box DSpace OAI Harvesting in DSpace-CRIS; the DSpace-CRIS SOAP web-services; the DSpace-CRIS Network when users try to show many graph

2016

5.6 (released on November 16th, 2016 - click here to browse the code on github) / include the release of DSpace-CKAN integration module

The release includes the security fixes already available in DSpace JSPUI 5.6, making it easier to upgrade from a recent DSpace version to DSpace-CRIS (no more need to run sql scripts manually) and brings a lot of new and exciting features:

UI Extendibility: the webapp can now use the servlet 3.0 specification, enabling the creation and plug-in of external modules with their specific web UI components and pages. An extension point has been introduced to plugin viewers dedicated to particular bitstreams.

Edit metadata for any DSpace object via the UI: it is now possible to edit/add/remove metadata for Communities, Collections, Bundles and Bitstreams, to simplify the management of further functionalities based on custom metadata.

Edit archived items with UI submission: administrators can now edit archived or withdrawn items using the same UI available for submissions, exploiting functionalities such as dropdown, autocomplete, ORCID lookup, validation, etc.

Duplication tools (detect & merge): this administrative tool allows to check the database for potential duplicates and to merge the confirmed matches. During the submission, an alert is shown when a potential duplicate is detected. More information and screenshots available here https:// wiki.duraspace.org/display/DSpaceCRIS/deduplication+alert

Improved ORCiD synchronization: DSpace-CRIS now stores the internal identifier assigned by ORCID to the publications in order to prevent record duplications when a local DSpace-CRIS update is pushed to ORCID ("put" code). In addition to that, DSpace-CRIS is now able to push to the ORCID profiles educational and professional information of the researcher.

Improved submission forms: among the new functionalities we can list the regex validation support, a framework for complex validation support, new input type "number" for submission and new input type "year" for submission.

Improved security model for CRIS entities: every single CRIS object, object tab and object box can now be configured to be visible to specific users or user groups. An example of this would be when parts of a specific project description (such as costs) can be linked to the project participants, or the department director, or the research/contract office, etc.

Automatic calculation of derived metrics: examples are average, maximum, minimum, variance of publication citation counts shown as metrics at the level of researcher, organization, project, and so on.

Advanced import framework: border tables have been introduced to easily create ETL procedures to load and synchronize data, currently limited to publication, in the DSpace-CRIS installation.

On-demand DOI registration: an administrative UI allows to register DOIs via DataCite or CrossRef for items matching configured criteria (theses, dataset, etc.). For each group it is possible to define the template used to generate the DOI and the metadata to deposit. The precalculated DOI can be revised by the administrator to allow complete personalization.

Template service: the template item now supports the use of substitution variables bound to dynamic code plugged in as spring bean. The functionality allows the generation of default values dynamically generated in submission such as the timestamp, the details of the submitter, and so on.

Creation of CRIS objects as part of the submission process: it allows users to create new CRIS objects (persons, projects, organizations, events, etc.) on demand as needed during the submission of a DSpace item. It can be even used to provide a workflow around the collection of data, including metrics, about CRIS entities.

As first implementation of the UI Extendibility we provide native support in DSpace-CRIS of the DSpace-CKAN Integration module (https://github.com /4Science/dspace-ckan). DSpace-CKAN allows an in-depth integration between DSpace and CKAN. Tabular data (CSV, XLS, etc.) are deposited in a CKAN instance through a curation task. The preview of the dataset content is enabled proxying in DSpace the CKAN Datastore API so to enforce the access condition defined in DSpace (Open Access, embargo, etc.). The dataset preview allows filtering, pagination and sorting, all the operation are performed on server side to save bandwidth overload. An example is visible here: https://dspace-cris.4science.it/handle/123456789/31
5.5 (released on March 27th, 2016 - click here to browse the code on github)

- Global Statistics: to provide a global view over the repository usage, visualization, download and deposit trends
  http://demo-dspace-cris.cineca.it/cris/stats/site.html?handle=123456789/0&type=item

- Facets for dynamic components: publications list, projects list and any other dynamic component included in the researcher profiles or in other CRIS entity details page (project, organization, etc.) can now provide faceting capabilities
  http://demo-dspace-cris.cineca.it/cris/rp/rp00006

- Bibliographic export for publications: researcher's publication list can be exported in several format by the profile owner and search results can be exported by the repository administrators

- Incremental Authority from previous value: to suggest terms from values already added into the system to keep metadata clean and to avoid misspelling. Common use cases include keywords, publishers, etc.

- Direct access to the researcher profile using external identifiers: make it easy to link external systems to your DSpace-CRIS installation without the need to know the internal identifier. For instance you can address your researcher profiles using their ORCID
  http://demo-dspace-cris.cineca.it/cris/rp/details.htm?lt=orcid&lv=0000-0002-9421-192X

5.4 (released on February 15th, 2016 - click here to browse the code on github)

- There is now a general infrastructure to support metrics about any DSpace/DSpace-CRIS objects, such as traditional bibliometrics for publications, authors, journals, alternative and local metrics.
- DSpace-CRIS is now integrated out-of-box with Scopus, Web Of Science, and PubMed Central to collect, show and process citation data. The AltMetrics badge can be shown beside the other metrics.
- For any defined metric DSpace-CRIS allows for calculating objects' local ranking and percentile in order to provide the “most cited” component to different web pages (the home page or any other specific Department/Office pages).
- Internal statistics have been elaborated as usage metrics to make them available for “Most viewed”, “Most downloaded” components and to calculate local percentile.
- Metrics data can now be exposed in “listing” to make browsing and searching easier, and they can also be used as sorting criteria. This is done by extending the SOLR capability to load additional information from an external source. This feature enables future improvements such as support for “user rated content” to DSpace.
- Another important new development is the ability to load and update CRIS' objects into the system using XLS files, a similar approach to what is actually supported by DSpace for standard items. The feature allows a user to set any kind of field, including the relations between different objects (such as org.unit and researchers, projects and researchers, etc.), and custom fields.
- The data model configuration has been simplified, indeed it is now possible to easily export and import the configuration also using XLS files.
- There is now a better integration between DSpace-CRIS and ORCID. When a researcher creates her profile in the local DSpace-CRIS, the system automatically collects all the biographic information (such as biography, additional names, external URLs, additional identifiers) from ORCID, both when the researcher directly accesses the system, as well as when a new publication is added to the system that the researcher is co-authoring.
- Additionally, the new version has improved the layout and navigation experience: the navigation menu invites the user to explore the repository contents by “Entity”, offering the appropriate tools for each specific type of content such as dedicated browse indexes, advanced search options and components to highlight recent or featured content.

2015

5.3 (released on August 15th, 2015 - click here to browse the code on github)

- Classification widget for CRIS entities (support for hierarchy taxonomy)

5.2.1 (released on July 24th, 2015 - click here to browse the code on github)

- ORCID integration: ability to push biographic data, publications and projects to the ORCID profile
- Boolean widget for CRIS entities
- Text Widget for CRIS entities now support input from controlled list using dropdown, checkbox or radio buttons

5.2 (released on May 25th, 2015 - click here to browse the code on github)

- ORCID integration (authentication)
- Ability to claim profiles (submission lookup on ORCID)
- Global search with Text Highlighting

4.3 (released on Apr 15th, 2015 - click here to browse the code on github)

- many layout improvement
- Global Search funded by University of Hong Kong
- ORCID integration (authentication, submission lookup and import into cris)

4.2 (released on Mar 11th, 2015 - click here to browse the code on github)

- bug fixing of the 4.1.2 release and update to DSpace 4.2 release
2014

4.1.2 (released on Jul 12th, 2014 - click here to browse the code on github)
- bug fixing of the 4.1.1 release

4.1.1 (released on Jun 28th, 2014 - click here to browse the code on github)
- bug fixing of the 4.1.0 release

4.1.0 (released on Jun 13rd, 2014 - click here to browse the code on github)
- upgrade to DSpace 4.1 and to the bootstrap layout also for the DSpace-CRIS pages
- full support for Oracle (tested on 11.g R2 and 12.c), other than PostgreSQL 9.x
- Extensive testing on Oracle
- Easier installation process

2013

1.8.3-beta (released on Sep 6th, 2013 - click here to browse the code on github)
- bug fixing of the 1.8.2.1-beta release
- upgrade to dspace 1.8.3 (security fix)

3.2.0-beta (first draft on Jul 31, 2013 - released on Aug 3rd, 2013 - click here to browse the code on github)
- porting to DSpace 3.2

1.8.2.1-beta (released on July 24th, 2013 - click here to browse the code on github)
- bug fixing of the 1.8.2.0-beta release
- Data Model: ability to define new object types via UI to manage 2nd level CRIS entities: prize, equipment, laboratory shared and linked to one or more 1st or 2nd level CRIS entities

1.8.2.0-beta (released on June 24th, 2013 - click here to browse the code on github)
- Usage Statistics
  1. CRIS entity detail page visit
  2. Global & Top related CERIF Entity views & downloads referencing the CRIS entity (projects for researchers, researchers for OrgUnits, etc.)
  3. Global & Top item views & downloads referencing the CRIS entity
  4. email and RSS alerts
- PubMed Article level metrics
  1. cited-by count in the item page
  2. number of pubmed articles for researcher
  3. total citations in pubmed for researcher (only items in local DSpace database will be counted)
- Integration with DSpace
  1. ability to hide publications (or any other related entity: projects, etc.) in the researcher profile
  2. make a list of selected publications (or any other related entity: projects, etc.)
  3. claim/disclaim (link/unlink) previously DSpace entered publication items, to a researcher profile
- SOAP WebServices for READ-ONLY access to CRIS information
- Network visualization and analysis

1.8.2.0-alpha1 (unreleased, available on github since February 4th, 2013 )
- bug fixing of the alpha release

2012

1.8.2.0-alpha (released on November 26th, 2012)
- Management of the 1st level CRIS entities: Researcher Profiles, Projects, Organization Units
  1. Administrative UI for data model definition using the JDynA framework
  2. Detail page for any entity organized in Tab and Box themed with JQuery UI
  3. Faceted Search using the DSpace Discovery 3.0 configuration
  4. Customizable Browse indexes using a backport of the SOLR Browse DSpace 3.0 contribution
- Basic integration of DSpace-CRIS entities with publications (DSpace Item):
  1. CRIS entities as authority for item metadata
2. list of referencing DSpace Items in the detail page of the CRIS entities