

New Workflow for SciCat Data Publication

DCS Round 2 Update, July 21st 2025

Nicolas Hayen, Regina Hinzmann, DAPHNE4NFDI



DCS Round 2



Second round of DAPHNE Contributions to SciCat
Work by Martin Trajanovski since March 2025

Two major subprojects for this round

1. Improvement to **Frontend UI** and search capabilities
2. Rework of data publication and **DOI minting** workflow



UI Improvements



Site Header Logo

Help About Sign in

Datasets /

Search

Search Reset Search

Filters and Conditions

Location

Pid

Group

Type

Keyword

Start Date - End Date

Pid	Datasetname	Runnumber	Sourcefolder	Size	Creationtime	Type
dacat/183c9bf...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...	raw
dacat/3512544...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...	raw

Items per page: 25 1 = 2 of 2

UI Improvements



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Filters and Conditions

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Start Date - End Date

Pid	Datasetname	Runnumber	Sourcefolder	Size
dacat/183c9fbf-b6ca-4b57-9702-5d5c4583d018	Test Dataset.		/somewhere/on...	3 KiB
dacat/35125449-a747-404c-89f0-dae92fac65b5	Test Dataset.		/somewhere/on...	3 KiB

Items per page: 251 = 2 of 2

UI Improvements



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dacat/35125449-a747-404c-89f0-dae92fac65b5	Test Dataset.		/somewhere/on...	3 KiB

Items per page: 251 = 2 of 2

UI Improvements



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Items per page: 25

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UI Improvements



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Test Dataset.	dacat/35125449-a747-404c-89f0-dae92fac65b5		/somewhere/on...	3 KiB	

Items per page: 25

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UI Improvements



Improvements to Frontend search filters
<https://github.com/SciCatProject/frontend/issues/1806>

- Streamline adding SM filters
- Add new operators
- Higher responsiveness
- Use Dataset API v4 queries

Filters

Pid
=

Keyword

Group

Location

Type

SM Run Number
3000

=
>
<
r

More Filters...

Apply Reset Filters

Filters and Conditions ⚙️

Location Filter

Pid Filter

Group Filter

Type Filter

Start Date - End Date 📅

scanID > 5646 A ✎️ 🗑️

+ Add Metadata Conditions

Apply Reset Filters

SciCat DOI



Reworking the data publication / DOI feature in SciCat

- Replacing the existing system with extended new workflow
- Focus on general applicability and user friendliness



SciCat DOI



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Type

Keyword

Start Date - End Date

Text

☒ My Data ☐ All Public Data

<input type="checkbox"/>	Pid	Datasetname	Runnumber	Sourcefolder	Size	Creationtime
<input type="checkbox"/>	dacat/183c9fb...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...
<input type="checkbox"/>	dacat/351254...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...
<input type="checkbox"/>	dacat/a752b87...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...

Datasets

Files

Instruments

Jobs

Policies

Proposals

Published Data

Samples

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Location

Pid

Group

Type

Keyword

Start Date - End Date

Text

☒ My Data ☐ All Public Data

☒

	Pid	Datasetname	Runnumber	Sourcefolder	Size	Creationtime	Type	
<input checked="" type="checkbox"/>	dacat/183c9fb...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...	raw	
<input checked="" type="checkbox"/>	dacat/351254...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...	raw	
<input type="checkbox"/>	dacat/a752b87...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...	raw	

Add to Cart

SciCat DOI



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Type

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Start Date - End Date

Text

☒ My Data ☐ All Public Data

Add to Cart

	Pid	Datasetname	Runnumber	Sourcefolder	Size	Creationtime	Type	
<input checked="" type="checkbox"/>	dacat/183c9fb...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...	raw	
<input checked="" type="checkbox"/>	dacat/351254...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...	raw	
<input type="checkbox"/>	dacat/a752b87...	Test Dataset.		/somewhere/o...	3 KiB	2025-07-10 2...	raw	

SciCat DOI



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Text

☒ My Data ☐ All Public Data

Pid

Datasetname

Runnumber

Sourcefolder

Size

Creationtime

Type

☒

dacat/183c9fb...

Test Dataset.

/somewhere/o...

3 KiB

2025-07-10 2...

raw

☒

dacat/351254...

Test Dataset.

/somewhere/o...

3 KiB

2025-07-10 2...

raw

☐

dacat/a752b87...

Test Dataset.

/somewhere/o...

3 KiB

2025-07-10 2...

raw

Add to Cart

Cart

2 datasets.

Remove All

Actions

Search

http://localhost:4200/datasets/batch

July 21st, 2025

Nicolas Hayen, Regina Hinzmann

DCS Round 2 Update

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SciCat DOI



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Empty Cart Publish Share

Remove	PID	Source Folder	Creation Time
	dacat/183c9fbf-b6ca-4b57-9702-5d5c4583d018	/somewhere/on/remote	2025-07-10 20:53
	dacat/35125449-a747-404c-89f0-dae92fac65b5	/somewhere/on/remote	2025-07-10 20:53

SciCat DOI



SciCat Site Header Logo

Help About 2 admin

[Datasets](#) / [Batch](#) / [Publish](#) /

You are about to publish 2 datasets.

Title*

Creators*

Nicolas Hayen ✕

Publisher*

SciCat Vanilla

Resource Type*

raw

Description*

This is a test dataset.

Abstract*

Download link

Related publications

Publish

SciCat DOI



SciCat

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Published Datasets / < DOI PREFIX>/ecb159a7-a3d4-4024-b2c2-76cf1b84db52 /

Publication Status

Status

pending_registration

Register

General Information

Title

Test 3

Abstract

Test 3

DOI

<DOI_PREFIX>/ecb159a7-a3d4-4024-b2c2-76cf1b84db52

URL

doi.ess.eu/detail/<DOI_PREFIX>/ecb159a7-a3d4-4024-b2c2-76cf1b84db52

Publication Year

2025

Creator Information

Creator

Nicolas Hayen

Authors

Publisher

SciCat Vanilla

File information

Size

5 KiB

Resource Type

raw

Data Description

This is a test dataset.



Registration Failed

SciCat DOI



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My Data

All Public Data

Pid

Datasetname

Runnumber

Sourcefolder

Size

Creationtime

Type

Image

Proposalid

dacat/183c9fbf...

Test Dataset.

/somewhere/on...

3 KiB

2025-07-10 20:...

raw

dacat/3512544...

Test Dataset.

/somewhere/on...

3 KiB

2025-07-10 20:...

raw

Add to Cart

Items per page: 1000

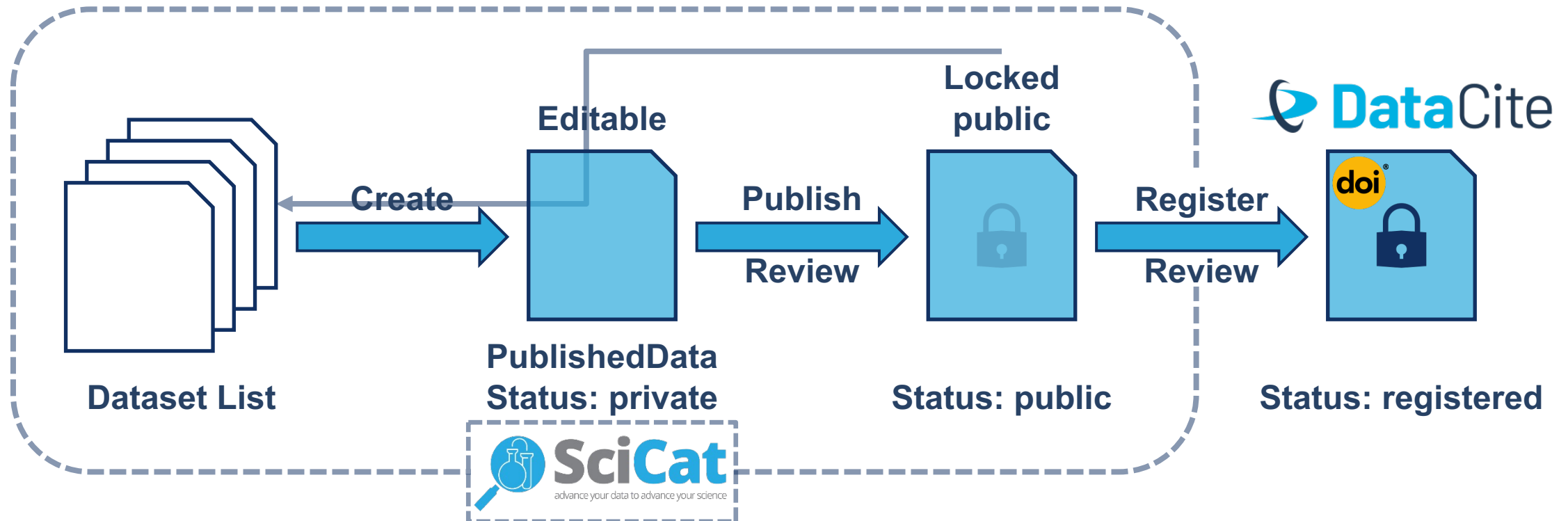
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Problems



1. Unintuitive UI path to get to data publication
2. Metadata form covers only absolute minimum for DOIs
3. No possibility to edit PublishedData once created
4. All data is made public upon registration, but can be hidden again
5. No possibility for integration with other services / databases

New workflow



Metadata Form



[Datasets](#) / [Batch](#) / [Publish](#) /

You are about to publish 2 datasets.

Title*
Cypress minimal test proposal

Abstract*
Abstract of test proposal

Metadata Here you can add metadata to your published data.

[Save changes](#) [Save and Continue](#) [Cancel](#)

Metadata Form



[Datasets](#) / [Batch](#) / [Publish](#) /

You are about to publish 2 datasets.

Title*
Cypress minimal test proposal

Abstract*
Abstract of test proposal

Metadata

Here you can add metadata to your published data.

Creators*

No data

Publisher

Publisher Name*

Publisher Identifier

Publisher Identifier Scheme*

Scheme URI

Metadata Form



[Datasets](#) / [Batch](#) / [Publish](#) /

You are about to publish 2 datasets.

Title*
Cypress minimal test proposal

Abstract*
Abstract of test proposal

Metadata

Here you can add metadata to your published data.

Creators* 1 22

Name*
is a required property

Name Type

Given Name

Family Name

Name Identifiers +

No data

Affiliations +

No data

Publisher

Metadata Form



Christian-Albrechts-Universität zu Kiel



Related Identifiers

No data

Sizes

Formats

Rights

No data

Descriptions

No data

Geo Locations

No data

Funding References

No data

Related Items

No data

Save changes

Save and Continue

Cancel

18.GeoLocation	17.a. descriptionType	M if 17.	1	
	18.1. geoLocationPoint	R	0-n	published-data.metadata.geoLocations
	18.1.1. geoLocationLongitude	M if 18.1.	1	
	18.1.2. geoLocationLatitude	M if 18.1.	1	
	18.2. geoLocationBox	O	0-1	
	18.2.1. westBoundLongitude	M if 18.2.	1	
	18.2.2. eastBoundLongitude	M if 18.2.	1	
	18.2.3. southBoundLatitude	M if 18.2.	1	
	18.2.4. northBoundLatitude	M if 18.2.	1	
	18.3. geoLocationPlace	O	0-1	
	18.4. geoLocationPolygon	O	0-n	
	18.4.1. polygonPoint	M if 18.4.	4-n	
	18.4.1.1. pointLongitude	M if 18.4.1.	1	
	18.4.1.2. pointLatitude	M if 18.4.1.	1	
	18.4.2. inPolygonPoint	O	0-1	
	18.4.2.1. pointLongitude	M if 18.4.2.	1	
	18.4.2.2. pointLatitude	M if 18.4.2.	1	
19. FundingReference		O	0-n	published-data.metadata.fundingReferences
	19.1. funderName	M if 19.	1	
	19.2. funderIdentifier	O	0-1	
	19.2.a. funderIdentifierType	M if 19.2.	1	
	19.2.b. schemeURI	O	0-1	
	19.3. awardNumber	O	0-1	
	19.3.a. awardURI	O	0-1	
	19.4. awardTitle	O	0-1	
20. RelatedItem		O	0-n	published-data.metadata.relatedItems
	20.a. relatedItemType	M if 20.	1	

Metadata Form



The screenshot shows a web browser at `localhost:4200/publishedDatasets/10.17199%2F1652c0e1-667a-4ca9-8057-ffe6c6f62c19/edit`. A modal dialog titled "localhost:4200 says" is displayed, stating: "You have unsaved changes. Press Cancel to go back and save these changes, or OK to leave without saving." The dialog has "OK" and "Cancel" buttons. The background form is for editing a "Published Data record". It includes a "Test title" field, a "test abstract" field, and a "Metadata" section with the instruction "Here you can edit the metadata." Below this is a "Creators*" section with a "+" icon. A "Name*" field contains the text "Test creator 1".

Configuration



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```
C: > Users > hayen > Documents > Dev > scicat-backend-next > {} publishedDataConfig.example.json > ...

1  {
2    "metadataSchema": {
3      "type": "object",
4      "properties": {
5        "creators": {
6          "type": "array",
7          "minItems": 1,
8          "items": {
9            "type": "object",
10           "properties": {
11             "name": {
12               "type": "string",
13               "title": "Name",
14               "$dataciteRequired": true
15             },
16             "nameType": {
17               "type": "string",
18               "title": "Name Type",
19               "$dataciteRequired": false,
20               "enum": ["Personal", "Organizational"]
21             },
22             "givenName": {
23               "type": "string",
24               "title": "Given Name",
25               "$dataciteRequired": false
26             }
           }
         }
       }
     }
  }
```

Summary & Timeline



When will the features be available?

- Adjustable columns: already available (FE v5)
- Reworked published workflow: by end of contract
- Fix in search w/ scientific metadata: not trivial

Focus now in SciCat Collaboration: follow up of topics from SciCatCON2025

- Mono repo, UI/UX (DAPHNE contribution)
- Details for Governance model: September