

# a vault for your data

continuity in a changing world  
linda reijnhoudt | R&D engineer

2026-06-11

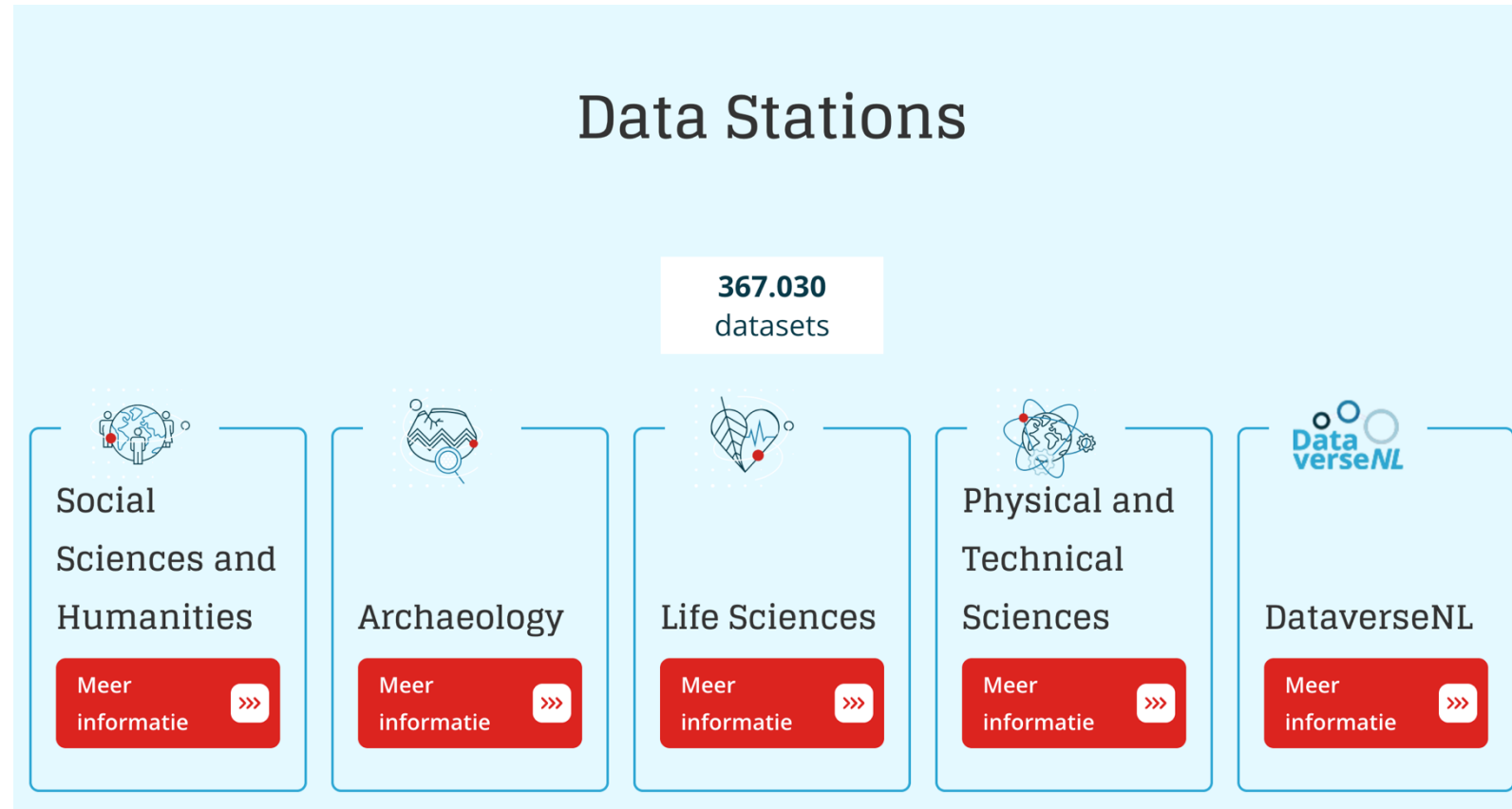
**DANS**

DANS Open Day  
Open data, open science



# Content

1. architecture
2. design principles
3. components
4. dataset journey
5. quality controls
6. long-term preservation
7. governance variants



# Data Stations & DataverseNL

- deposit
- curate
- share
- search
- reuse

The screenshot displays the DataverseNL search interface. At the top, there is a search bar with the text "Search this dataverse..." and a magnifying glass icon, followed by a link to "Advanced Search" and a "+ Add Data" button. Below the search bar, the left sidebar contains filters for "Dataverses (0)", "Datasets (174,424)", and "Files (4,778,831)". There are also filters for "Publication Year" (2026: 3,410; 2025: 14,608; 2024: 8,924; 2023: 16,274; 2022: 15,207), "License" (CC-BY-NC-SA-4.0: 102,590; CC-BY-4.0: 55,354; CC0-1.0: 9,784; CC-BY-SA-4.0: 2,295; DANS Licence: 1,910), and "Temporal (ABR Periodes)" (Nieuwe Tijd Vroeg: 17,335; Vroeg Romeinse Tijd A: 16,465; Late Middeleeuwen B: 14,638; Nieuwe Tijd Midden: 13,951; Midden Romeinse Tijd A: 13,057). The main content area shows "1 to 10 of 174,424 Results" with "List" and "Map" view options and a "Sort" dropdown. Three search results are visible, each with a document icon, a title, a date (Jun 5, 2026), a citation snippet with a DOI link, and a brief description of the archaeological work.

Search this dataverse...   [Advanced Search](#)

Dataverses (0)  
 Datasets (174,424)  
 Files (4,778,831)

Publication Year  
2026 (3,410)  
2025 (14,608)  
2024 (8,924)  
2023 (16,274)  
2022 (15,207) [More...](#)

License  
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Temporal (ABR Periodes)  
Nieuwe Tijd Vroeg (17,335)  
Vroeg Romeinse Tijd A (16,465)  
Late Middeleeuwen B (14,638)  
Nieuwe Tijd Midden (13,951)  
Midden Romeinse Tijd A (13,057) [More...](#)

1 to 10 of 174,424 Results

**Replication Data for: Cothen, Kerkweg 30c Gemeente Wijk bij Duurstede (UT)**   
Jun 5, 2026  
J. Ponstein, 2026, "Replication Data for: Cothen, Kerkweg 30c Gemeente Wijk bij Duurstede (UT)", <https://doi.org/10.17026/AR/HLN3P5>, DANS Data Station Archaeology, V1  
In opdracht van J. Van Etteken heeft Transect b.v. in april 2024 een archeologisch vooronderzoek uitgevoerd in een plangebied aan de Kerkweg 30c in Cothen (gemeente Wijk bij Duurstede). Het archeologisch vooronderzoek bestaat uit een Archeologisch Bureauonderzoek (BO) en een Inventariserend veldonderzoek (IVO). De vraagstelling van deze onderzoek...

**Het Alfonsusklooster of Klooster Bronckhorst aan de Basilius van Bruggelaan 2 te Velp (Gemeente Grave)**   
Jun 5, 2026  
F. Haans; V. Delmee, 2026, "Het Alfonsusklooster of Klooster Bronckhorst aan de Basilius van Bruggelaan 2 te Velp (Gemeente Grave)", <https://doi.org/10.17026/AR/CANWYK>, DANS Data Station Archaeology, V1  
Het voormalige klooster van de zusters Redemptoristen, gebouwd op het voormalige landgoed De Bronckhorst in (Oud)Velp bij Grave. Dit grotendeels in de tweede helft van de 19de eeuw tot stand gekomen kloostercomplex is nadat het sedert 1991 in gebruik was door een woongemeenschap (Stichting Beth Hachajiem) recent aangekocht met als doel de herbestem...

**Appingedam, Paasweide Gemeente Eemsdelta (Gr.) Opgraving (DO) Variant Archeologische Begeleiding**   
Jun 5, 2026  
Steekproef, De, 2026, "Appingedam, Paasweide Gemeente Eemsdelta (Gr.) Opgraving (DO) Variant Archeologische Begeleiding", <https://doi.org/10.17026/AR/5VV1YM>, DANS Data Station Archaeology, V1  
Om inzicht te krijgen in de slootvulling zijn proefvakken van circa 2 meter breed uitgebaggerd. Het slib is hierbij uitgespreid over de oever (maximaal 30 centimeter dik; zie Figuur 2). Met een schep en metaaldetector zijn de proefvakken doorgespit en onderzocht op archeologische vondsten. Er waren vijf proefvakken gepland, uiteindelijk zijn er zev...

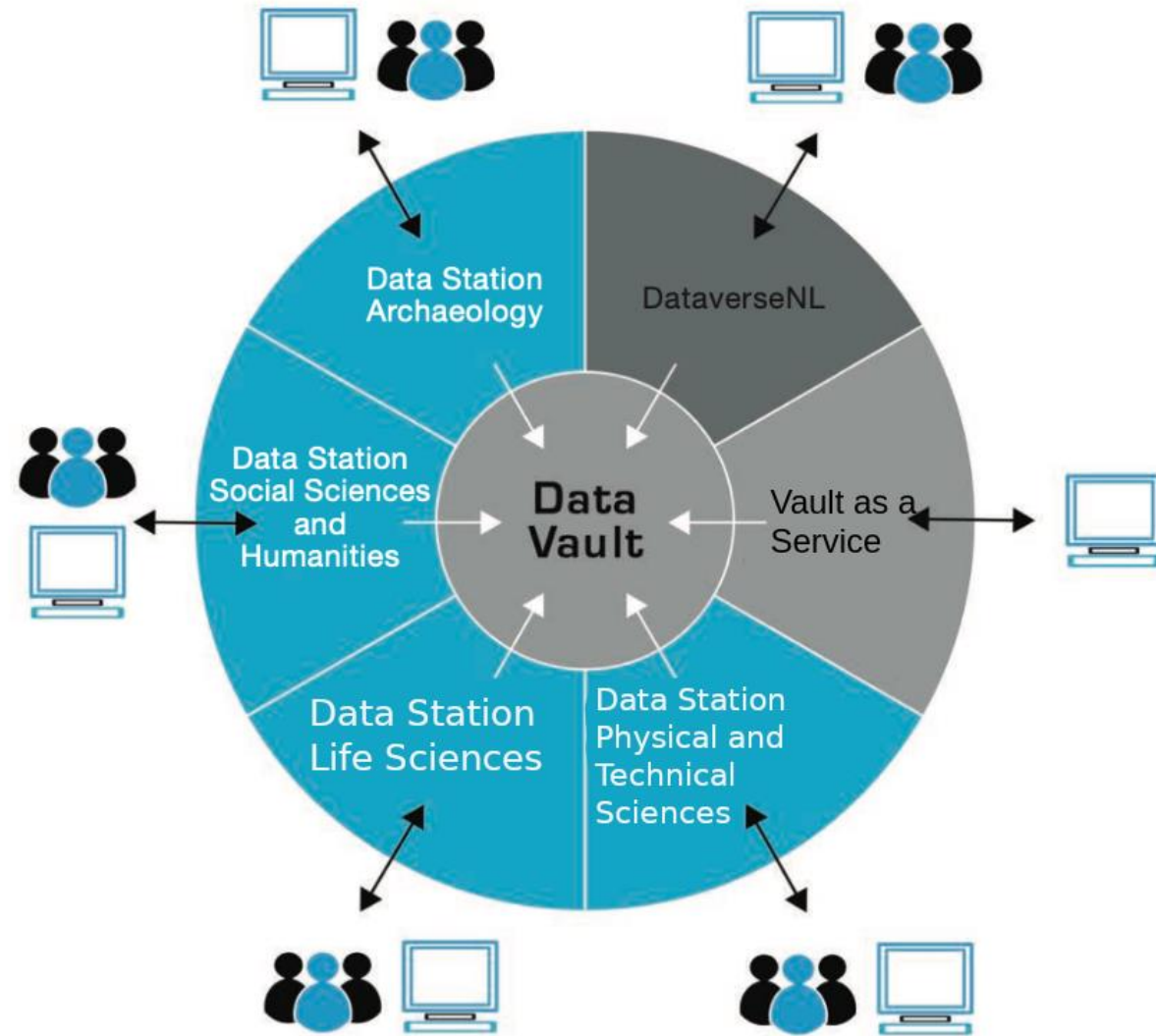
# architecture

## outer layer:

- deposit
- dissemination

## Data Vault:

- preservation



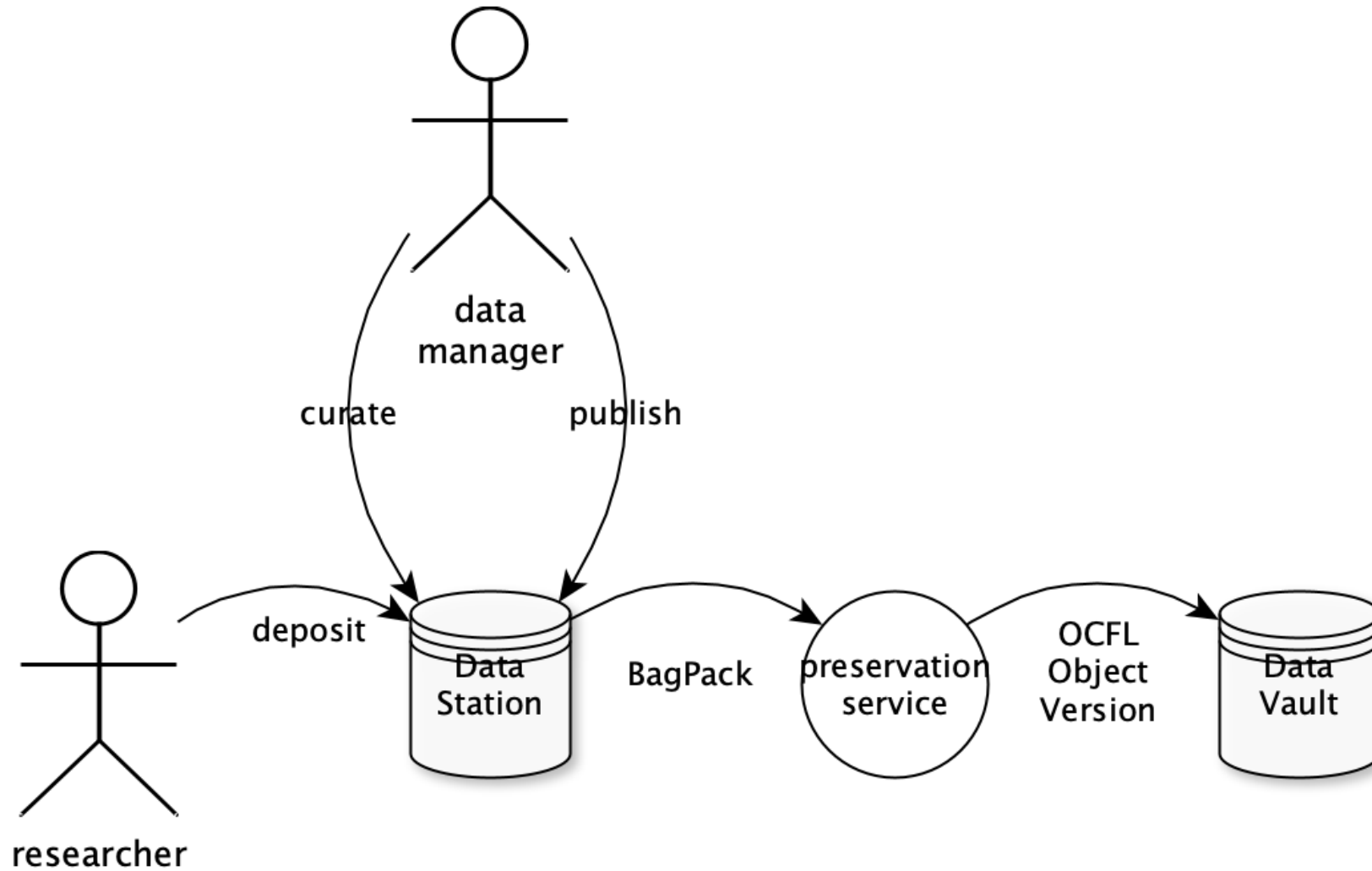
# design principles

- modular by design
  - many small services instead of one giant system
- open standards
  - Dataverse, SWORD2, OCFL, BagIt/BagPack
- preservation-first mindset
  - long-term copies are a core function, not an afterthought
- future readability
  - storage root documented as an exchange format for future users

# components

- repository (Dataverse)
- DANS microservices
  - ingest, validation, transfer, metadata, catalog, virus scan
- preservation
  - Data Vault + LOB store
- supporting infrastructure
  - NBN resolver, SURF Data Archive

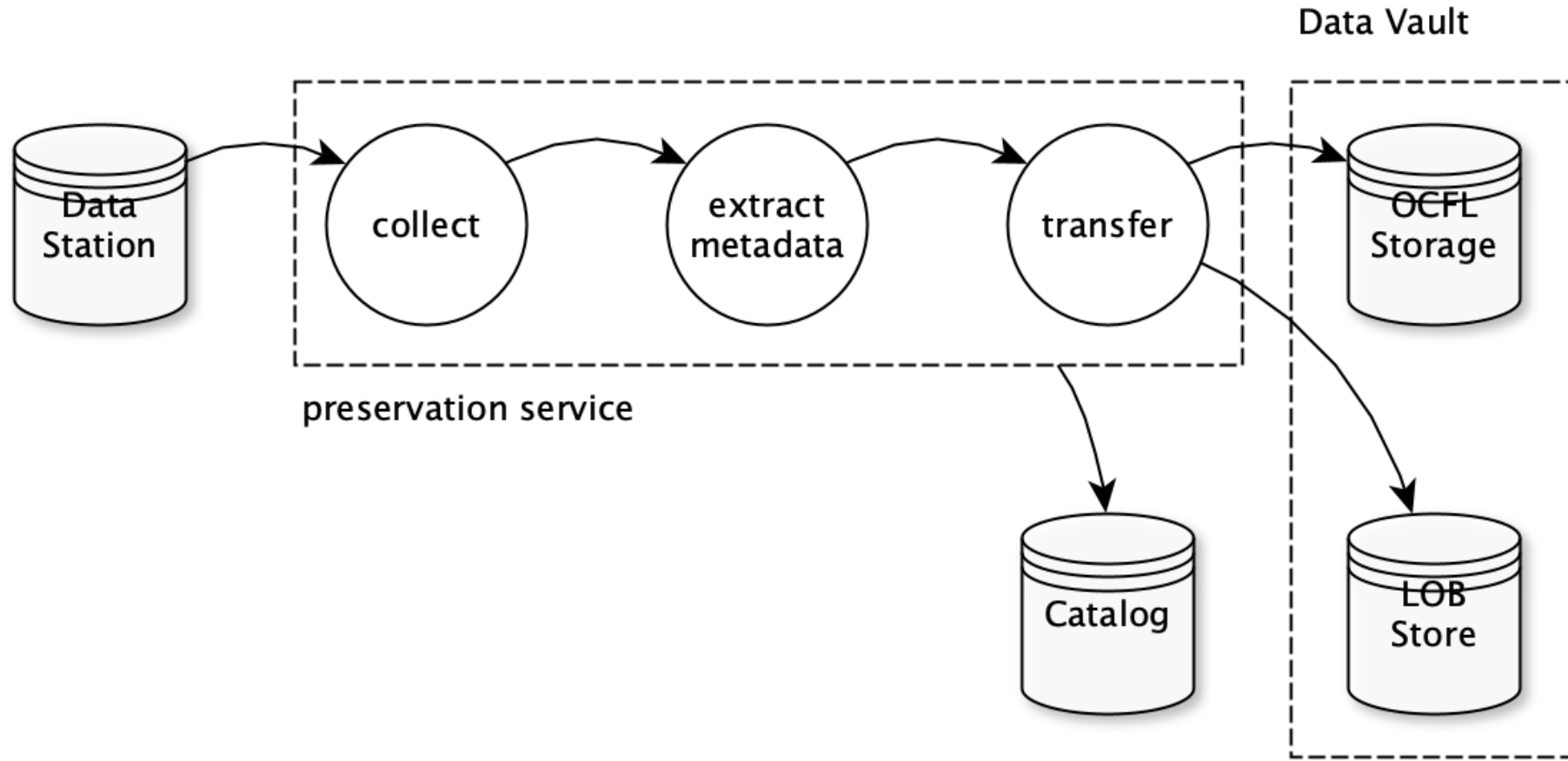
# journey of a dataset



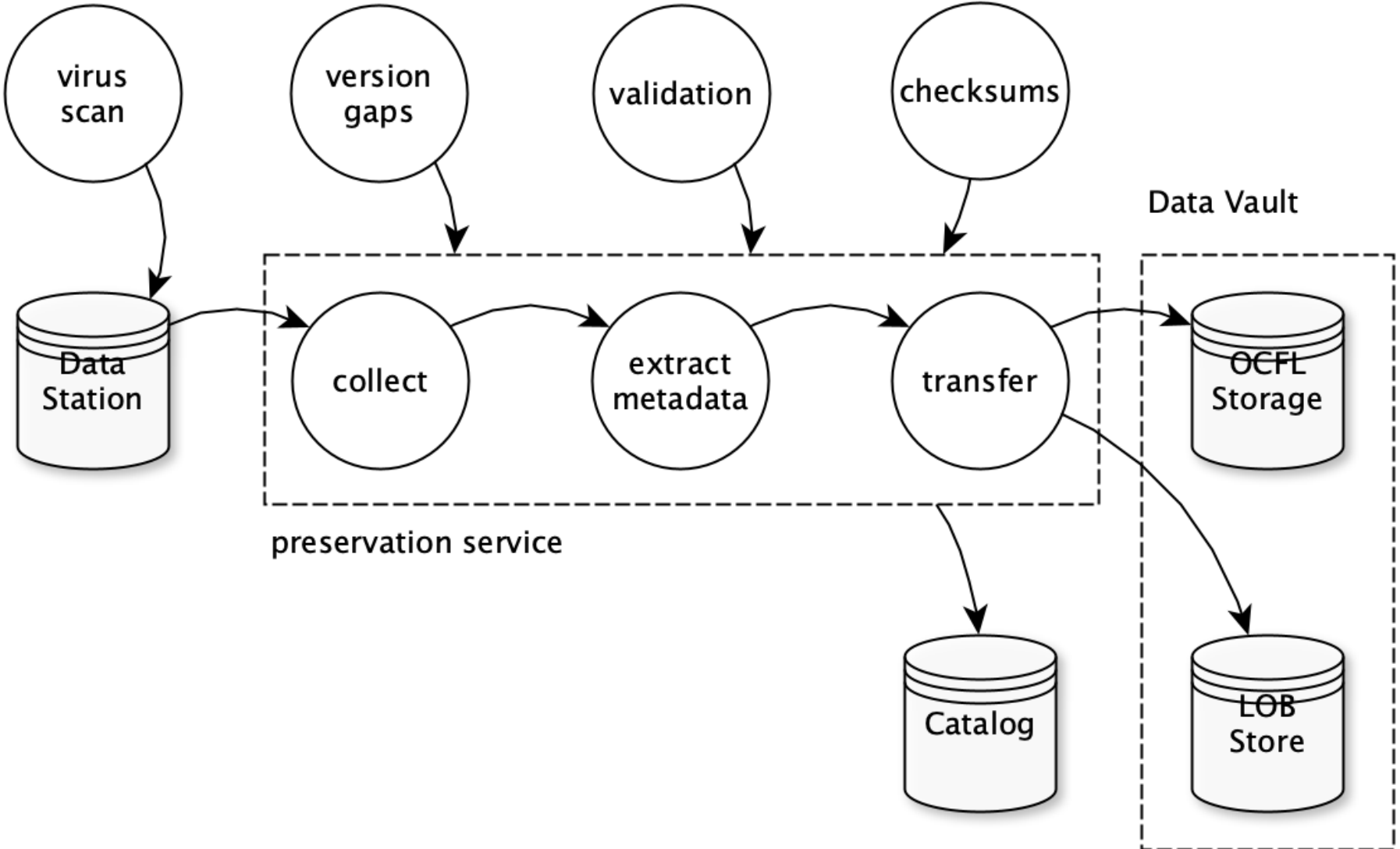
# long-term preservation strategy

- Data Vault uses OCFL: versioned, structured archival objects
- Each dataset maps to one OCFL object so versions remain traceable
- Large files handled via companion Large Object Store (LOB Store)

# more in-depth look of this journey



# trust and quality controls



# Data Vault using OCFL Storage

- Future-proof: uses open standards, not a hidden custom format.
- Restorable: datasets can be reconstructed in correct version order.
- Reliable at scale: very large files can be stored separately but still linked.

# identifiers

- Datasets registered with NBN persistent identifiers
- Resolver points users/services to current location over time
- *Identifiers outlive platform changes*

# Data Vault Catalog

## DANS Data Vault Catalog summary for urn:nbn:nl:ui:13-881d42bd-c9fa-420b-bf52-626c66a37512

### *LISA Dutch Company Data*

**NBN** urn:nbn:nl:ui:13-881d42bd-c9fa-420b-bf52-626c66a37512  
**OCFL Storage Root** ssh  
**Dataverse PID** doi:10.17026/SS/AQNXX9

#### v5

**Title** LISA Dutch Company Data  
**Bag ID** urn:uuid:5e9dae2e-2299-4d01-b792-1664a90ba50f  
**OCFL Object version** 5  
**Creation timestamp** 2026-03-12T17:29:02.431+01:00  
**Archival timestamp** 2026-03-12T17:34:25.837111+01:00  
**DV PID version** 5.0  
**Exporter** Dataverse  
**Exporter version** 6.9 build DANS-DataStation-PATCH-7

Filepath	SHA-1	File size
20240513 DataAccessProtocol_DANS_ErasmusUPT.pdf	b9138ca24195a29292b9f887e7bc51a5244ee0fb	148992
20250311 Erasmus UPT - request form LISA data.docx	b305cf9a5f918cd2fef5072da306e0423e6382dc	302100
Erasmus UPT - licence agreement LISA data.pdf	7b498b5acb02def07eb2d2c3624dd3465fef6369	145397
LISA_2022_sample.csv	2fb5807892a9b6106c94a83ba58bfd9a91621ab4	7850
LISA_2022_sample.rds	599397b859468ec1aa329aca699d1f6a589bfeca	11449
README.txt	67f420d5c8be6d655a51855b1967c7a639ae0320	1642

#### v4

**Title** LISA Dutch Company Data  
**Bag ID** urn:uuid:df6b10e1-f798-4e52-b708-441d4a03ede3  
**OCFL Object version** 4  
**Creation timestamp** 2026-03-12T17:28:54.074+01:00  
**Archival timestamp** 2026-03-12T17:34:22.366844+01:00  
**DV PID version** 4.0  
**Exporter** Dataverse  
**Exporter version** 6.9 build DANS-DataStation-PATCH-7

# Service Variants for Different Needs

- **Data Stations:** full workflow incl. curation and dissemination
- **DataverseNL:** similar tech, different governance model
- **Vault as a Service:** direct archival pipeline for organizations with their own front-end workflows

## keeping research data useful across decades

- Architecture combines usability, automation, and preservation
- Open standards reduce lock-in and support interoperability
- Modular services make evolution easier while keeping core trust guarantees

# Thank you for your attention

**DANS**

Anna van Saksenlaan 51 | 2593 HW The Hague | The Netherlands | +31 (0)88 003 46 66  
National centre of expertise and repository for research data | An institute of the KNAW and NWO

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