



Tech introduction

About DOIs

Digital Object Identifiers



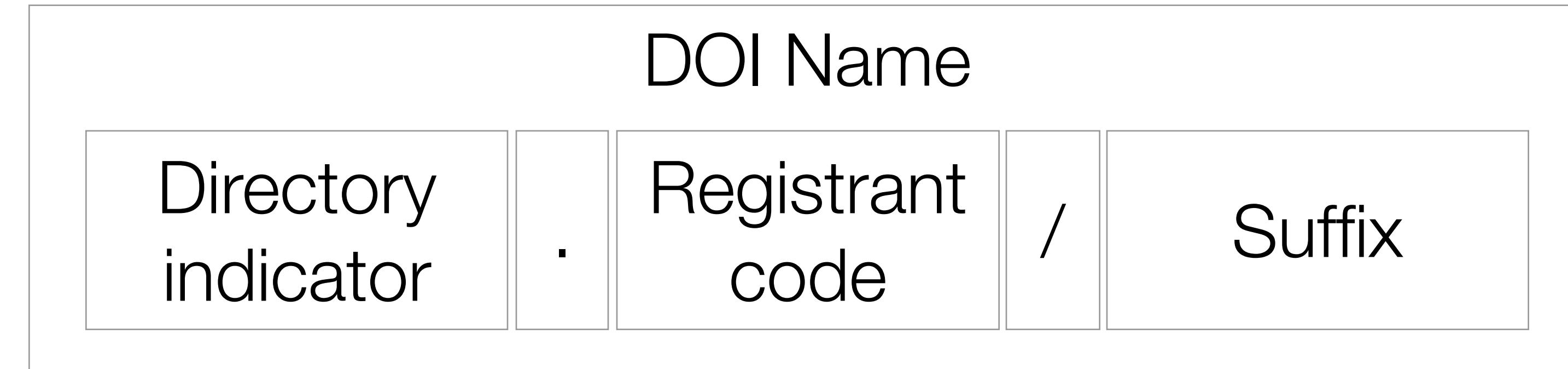
DOI: Digital Object Identifier

- A DOI is a serial code used to **uniquely identify** content of various types of entities. The DOI system is particularly used for electronic documents such as journal articles or datasets.
- What is digital is the identifier, not the object!



DOI Names

- ANSI/NISO Z39.84-2000 (reconfirmed 2005, 2010) and ISO 26324 (2010).



Example:

10	.	1234	/	data567
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URL

- The DOI name points to a URL, and it can be repointed as many times as needed.
- This URL can be the object itself or a landing page displaying metadata and how to access the object.



Metadata

- A metadata schema is a list of core metadata properties chosen for the accurate and consistent identification of a resource.

Mandatory	Recommended	Optional	
Identifier	Subject	Language	https://schema.datacite.org
Creator	Contributor	Alternate ID	XML Current version 3.1
Title	Date	Size	
Publisher	Resource Type	Format	
Publication year	Related identifier	Version	
	Description	Rights	
	GeoLocation		

Resolving DOIs

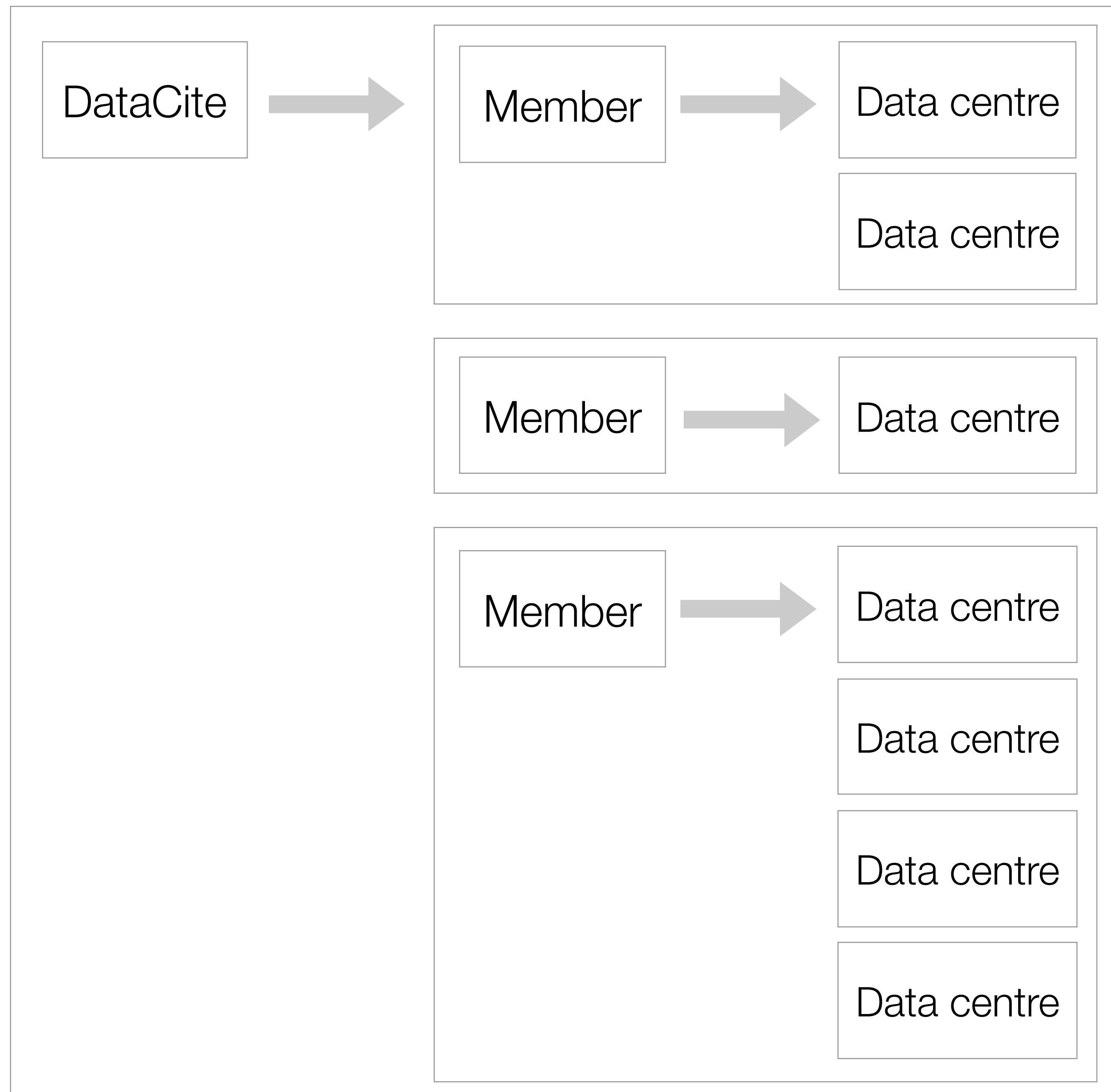
- You can resolve a DOI to its URL using:
 - <http://doi.org/DOI name>
 - <http://dx.doi.org/DOI name>

About the service



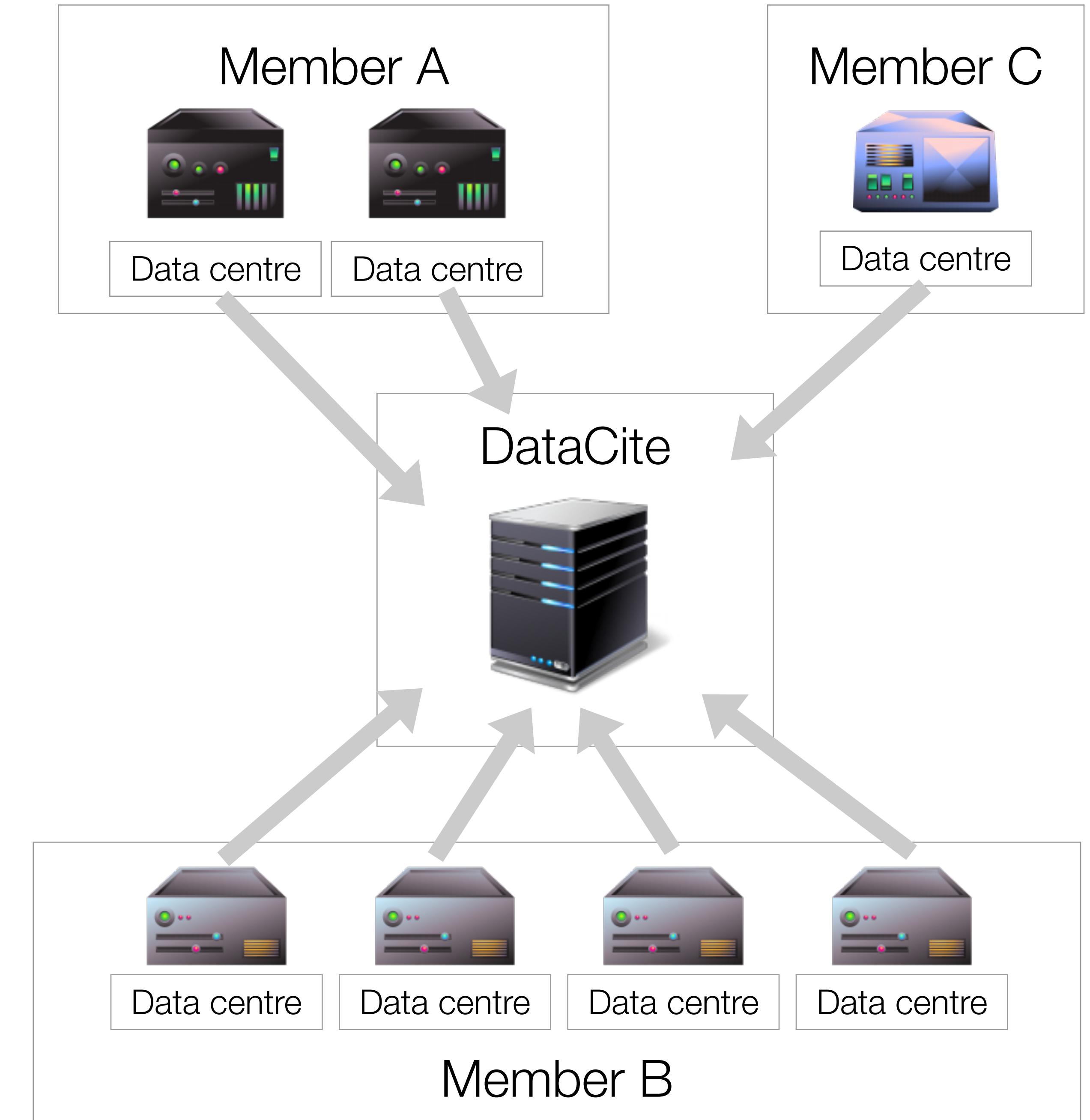
Service agreements

- DataCite serves its members
- Two types of members:
 - Full members
 - Affiliated members
- Each member serves its affiliated data centres
 - With different business models



Technical infrastructure

- DataCite serves all the data centres using a centralised infrastructure
- Same end-point for all of them
- Becoming a member does not require to set up any technical infrastructure



About the MDS

MetaData Store



The MetaData Store

- The DataCite Metadata Store is a service for data publishers to mint DOIs and register associated metadata.
- Two ways to use it:
 - Web interface - <https://mds.datacite.org>
 - API - <https://mds.datacite.org/static/apidoc>

Web interface

- “Single” or manual operations.

Members

Datacentre

[Create new Datacentre](#)

[List all Datacentres](#)

[Find by Symbol](#)

[Find by Name](#)

Dataset

[Register new Dataset](#)

[List all Datasets](#)

[Find by DOI](#)

View

[API documentation](#)

Datacentres

Dataset

[Register new Dataset](#)

[List all Datasets](#)

[Find by DOI](#)

View

[API documentation](#)

Example: mint a DOI

▼ Register new Dataset

DOI latency: Be aware that it can take up to 24 hours until a DOI update is globally known. New DOIs should be resolvable after about 5 minutes.

For testing purposes please only use our dedicated test prefix 10.5072

DOI:	<input type="text"/>	Name
Url:	<input type="text"/>	URL
XML upload:	<input type="button" value="Choose File"/> No file chosen	Metadata
Please select an XML file. It must reference a schema located under the following base URL: http://schema.datacite.org/meta/		
XML:	<input type="text"/>	
SAVE		

- RESTful API.
- HTTPS with basic authentication.
- Example, first upload the metadata, then mint the DOI:

```
curl -u USER.NAME  
      -H "Content-Type: application/xml"  
      --data-binary @metadata.xml  
      https://mds.datacite.org/metadata
```

200 OK

```
curl -u USER.NAME  
      -d "url=http://page1.com"  
      -d "doi=10.1234/dataset567"  
      https://mds.datacite.org/doi
```

200 OK

Sandbox

- DataCite provides a test environment for developers.
- The endpoint is <https://test.datacite.org> and the resolver is <http://dx.test.datacite.org>
- A test prefix exists for all data centres 10. 5072

Distributed System

- The Handle system (the technical infrastructure of DOIs) is distributed.
- Newly minted DOIs should be resolvable in less than 5 minutes (normally no more than 1 minute).
- Updates to DOIs (URL/metadata) can take up to 24h before being distributed through the whole network.

Questions?

support@datacite.org

References

- DOI Handbook:
doi.org/10.1000/182
- DataCite Metadata Schema Documentation:
doi.org/10.5438/0010
- DataCite Metadata XML Schema:
doi.org/10.5438/0011