IGSN IDs
Getting Started
What is the International *Generic* Sample Number?

The IGSN ID is a globally unique and persistent identifier for material samples.

It can be assigned to any sample from any discipline from anywhere in the universe.
What Can be Assigned an IGSN ID?

- Individual material samples
- Aggregations of material samples
- Features-of-interest or collection sites
- Destroyed, discarded, or ephemeral samples
What are IGSN ID Use Cases?

Link samples to the Web via metadata & landing pages

Locate samples via labelling for collection management

Track samples throughout their lifecycle

Link samples with datasets & articles for discovery and credit

Describe collection site, sample, & subsample relationships
IGSN IDs Versus DOIs in DataCite Services
What is the Same for IGSN IDs & DOIs?

IGSN IDs are functionally DOIs

- IGSN IDs can be registered through
  1. Fabrica web interface either via the [DOI Form](#) or the [File Upload](#)
  2. DataCite APIs. New users should use the [REST API](#)
  3. Integrations from [DataCite Service Providers](#)

- IGSN IDs are registered with metadata encoded in the [DataCite Metadata Schema](#)

- IGSN IDs have a [prefix and a suffix](#)
What is the Same for IGSN IDs & DOIs?

- IGSN IDs resolve to landing pages describing the material sample or feature-of-interest (collection site)
- **Findable** IGSN IDs appear in DataCite Commons, REST API queries, and other discovery services

DataCite APIs
- REST API
- MDS API

DataCite Fabrica
- Web interface

Register IGSN IDs with DataCite metadata

DataCite Commons, REST API queries & other discovery interfaces
How Do IGSN IDs Differ From DOIs?

IGSN IDs are differentiated from DOIs at the Repository level

- IGSN IDs must be registered in an IGSN ID Catalog Repository
  - Select ‘IGSN ID Catalog’ from the ‘Type’ options in ‘Add Repository’. This setting cannot be changed later
  - IGSN ID Catalog Repositories must be used exclusively to register IGSN IDs

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Add Repository

Click the circle icon for a new random ID, or the cross icon to delete the random ID and enter a value manually.

<table>
<thead>
<tr>
<th>Repository ID</th>
<th>ADMIN.EWRRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Repository ID is the unique identifier for each repository in DataCite and can’t be changed. The Repository ID must start with the Member ID, followed by a dot. It can then contain only upper case letters, numbers, and at most one hyphen.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Repository</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salesforce ID</td>
<td>Type to search...</td>
</tr>
<tr>
<td>Repository</td>
<td>Periodical</td>
</tr>
<tr>
<td></td>
<td>IGSN ID Catalog</td>
</tr>
</tbody>
</table>
What Should I Consider When Implementing IGSN IDs?

Internal discussion points for implementing IGSN IDs may include

- Can our current system for DOI registration handle multiple Repository account credentials and prefixes?
- Should the department/service managing our DOI registration also control our IGSN ID Catalog Repository(ies)?
- What metadata sources are available to assist discovery and distinction of our samples?
- What information do domain experts need about the samples that must be displayed on landing pages?
- Is it possible to have common landing pages or do they need to be customized for different departments/disciplines?
- Should the department/service creating and hosting our DOI landing pages do the same for IGSN ID landing pages?
IGSN ID
Metadata
How Do I Complete IGSN ID Metadata?

- All IGSN IDs are registered with the `resourceTypeGeneral` DataCite Metadata Schema property set to `PhysicalObject`.

- IGSN IDs have specific metadata guidance developed by the IGSN–DataCite Crosswalk and Metadata Management Working Group.

- There are also some best practices for enriching IGSN ID metadata.

- DataCite is continuing to work with the IGSN e.V. to expand and refine metadata best practices for IGSN IDs over time.
What Sample Information is Needed for Mandatory Metadata Properties?

1 **Identifier**
- Automatically populated with a DOI upon the creation of an IGSN ID.

2 **Creator**
- Sample collector/creator, chief scientist, curator, or person who deposited the sample into a repository.

3 **Title**
- Appropriate elements that help find and distinguish a sample; for example,
  - Basic form of the object
  - Material(s) that compose to the sample
  - Local sample identifiers

4 **Publisher**
- The organization registering the IGSN ID for the sample.

5 **PublicationYear**
- The year the sample was first made available to the research community; likely when the sample is registered.

10 **ResourceType**
- Use of ‘material sample’ or ‘feature-of-interest’ is recommended to distinguish between these concepts.

10.a **resourceTypeGeneral**
- ‘PhysicalObject’
What Sample Information is Needed for Recommended Metadata Properties?

6 **Subject**
- Materials that compose the sample. May be categorized under different schemata.

7 **Contributor**
- Institutions and people contributing to the collection and management of the sample.

8 **Date**
- Events relevant to the sample.
- Use `dateType=Collected` for the collection time of the sample.

11 **alternateIdentifier**
- Other identifiers for the sample; for example, local sample identifiers.

12 **relatedIdentifier**
- New IGSN IDs created in DataCite services are `relatedIdentifierType=DOI`, thus are displayed in DataCite APIs and DataCite Commons, and represented in the PID Graph.

17 **Description**
- Use `descriptionType=Abstract` to add information about the sample at its ‘birth’.
- Use `descriptionType=Methods` to outline the sample collection process.

18 **GeoLocation**
- Location where the sample was collected, noting that samples can be ‘non-geographic’
# How Do I Link Samples to Other Objects?

**relatedIdentifier metadata** is used to create links

<table>
<thead>
<tr>
<th>relatedIdentifierType</th>
<th>relationType</th>
<th>resourceTypeGeneral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent &amp; child samples identified by IGSN IDs</td>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
</tr>
<tr>
<td>Citations in resources identified by PIDs</td>
<td><img src="image3.png" alt="Diagram" /></td>
<td><img src="image4.png" alt="Diagram" /></td>
</tr>
<tr>
<td>Domain and institution-specific metadata on the Web</td>
<td><img src="image5.png" alt="Diagram" /></td>
<td><img src="image6.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>
How Do I Link Samples to Contributors?

`nameIdentifier` metadata is used to create links to people, and `affiliationIdentifier/fundingReference` to organizations.
Available Resources
Important Resources

DataCite General
- Support Site: https://support.datacite.org
- Getting Started: https://support.datacite.org/docs/getting-started
- Fabrica Guide: https://support.datacite.org/docs/doi-fabrica
- Testing Guide: https://support.datacite.org/docs/testing-guide
- REST API Guide: https://support.datacite.org/docs/api
- Metadata Schema: https://schema.datacite.org/

IGSN ID Specific
- Support Pages:
  https://support.datacite.org/docs/about-igsn-ids-for-material-samples
- IGSN e.V. Website: https://www.igsn.org/