cdbb
Centre for Digital Built Britain

National Annex

Guidance

UNIVERSITY OF CAMBRIDGE

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Executive summary

A National Annex (NA) is intended to be appended to an international standard to provide localised recommendations, guidance or statements. This NA guidance document specifically relates to content that could be used to form a National Annex to ISO 19650–2. It aims to provide localised informative clauses to support the normative requirements within the main text of the standard.

This National Annex (NA) guidance document has been developed to provide suggested content that could be included, including working examples from the United Kingdom's NA, to provide context for each section.

There is no strict structure to an NA. However, NAs should not:

- Contain additional requirements; or
- Modify or supplement existing requirements within the main text.

This National Annex (NA) guidance document covers examples of how the unique identification of information containers could be structured, with consideration of how this identification convention will be used to determine what information is within a container, as well as example values that could be assigned to the specified classification, status and revision metadata, to be assigned to information containers.

A National Annex (NA), when completed, should be appended to the main text and exchanged as a single national standard that forms part of the technical framework that will provide the foundation for a given country or region's building information modelling (BIM) implementation programme.

For further information, please refer to BIM toolkit guidance document.

1 Information container identification

To correctly identify pertinent information effectively, it must be easily recognisable by its identifier.

This is achieved through implementation of a codified unique identification.

The British National Annex has been used as an example to help provide clarity throughout this section.

Information containers are the foundation of collaborative information management, providing the means to exchange information collaboratively.

{Country name} acknowledges that to aid effective information management, a standard naming convention/information identification convention is required. The ISO 19650 series recommended principles are to be adopted:

1) Each information container should have a unique identifier, based upon an agreed information identification convention, which comprises a string of data fields.
2) Each information identification field is to be assigned a value from an agreed and documented codification standard.

1.1 Information container identification convention

Define the region/country's standardisation of information containers identification (naming convention). Each identifier should be unique; there should never be more than one information container with the same identification.

Specify the data fields required, the order they should appear in and codification for each field.

In **{country name}** the unique identification for information containers should be defined by the following fields. This will enable a national convention to be adopted for all future public projects adopting building information modelling (BIM).

<The National Annex (NA) template, Table 1.1, could be populated to demonstrate the national convention. It enables the input of specific data fields that define region/country requirements. The number of fields can be shortened or expanded as required.

The example below demonstrates the United Kingdom's National Annex, illustrating how the United Kingdom implemented the ISO 19650 standard series principles for the identification of information containers.

When devising the national identification convention, it is important to consider data fields that would provide benefit to the current and future national information management procedures. Typically, such conventions either utilise a:

- Fixed field system, where fields have a fixed length and are denoted using their position within a string; or
- Delimited field system, where fields have a variable length and are denoted using a dedicated character to act as a field delimiter. An example of a common character used as a delimiter is the hyphen (-).>

The unique identifier for information containers should be defined using the following fields in the stated order, with each field separated by a delimiter.

Table 1.1: Information container identification convention

	Field 1	Field 2	Field 3	Field 4	Field 5	Field 6	Field 7
Field name	Project	Originator	Volume/ system	Level	Type	Discipline	Number

In **{country name}**, the following delimitation should be used:

Hyphen-minus Unicode reference U+002D

An example of a delimiter in unison with the file document convention is illustrated below:

Project – Originator – Volume /system – Level – Type – Discipline – Number

1.2 Field codification

Provide further clarification on what each data field refers to, defining each field's specific function.

Each subsection expands, providing suggested codification of each field.

Standardising the data fields of the information containers supports a common national approach to identifying information, which can be developed for specific projects.

The **{country name}**'s field codification should be as follows:

<It is intended for Table 1.2 to provide an overview of the permitted values for each field. The suggested subsections below are to expand on each field's purpose, providing further details of the content required and to specify the national codification. Field values can be alphanumeric, numeric or alphabetical, but they should be defined for each field, including the recommended number of characters.

The agreed information container identification convention, including the agreed codified values for each field, should be confirmed for each project within the project's information standards, for use by all members of the delivery team.

The example below demonstrates the United Kingdom's National Annex (NA) adopted approach to field codification.>

Each data field should be applied in the order presented.

Table 1.2: Field definitions

Chronological order	Field	Definition	Number of characters
1	Project	A unique project reference number/code	2–6
2	Originator	Originator code, specific to the information author's organisation	2–6
3	Volume/system	Identifies the specific spatial subdivision of the project	2
4	Level/location	The level that the information container refers to	2
5	Type	Information container type	2
6	Role	The discipline of the information author	1–2
7	Number	Information container number	4–6
<Add or remove rows as required>			

In **{country name}** the codification for each field should be developed from the following codifications.

1.2.1 Field 1 – Project

A single unique identifier should be defined to identify the project. This code should be used by the entire delivery team. It is recommended that the code for this field be between two and six characters in length. Typically, this is assigned by the appointing party.

Note: A project can be divided into sub-projects.

1.2.2 Field 2 – Originator

A unique identifier should be defined for each organisation within the project team to identify the organisation responsible for producing the information within the container. It is recommended that the code for this field be between three and six characters in length.

1.2.3 Field 3 – Volume/system

A unique identifier should be defined for each breakdown (project subdivision). These codes should align with the lead appointed party's proposed information container breakdown convention. It is recommended that the code for this field be two characters in length.

The following recommended codes should be used. This schedule should be expanded with project-specific codes.

- ZZ – refers to all volumes or systems; or
- XX – refers to no volumes or systems.

1.2.4 Field 4 – Level

A unique identifier should be defined for each level/location. It is recommended that the code for this field be two characters in length.

The following recommended codes should be used. This schedule should be expanded with project-specific codes.

Table 1.3: Level/location definition

Type code	Definition
ZZ	Refers to multiple locations
XX	Refers to no applicable location
00	Level 00 (ground floor/base storey)
01	Level 01 (first floor/first storey)
B1	Basement level
M1	Mezzanine level, above 01

1.2.5 Field 5 – Type of information container

A unique identifier should be defined for each form of information. It is recommended that the code for this field be two characters in length.

This schedule could be expanded with project-specific codes.

Table 1.4: Type of information container definitions

Type code	Definition
AF	Animation file of a model
BQ	Bill of quantities
CA	Calculations
CM	Combined model (combined multidiscipline model)
CO	Correspondence
CP	Cost plan
CR	Clash rendition
DB	Database
DR	Drawing rendition
FN	File note
HS	Health and safety
IE	Information exchange file
M2	2D model
M3	3D model
MI	Minutes/action notes
MR	Model rendition for other renditions, for example, thermal analysis/BIM uses
MS	Method statement
PP	Presentation
PR	Programme
RD	Room data sheet
RI	Request for information
RP	Report
SA	Schedule of accommodation
SH	Schedule
SN	Snagging list
SP	Specification
SU	Survey

Type code	Definition
VS	Visualisation

1.2.6 Field 6 – Discipline

A unique identifier should be defined for each discipline on the project. It is recommended that the code for this field be one character in length; the following recommended codes should be used.

This schedule could be expanded with project-specific codes.

Table 1.5: Discipline definitions

Discipline code	Definition
A	Architect
B	Building surveyor
C	Civil engineer
D	Drainage, highways engineer
E	Electrical engineer
F	Facilities manager
G	Geographical and land surveyor
H	Heating and ventilation designer
I	Interior designer
K	Client (appointing party)
L	Landscape architect
M	Mechanical engineer
P	Public health engineer
Q	Quantity surveyor
S	Structural engineer
T	Town and country planner
W	Contractor (lead appointed party or appointed party)
X	Subcontractor
Y	Specialist designer
Z	General (non-disciplinary)

1.2.7 Field 7 – Number

A number should be assigned to each information container as a distinguisher to produce a unique identifier in conjunction with the other fields. This number should be sequential for each information container of a series and not distinguished by any other of the fields.

It is recommended that this field be between four and six integer numeric digits in length.

1.3 Information container identification example

Below is an example of a completed information container identification/name.

Table 1.6: Information container identification example

	Field 1	Field 2	Field 3	Field 4	Field 5	Field 6	Field 7
Field name	Project	Originator	Breakdown	Location	Form	Discipline	Number
	123456	ORG	A1	ZZ	MO	A	0001

The same example as a single string of characters: 123456-ORG-A1-ZZ-MO-A-0001

2 Information container metadata

This section should specify the metadata to be assigned to all information containers, within the common data environment (CDE). Metadata defines certain data about the information container.

Metadata does not form part of the information identification, unless information containers are exported from the common data environment (CDE), in which case it could be added to the identification as a suffix.

The ISO 19650 series information management workflow, within a common data environment (CDE), leverages metadata to manage information throughout the project.

Metadata should be used to determine the status of an information container, within the information management workflow, to enable all project participants to understand its condition and intended usage.

{Country name} acknowledges that, in order to aid effective information management, the ISO 19650 standard series recommended metadata attributes are to be assigned to each information container:

1) Status (suitability);
2) Revision; and
3) Classification.

2.1 National Metadata

Provide the national translation of the minimum metadata requirements.

The subsections are to provide further details of each metadata field and the codification to be adopted.

Use the British National Annex as an example to help provide clarity.

The purpose is to provide a direct translation for the different ISO 19650 series metadata requirements to the local context, allowing the reader/user(s) to fully understand the metadata to be adopted.

The metadata values identified are the minimum requirements, which could be expanded to suit the project requirements.

<These metadata values can be directly adopted or redefined to suite the regional/country-specific requirements. Table 2.1.1 (below) includes the minimum metadata fields; however, you can expand the table as needed. It also provides you with the opportunity to redefine values to additional metadata if required. By doing so, a brief definition is also required to help with comprehension.>

Table 2.1: Metadata

ISO 19650 metadata terms	Definition	Adopted new terms by region/country	Definition
ISO 19650 minimum requirements			
Status (suitability)	Provides current position of progression within a process	<Insert adopted new term>	<Insert brief description of the term purpose>
Revision	Creation of modification that provides a historical audit trail	<Insert adopted new term>	<Insert brief description of the term purpose>
Classification	Organising a set of data or information about items/objects to make them easier to understand	<Insert adopted new term>	<Insert brief description of the term purpose>
Additional metadata			
<Add or remove row as required>			

It is best practice for information containers to remain within the common data environment (CDE); however, if an information container is removed from a common data environment it should have its metadata preserved. If the metadata cannot be preserved, it should be added to its information container identification as a suffix.

2.1.1 Status code and revision metadata

<The example below demonstrates the United Kingdom's National Annex (NA) and the adopted approach to status and revision metadata in a table format. This method can be directly adopted or adapted to suit the country/region requirements.

In

Table 2.2: Status codes and revision metadata the column ‘status code’, enter a code that will identify the status of an item. Provide a description of its function in the ‘description’ column. In the final column, ‘revision’, enter the revision code to inform users of its purpose. This identifier shall also inform the user, using a defined prefix, if it is a preliminary or contractual version.>

It is recommended that status codes have two characters. The status will dictate the revision prefix codes and numbering convention as outlined below.

Table 2.2: Status codes and revision metadata

Status code	Description	Revision
Work in progress (WIP)		
S0	Work in progress	Preliminary and version
Shared (non-contractual)		
S1	Suitable for coordination	Preliminary
S2	Suitable for information	Preliminary
S3	Suitable for review and comment	Preliminary
S4	Suitable for review and authorisation	Preliminary
S5	Suitable for review and acceptable	Preliminary
Published documentation *(contractual/completed)*		
A1, A*n*, etc.	Authorised or accepted	Contractual
B1, B*n*, etc.	Partial sign-off with comments	Preliminary
For asset information model (AIM) acceptance		
CR	As constructed record document	Contractual revision

Note: ‘*n’* refers to the project information delivery milestone.

Information container revision codes should be two integers, prefixed with the letter for the corresponding revision types, as below:

P = Preliminary (non-contractual information containers); and

C = Contractual information containers.

For example, preliminary revisions will follow the format P01, P02, and so on, and contractual revisions will follow the format C01, C02, for example.

Information containers considered a work in progress should also have a two-integer suffix to identify the version, delimited with a full stop, for example, P01.01.

2.1.2 Information classification

<The classification of information adopted should be in accordance with the region, language or country-specific usage. Each individual country shall adopt a recognisable classification system.

Provide a reference to the national information classification that should be adopted. Uniclass and OmniClass are two such systems that could be adopted or substituted to suit the information management process.

Below are URL links to the built environment classification systems that provide a better understanding of the types of classification that can be used.>

Classification of information provides a method to identify and manage the large quantities of information that are typically involved in a project. For that purpose, **{country name}** adopted the following classification:

- Omniclass classification system:

  https://www.csiresources.org/standards/omniclass

- Uniclass 2015

  https://www.thenbs.com/our-tools/uniclass-2015>