Arts and Humanities Research Council

Linked Conservation Data

Sharing Conservation Vocabularies

Kristen St John
Athanasios Velios

NKOS 2020
9 September 2020

Stanford | LIBRARIES

ual: university of the arts london | LIGATUS

Heritage (not biodiversity)
Documentation a critical task

Church of Sucevița Monastery-, burial chamber. Removal of adherent surface deposits by physical chemical means (by cotton swab). September 2006, Romania , Suceava, CERECS ART S.R.L., CC-BY-SA

Linked Conservation Data

https://www.ligatus.org.uk/lcd/

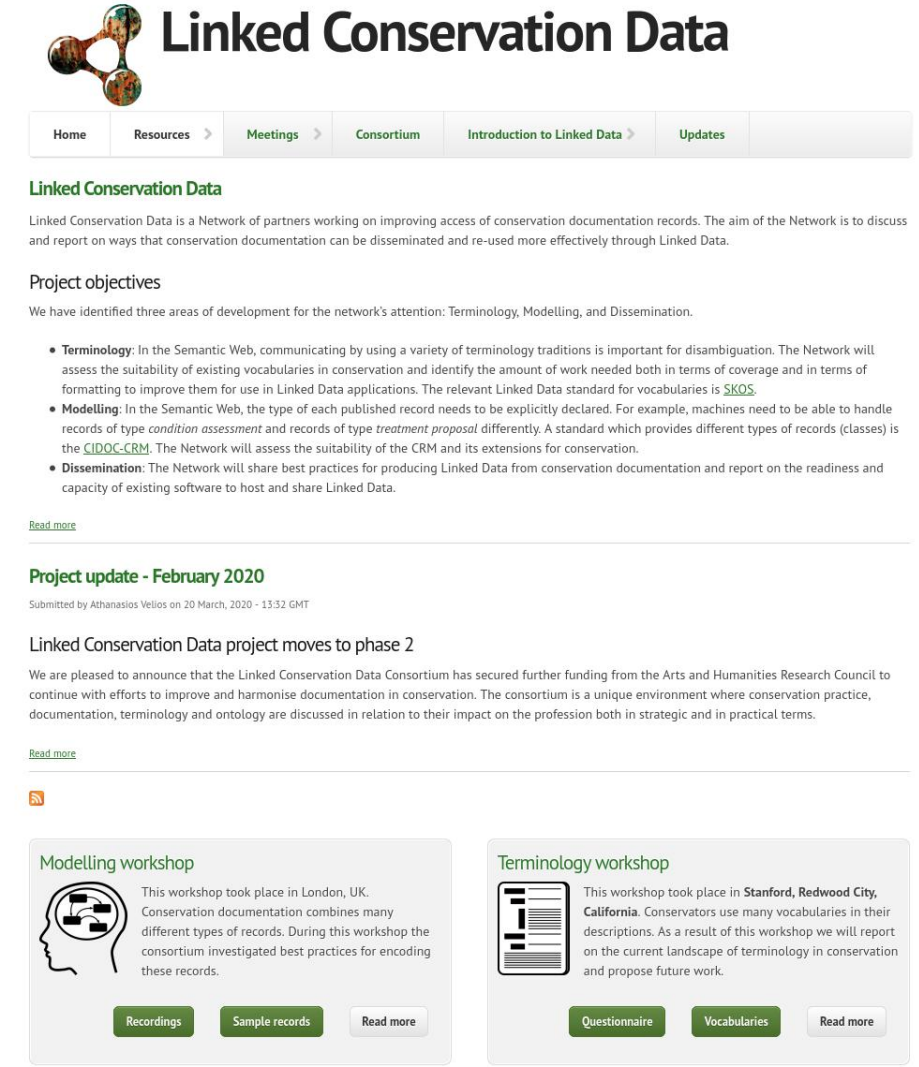
Overall aim:

- Make conservation documentation widely accessible

Three project strands:

- Outreach and Education
- Terminology
- Modelling

Use Linked Open Data!



Linked Conservation Data - Thesaurus and Glossary Usage Questionnaire

Email address *

Valid email address

This form is collecting email addresses. Change settings

Name *

Short-answer text

Organization

Short-answer text

What is your current professional role? *

- [ ] Conservator
- [ ] Conservation Scientist
- [ ] Thesaurus editor
- [ ] Data manager
- [ ] Other...

What types of documentation do you generate? (check all that apply) *

- [ ] Conservation Treatment Documentation

Thesaurus questionnaire (Responses)

File Edit View Insert Format Data Tools Form Add-ons Help

Share

Timestamp

	E	F	G	H	I	J	K	L	M
1	What is your current profe	What types of documenta	Is your	How do you choose your terminology? (check	General	Architecture/Building Site	Book, Paper, and Photogr	Paintings, Objects, and T	What is your current professional
2	Conservator	Conservation Treatment [	No	Published thesarus - if yes, please proceed t	CAMEO: Conservation & Art Materials	Encyclopedia Online. Mu	Graphics Atlas. Image Permanence Institute		
3	Conservator	Conservation Treatment [	Unsure	Published thesarus - if yes, please proceed to	the following questions to indicate which ones.				
4	Assistant professor and r	Scientific Data Collection	Yes	Published thesarus - if yes, please proceed t	Heritage Conservation Terminology	Definition of terms from various sources			
5	Conservator	Conservation Treatment [	No	No controlled vocabulary, choices guided by	experience and knowledge				
6	Conservator	Conservation Treatment [	No	No controlled vocabulary, choices guided by	experience and knowledge				
7	Conservator, Lecturer	Conservation Treatment [	Yes	No controlled vocabulary, choices guided by	Art & Architecture Thesaurus. Getty F	Illustrated glossary on sto	Glossary of Terms: Amer	Condition Reporting – Paintings. Part III: Glossary.	Canadia
8	Conservator	Conservation Treatment [	Yes	Published thesarus - if yes, please proceed t	Art & Architecture Thesaurus. Getty	Research Institute			
9	Conservator	Conservation Treatment [	No	Published thesarus - if yes, please proceed t	CAMEO: Conservation & Art Material	EwaGlos – European Illustrated Glossary for Conse		Condition Reporting – Paintings. Part III: Glossary.	Canadia
10	Conservator	Conservation Treatment [	No	No controlled vocabulary, choices guided by	experience and knowledge				
11	Conservator	Conservation Treatment [	No	Published thesarus - if yes, please proceed t	Art & Architecture Thesaurus. Getty	Research Institute, Wikidata, DIN EN ISO 472, DIN EN 1735:2017-07			
12	Conservator	Conservation Treatment [	No	Published thesarus - if yes, please proceed t	CAMEO: Conservation & Art Materials	Encyclopedia Online. Mu	Glossary of Terms: American Institute for Conservation, Book and Paper Group		
13	Conservation PhD Studer	Scientific Data Collection	Yes	In house glossary or thesaurus					
14	Conservator	Conservation Treatment [	Yes	In house glossary or thesaurus, No controlled	vocabulary, choices guided by	experience and knowledge	Bookbinding and the Conservation of Books: A Dictionary of Descriptive Terminology.		
15	Conservator	Conservation Treatment [	Yes	In house glossary or thesaurus	CAMEO: Conservation & Art Materials	Encyclopedia Online. Museum of Fine Arts Boston., European or British Standards such as: EN 15898, EN 16			
16	Conservation Student	Conservation Treatment [	Yes	Published thesarus - if yes, please proceed t	CAMEO: Conservation & Art Materials	Encyclopedia Online. Mu	Bookbinding and the Conservation of Books: A Dictionary of Descriptive Terminology.		
17	Conservator	Conservation Treatment [	Yes	Published thesarus - if yes, please proceed t	Art & Architecture Thesaurus. Getty	Research Institute	Binding Terms. Rare Books and Manuscripts Section: Controlled Vocabularies, Glossa		
18	Conservator	Conservation Treatment [	Yes	Published thesarus - if yes, please proceed t	Visual Glossary. Australian Institute for the Conservation of Cul		Bookbinding and the Conservation of Books: A Dictionary of Descriptive Terminology.		
19	Conservator	Conservation administrati	No	No controlled vocabulary, choices guided by	experience and knowledge				
20	Conservator, Thesaurus e	Conservation Treatment [	Unsure	Published thesarus - if yes, please proceed t	European or British Standards such a	EwaGlos – European Illustrated Glossary for Conservation Terms of Wall Painting and Architectonic Surfaces			
21	Conservator	Conservation Treatment [	Yes	Published thesarus - if yes, please proceed t	CAMEO: Conservation & Art Materials	Encyclopedia Online. Mu	Glossary of Terms: American Institute for Conservation, Book and Paper Group, Lang		
22	Conservator	Conservation Treatment [	Yes	Published thesarus - if yes, please proceed t	Art & Architecture Thesaurus. Getty	Research Institute, CAME	Binding Terms. Rare Books and Manuscripts Section: Controlled Vocabularies, Bookb		
23	Conservator	Conservation Treatment [	No	Published thesarus - if yes, please proceed t	European or British Standards such as: EN 15898, EN 16095, e		Glossary of Terms: American Institute for Conservation, Book and Paper Group, Grap		
24	Conservator	Conservation Treatment [	No	Published thesarus - if yes, please proceed t	Art & Architecture Thesaurus. Getty	Research Institute, CAME	Binding Terms. Rare Books and Manuscripts Section: Controlled Vocabularies, Graphi		
25	Faculty / content and met	not applicable in current r	Unsure	In house glossary or thesaurus, No controlled	Art & Architecture Thesaurus. Getty F	Glossary of Architectural	Terms. Trust for Architectural Easements		
26	Conservator	Conservation Treatment [	No	No controlled vocabulary, choices guided by	CAMEO: Conservation & Art Materials	Encyclopedia Online. Mu	Glossary of Terms: American Institute for Conservation, Book and Paper Group, Lang		
27	Conservation Scientist	Scientific Data Collection	Some ir	No controlled vocabulary, choices guided by	CAMEO: Conservation & Art Materials	Encyclopedia Online. Museum of Fine Arts Bostor	I cannot name specific sources, but my textile conservatior		
28	Conservator	Conservation Treatment [	partly	No controlled vocabulary, choices guided by	experience and knowledge				
29	Software Product Manage	not applicable in current r	Our con	Published thesarus - if yes, please proceed t	Art & Architecture Thesaurus. Getty	Research Institute			
30	Conservation Scientist	Scientific Data Collection	Yes	Published thesarus - if yes, please proceed t	Art & Architecture Thesaurus. Getty	Research Institute, CAMEO: Conservation & Art Mat	Object Names Thesaurus. British Museum		
31	Conservator	Conservation Treatment [	Yes	No controlled vocabulary, choices guided by	experience and knowledge		Bookbinding and the Conservation of Books: A Dictionary of Descriptive Terminology.		
32	Conservator	Conservation Treatment [	No	Published thesarus - if yes, please proceed t	CAMEO: Conservation & Art Materials	Encyclopedia Online. Museum of Fine Arts Bostor	Getty Union List of Artist's Names		
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Form Responses 1

Explore

Conservation controlled vocabularies

A library, media, and archival preservation glossary

DEPEW, J. N., & JONES, C. L. (1992). A library, media, and archival preservation glossary. Alphabetical list of terms.
In category: paper, books

Open library link | Worldcat permalink

ABC of bookbinding

GREENFIELD, J. (2002). ABC of bookbinding. New Castle, Del, Oak Knoll.
In category: books

Worldcat permalink

AIC BPG Glossary of Terms

Glossary of the paper conservation group of the American Institute for Conservation
In category: books, paper

Online glossary

AIC Lexicon Terms

In category: general

Online resource

Art & Architecture Thesaurus (AAT)

The AAT is a thesaurus containing generic terms, dates, relationships, sources, and notes for work types, roles, materials, styles, cultures, techniques, and other concepts related to art, architecture, and other cultural heritage (e.g., amphora, oil paint, olieverf, acetolysis, sintering, orthographic drawings, Olmeca, Rinascimento, Buddhism, watercolors, asa-no-ha-toji, sralais).
In category: general

SPARQL endpoint | Online resource

Binding Terms. Rare Books and Manuscripts Section: Controlled Vocabularies

Terminology workshop (pre COVID-19!)

Workshop outcomes

- Wide range of vocabularies: from LOD SKOS thesauri to unsorted wordlists without IDs
- Good coverage: materials, object components
- Poor coverage: conditions, treatment techniques
- Getty Arts & Architecture Thesaurus
  - hub for aligning vocabularies
  - best candidate to expand for coverage
- Backbone Thesaurus
  - hub for CIDOC-CRM modelling

Language of Bindings

Alphabetical | Hierarchy | Search | Download | Help | Log in

textblocks

Preferred label:
textblocks
tekstblokk

-
- Norsk bokmål

RDF/XML
JSON
JSON LD
TURTLE

The word textblock is used to describe all the leaves in a book on which the text is written or printed. Where there is more than one text in a single binding, as in the case of composite volumes or Sammelbände, all the different texts are included in a single textblock. A textblock does not include endleaves or other leaves added by a binder, such as inserted text separators or interleaving, even though these may now carry additional written material. Endleaves and all other leaves added by the binder are, however, included in a bookblock. In certain exceptional circumstances, such as dos-à-dos bindings, a single binding may contain two or more bookblocks, each of which can in theory be a composite volume. Stationery bindings will often be made with a textblock which consists of blank gatherings yet to be written in, in which the outermost leaf of the outermost gathering at each end will be used as endleaves in the form of pastedowns (i.e. integral endleaves), and in these cases the textblock and the bookblock are the same thing. If the outermost gatherings of such a book are made in a different format from the rest of the gatherings (e.g. four leaves as opposed to eight leaves, or outside hooks instead of bifolia), or made from a different, possibly coloured, paper, these can be described as endleaves, and the other leaves as the textblock, together making the bookblock.

Hierarchy:

[+] bookblock components
[-] textblocks [-]
composite textblocks
opened textblocks
unopened textblocks

Active editorial board
Available as LOD
Limited translations

acélmetszés	Stahlstich	steel(-plate) engraving	gravure sur acier	incisione in acciaio
acélmetszet	Stahlstich	steel(-plate) engraving	gravure sur acier	incisione in acciaio
achátkő	Achatstein	agate burnisher bloodstone	brunissoir d'agate	pietra agata
acquaforte l. rézmetszet	-	-	-	-
akvarell	Aquarell Gouache Wasserfarben	aquarelle gouache painting water colour	aquarelle couleur à l'eau gouache	acquerello colore a guazzo guazzo
álbordák	falsche Bünde	false bands	faux nerfs	falsa nervatura nervi falsi nervi finti
álcázott festett metszés	verschobener Schnitt	concealed for-edge painting	-	taglio mascherato
állag	Konsistenz	consistency	consistence	consistenza sostanza
állítható kőrző l. mérőkörző	-	-	-	-
álló prés	Stockpresse	standing press	presse à percussion (de reliure)	pressa a percussione
állomány (könyvtári)	Bestand Buchbestand Büchersammlung	book collection bookstock holding stock	fond (de livres) stock	collezione fondo di libri materiale librario
állományvédelem	Bestandserhaltung	preservation	préservation	preservazione
ammónia	Ammoniak	anhydrous-ammonion	ammoniac	ammoniaca
ammónium-hidroxid	Ammoniakhydrat Ammoniumhydroxid Salmiakgeist	ammonia hydrate ammonium hydroxide	hydroxyde d'ammonium	hidrossido di ammoniaca hidrossido di salmiaco
ammónium-karbonát	Hirschhornsalz	carbonate of ammonia hartshornsalt	carbonate d'ammonium sel de corne de cerf	carbonato d'ammonio
anilinfesték, -szinezék	Anilinfarbe	aniline-colour coal-tar dyestuff	couleur d'aniline	colore di anilina

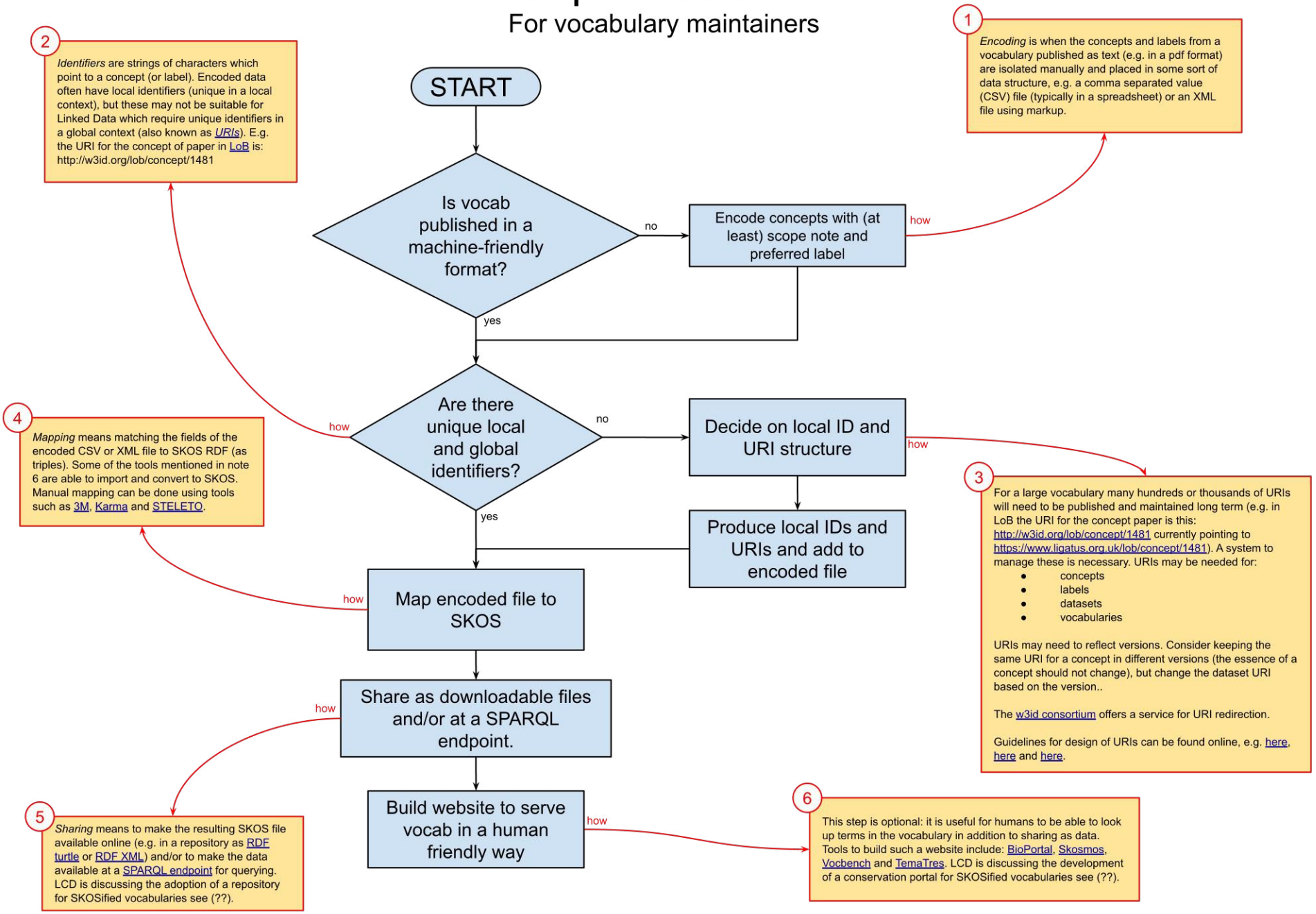
Dictionary of Book and Paper Conservation: BEÖTHYNÉ KOZOCSA, & ALBRECHTNÉ KUNSZERI. (1997) scanned PDF file – multilingual labels

Alignment

- Encoding vocabularies
  - to make them machine readable

How to publish as SKOS

For vocabulary maintainers



1

Encoding is when the concepts and labels from a vocabulary published as text (e.g. in a pdf format) are isolated manually and placed in some sort of data structure, e.g. a comma separated value (CSV) file (typically in a spreadsheet) or an XML file using markup.

2

Identifiers are strings of characters which point to a concept (or label). Encoded data often have local identifiers (unique in a local context), but these may not be suitable for Linked Data which require unique identifiers in a global context (also known as *URIs*). E.g. the URI for the concept of paper in LoB is: http://w3id.org/lob/concept/1481

3

For a large vocabulary many hundreds or thousands of URIs will need to be published and maintained long term (e.g. in LoB the URI for the concept paper is this: http://w3id.org/lob/concept/1481 currently pointing to https://www.ligatus.org.uk/lob/concept/1481). A system to manage these is necessary. URIs may be needed for:

- concepts
- labels
- datasets
- vocabularies

URIs may need to reflect versions. Consider keeping the same URI for a concept in different versions (the essence of a concept should not change), but change the dataset URI based on the version..

The w3id consortium offers a service for URI redirection.

Guidelines for design of URIs can be found online, e.g. here, here and here.

4

Mapping means matching the fields of the encoded CSV or XML file to SKOS RDF (as triples). Some of the tools mentioned in note 6 are able to import and convert to SKOS. Manual mapping can be done using tools such as 3M, Karma and STELETO.

5

Sharing means to make the resulting SKOS file available online (e.g. in a repository as RDF turtle or RDF XML) and/or to make the data available at a SPARQL endpoint for querying. LCD is discussing the adoption of a repository for SKOSified vocabularies see (??).

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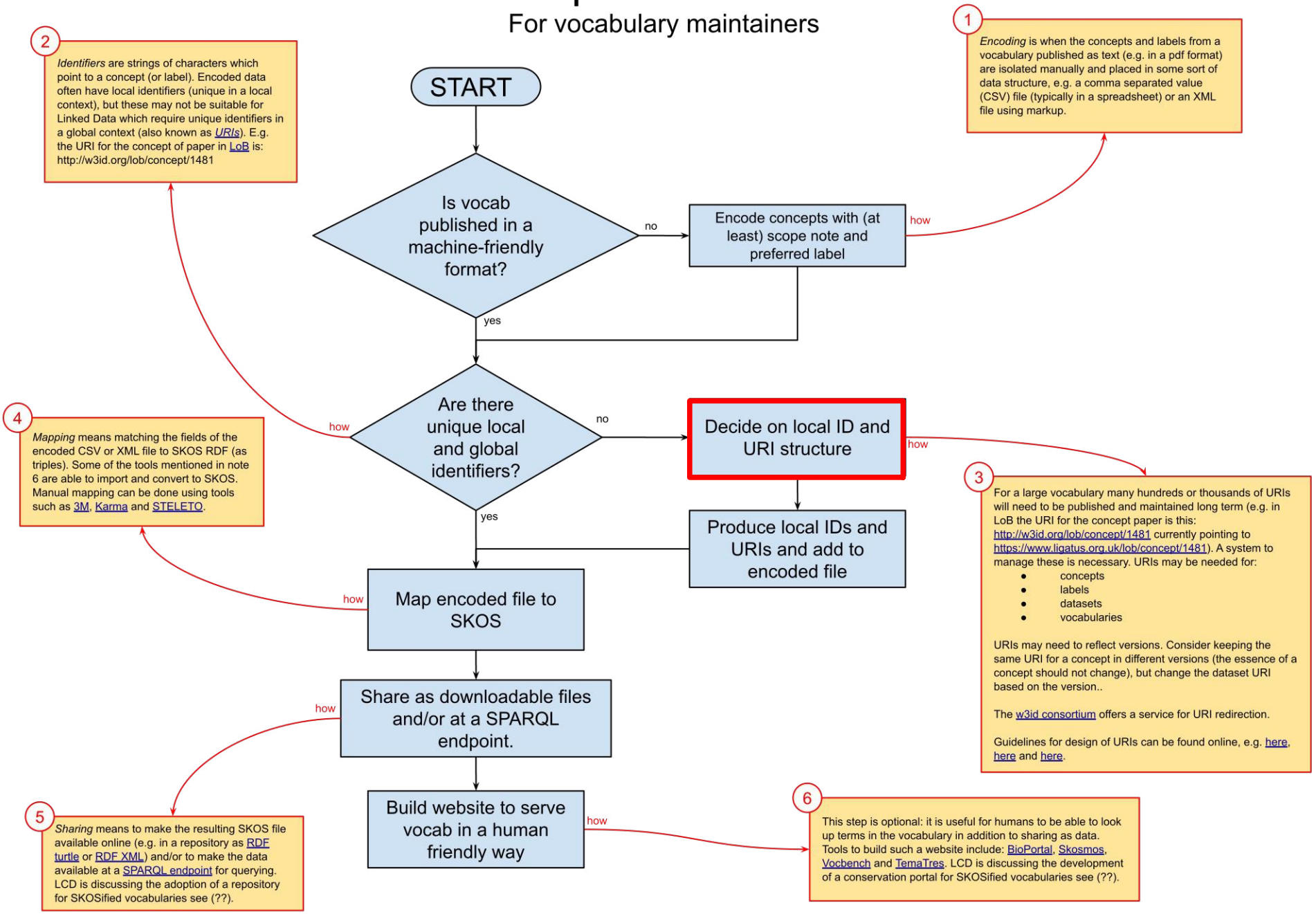

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Permanent Identifiers for the Web

Secure, permanent URLs for your Web application that will stand the test of time.

The purpose of this website is to provide a secure, permanent URL re-direction service for Web applications. This service is run by the W3C Permanent Identifier Community Group.

Web applications that deal with Linked Data often need to specify and use URLs that are very stable. They utilize services such as this one to ensure that applications using their URLs will always be re-directed to a working website. This website operates like a switchboard, connecting requests for information with the true location of the information on the Web. The switchboard can be reconfigured to point to a new location if the old location stops working.

There are a growing group of organizations that have pledged responsibility to ensure the operation of this website. These organizations are: Digital Bazaar, 3 Round Stones, OpenLink Software, Applied Testing and Technology, Openspring, and Bosatsu Consulting. They are responsible for all administrative tasks associated with operating the service. The social contract between these organizations gives each of them full access to all information required to maintain and operate the website. The agreement is setup such that a number of these companies could fail, lose interest, or become unavailable for long periods of time without negatively affecting the operation of the site.

This website operates in HTTPS-only mode to ensure end-to-end security. This means that it may be used for Linked Data applications that require high levels of security such as those found in the financial, medical, and public infrastructure sectors.

All identifiers associated with this website are intended to be around for as long as the Web is around. This means decades, if not centuries. If the final destination for popular identifiers used by this service fail in such a way as to be a major inconvenience or danger to the Web, the community will mirror the information for the popular identifier and setup a working redirect to restore service to the rest of the Web.

If you would like to add or update a permanent identifier to the website, the preferred procedure is to perform the following steps:

1. Fork the website on Github.
2. Add or update a new redirect entry and commit your changes.
3. Submit a pull request for your changes.

Please help out the maintainers of the service with the following:

- Add contact info in a README or .htaccess comment

perma-id / w3id.org

master 4 branches 0 tags Go to file Add file Code

davidlehn Merge pull request #1824 from huanyu-li/master ··· 30e36c8 16 hours ago **4,470** commits

.assets	move to bootstrap 3 and minor cleanup	5 years ago
.utils	Added README explaining how the git web hook PHP file works.	7 years ago
0x1	Update to Juchunko	2 years ago
360-sfs	Update .htaccess	3 years ago
3rs	Added link to US EPA Linked Data Services blog post.	3 years ago
AEOLUSsmartApi	Changed parent folder name	16 months ago
ARK	adding general rules for the ARK project	2 months ago
AcademIS	AcademIS ontology	2 years ago
AmIFAIR	repo on GitHub was renamed. Updating the redirect	15 months ago
BCI-ontology	BCI-O: add turtle resource	3 years ago
BESDUI	Added entry for BESDUI	4 years ago
CBGP_SEEK	reconfigured to accept the w3id namespace on the URL	6 months ago
CONSIDER	Create .htaccess	7 months ago
DEMETER_ontologies	Update README.md	4 months ago
DockerPedia	added DockerPedia README file	2 years ago
EVENTSKG-Dataset	Rename EVENTSK-Dataset/README.md to EVENTSKG-Dataset…	15 months ago

About

Website source code for w3id.org

Readme

Releases

No releases published

Contributors 377

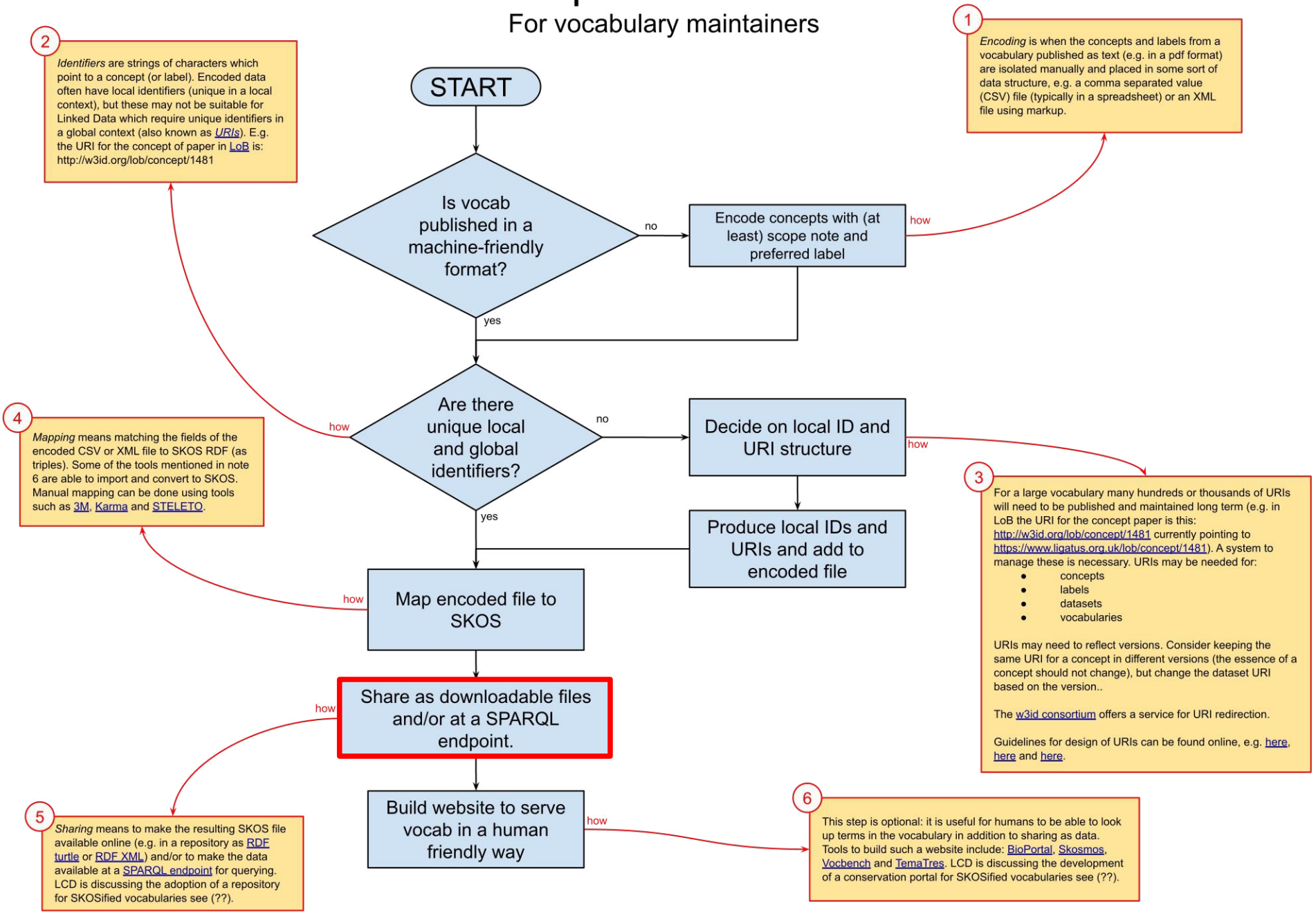
+ 366 contributors

Languages

HTML 86.8% PHP 13.2%

How to publish as SKOS

For vocabulary maintainers



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linked-conservation-data / **conservation-vocabularies**

Unwatch 1 | Star 0 | Fork 0

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

master | 1 branch | 0 tags | Go to file | Add file | Code

natuk Added Stanford early pilot vocabulary 7a3b93a 21 hours ago 4 commits

align	Added Stanford early pilot vocabulary	21 hours ago
vocabs	Added Stanford early pilot vocabulary	21 hours ago
.gitignore	Added Bodleian early pilot vocabulary	yesterday
README.md	Updated README file	yesterday

README.md

Linked Conservation Data

https://www.ligatus.org.uk/lcd

Conservation vocabularies repository

This repository hosts raw data representing conservation vocabularies: both published thesauri as well as local wordlists and vocabularies used in institutions or studios. The repository also hosts alignment data between different vocabularies. Best practices for the use of the repository are still being agreed. Current discussions are captured in the Terminology Guidelines document.

About

Datasets of contributed conservation vocabularies alongside vocabulary alignment data.

Readme

Releases

No releases published
Create a new release

Packages

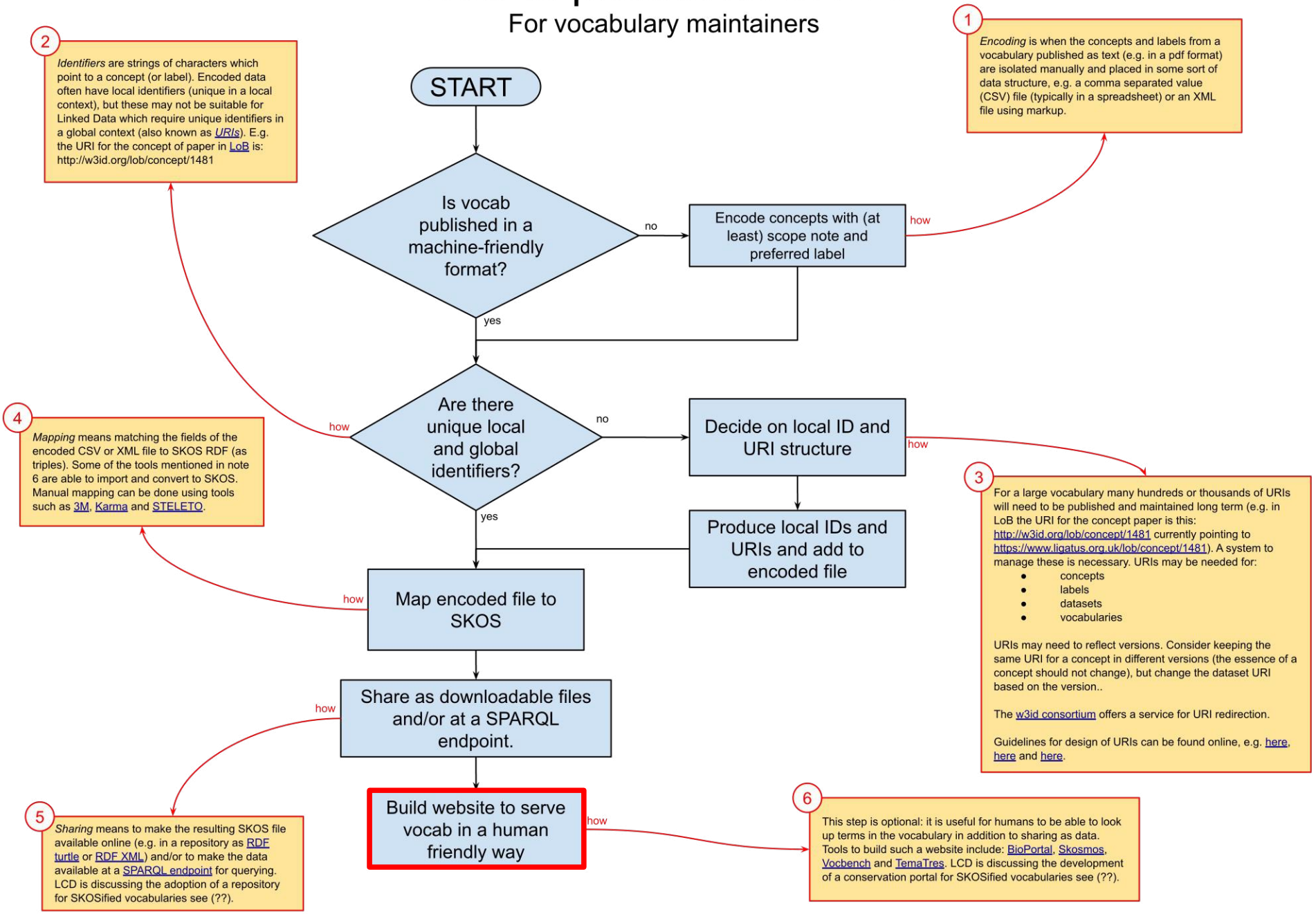
No packages published
Publish your first package

LCD repository

- Raw data, one file per vocabulary release
- Short term: engage community to enable conservators to publish
- Long term: fork and pull requests require minimum time from maintainers

How to publish as SKOS

For vocabulary maintainers



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LCD terminology portal

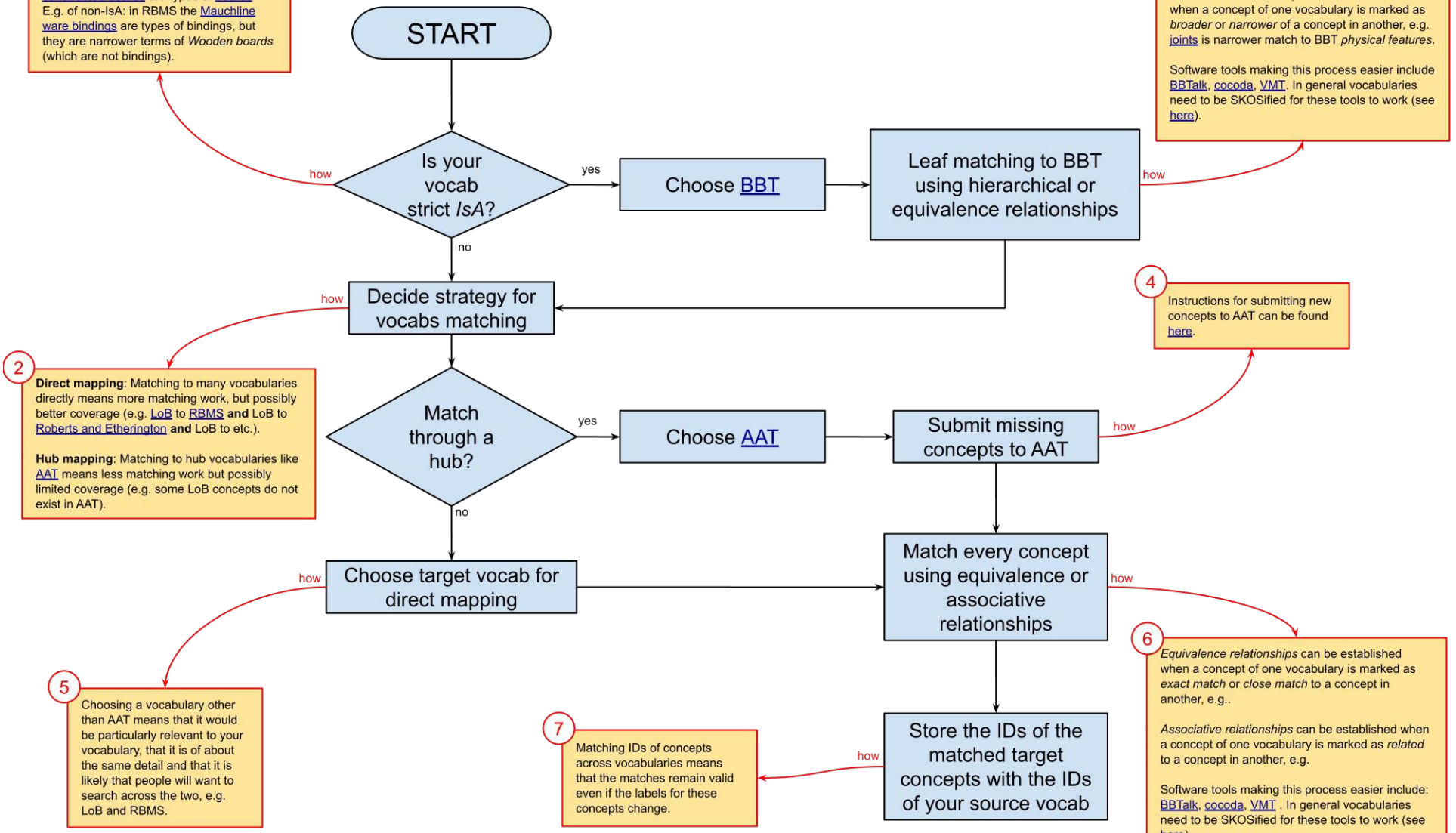
- Terminology querying
- Short term: working with the ResearchSpace project to provide interface
- Long term: ?

Alignment

- Encoding vocabularies
  - to make them machine readable
- Matching terms
  - strategies and methods for alignment

How to match concepts between vocabularies

For vocabulary maintainers



1

Vocabularies are *hierarchical* when their concepts are linked with broader/narrower relationships (e.g. paper has broader term fibre materials).

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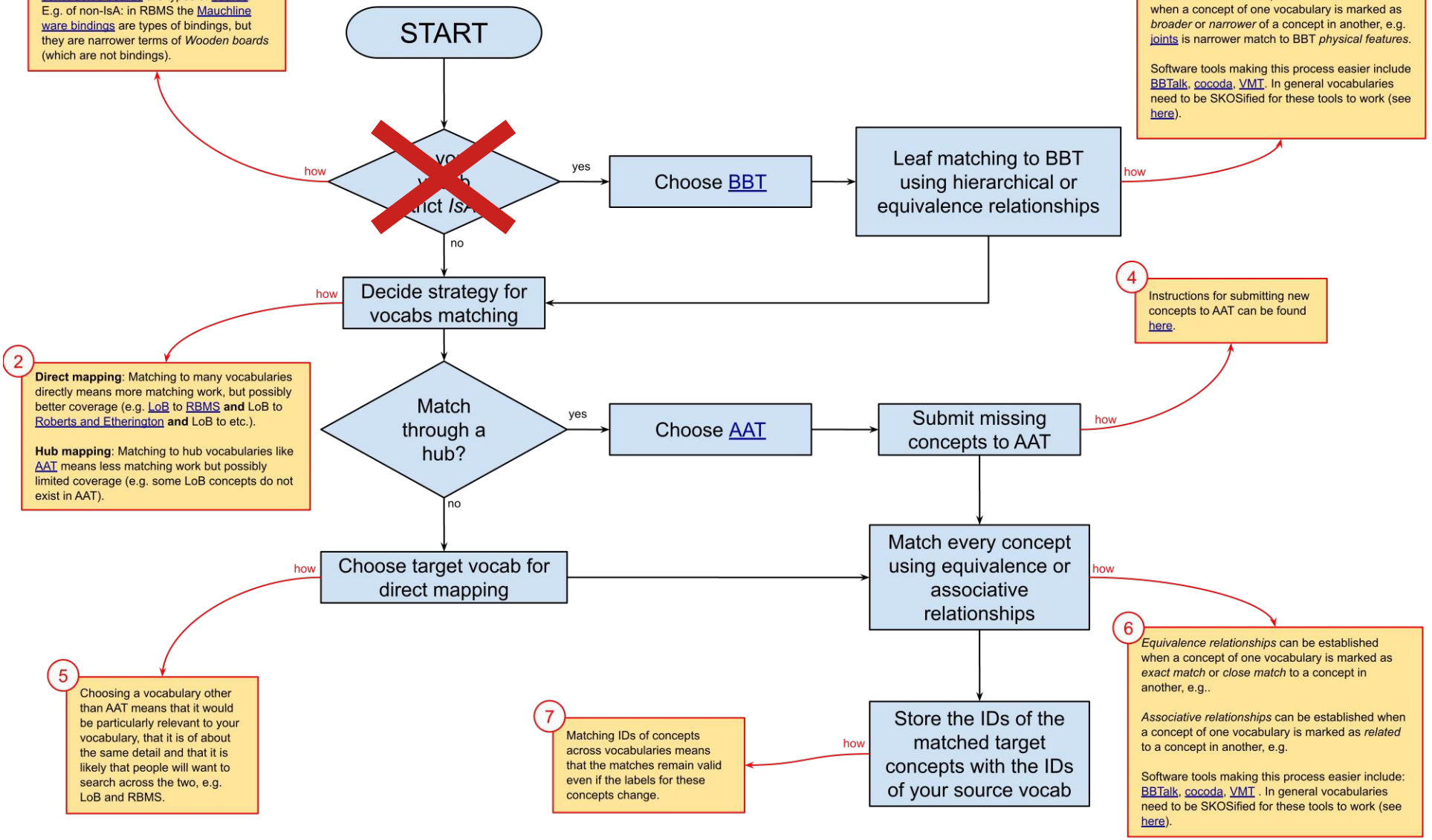
How to match concepts between vocabularies

For vocabulary maintainers



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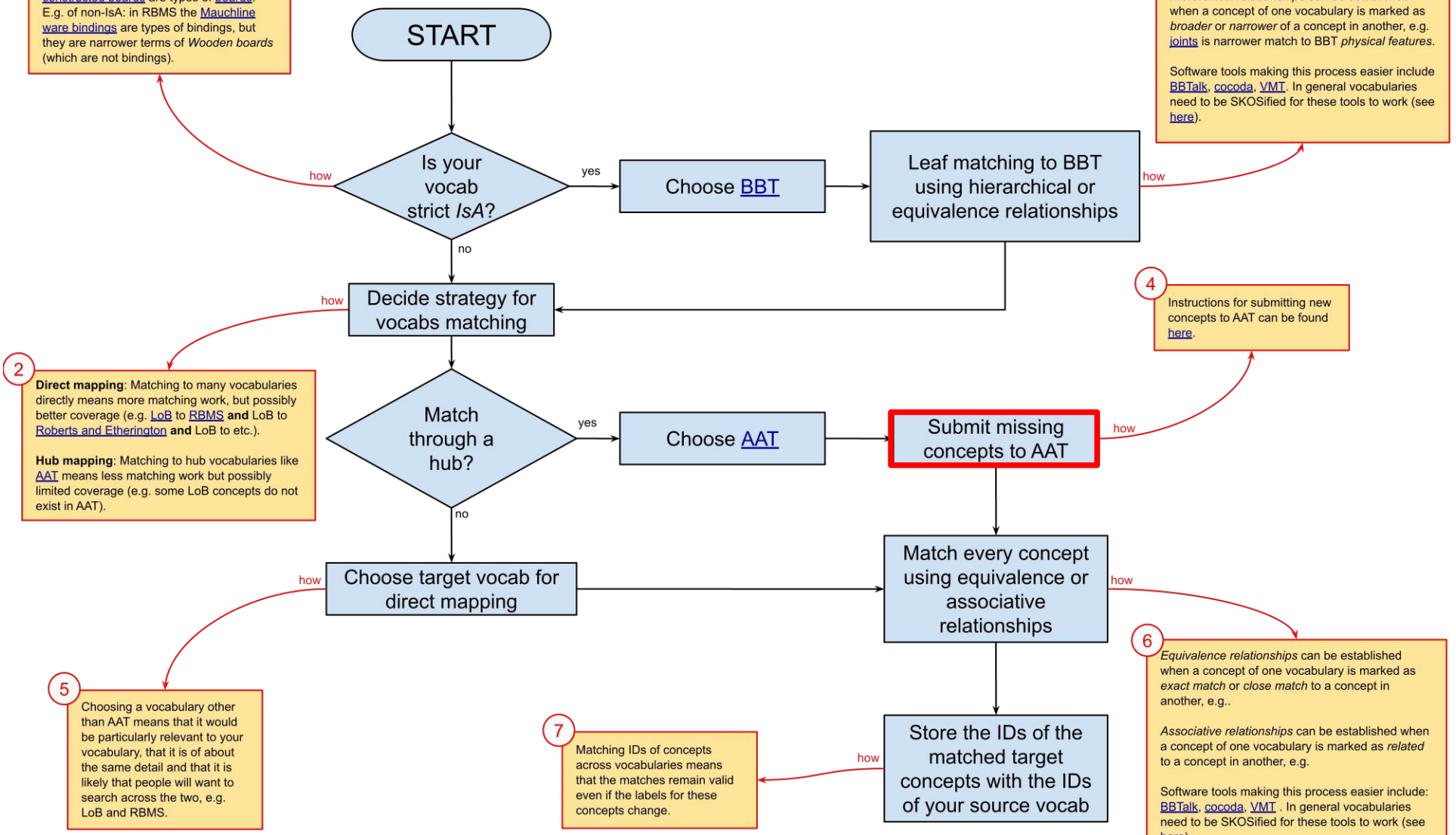

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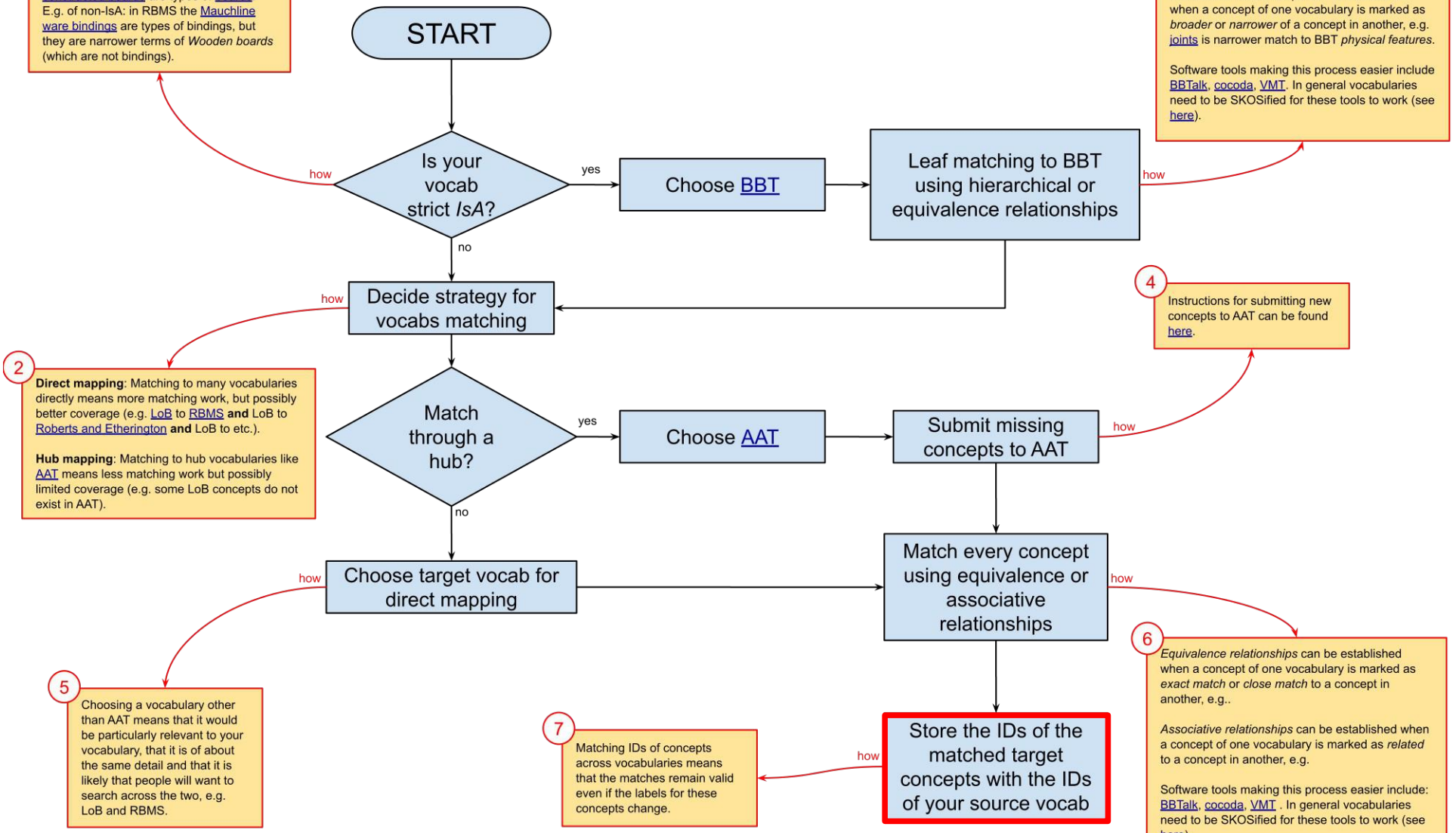

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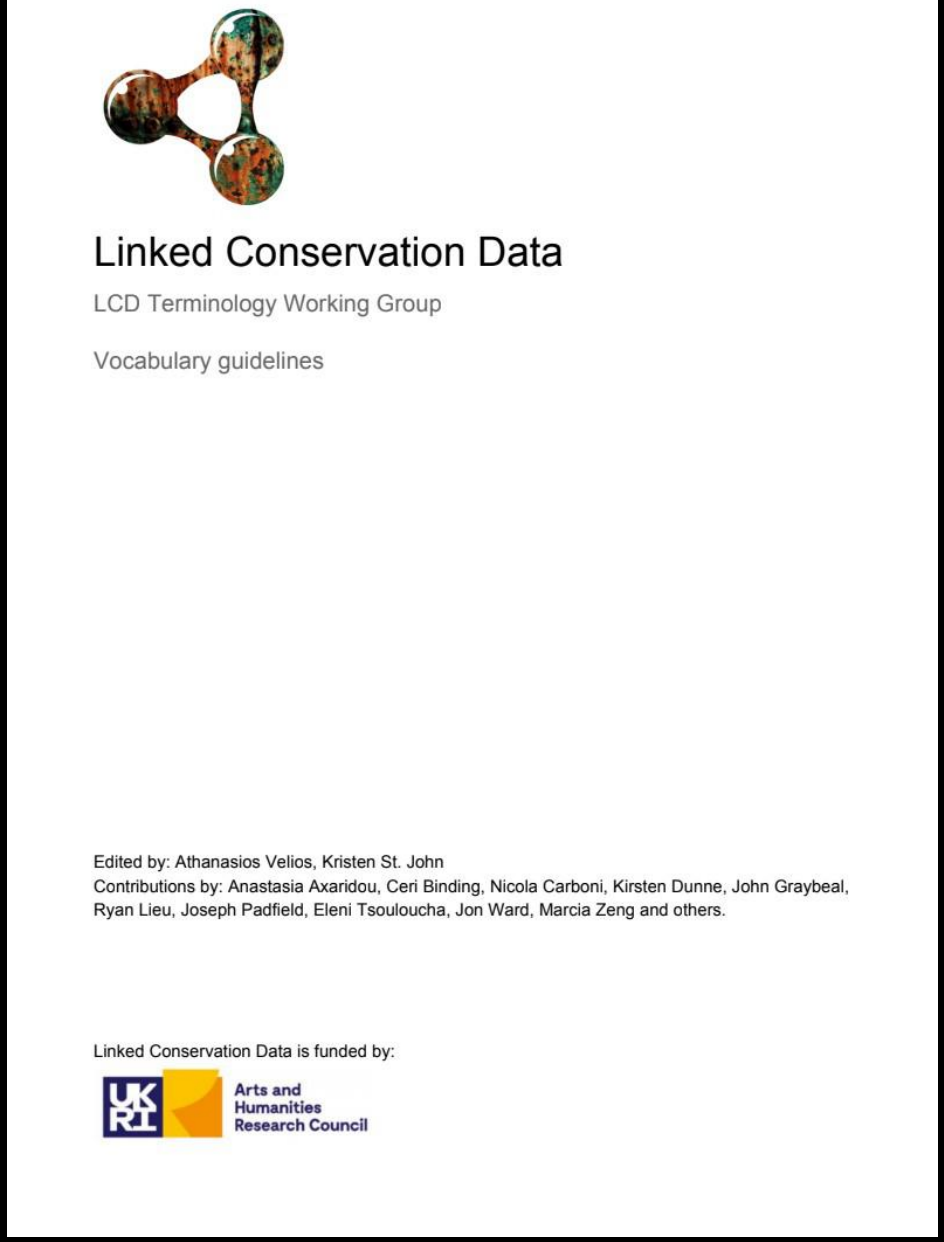
LCD repository

- Alignment data
  - different dataset to actual vocabularies to allow easier versioning



Linked Conservation Data

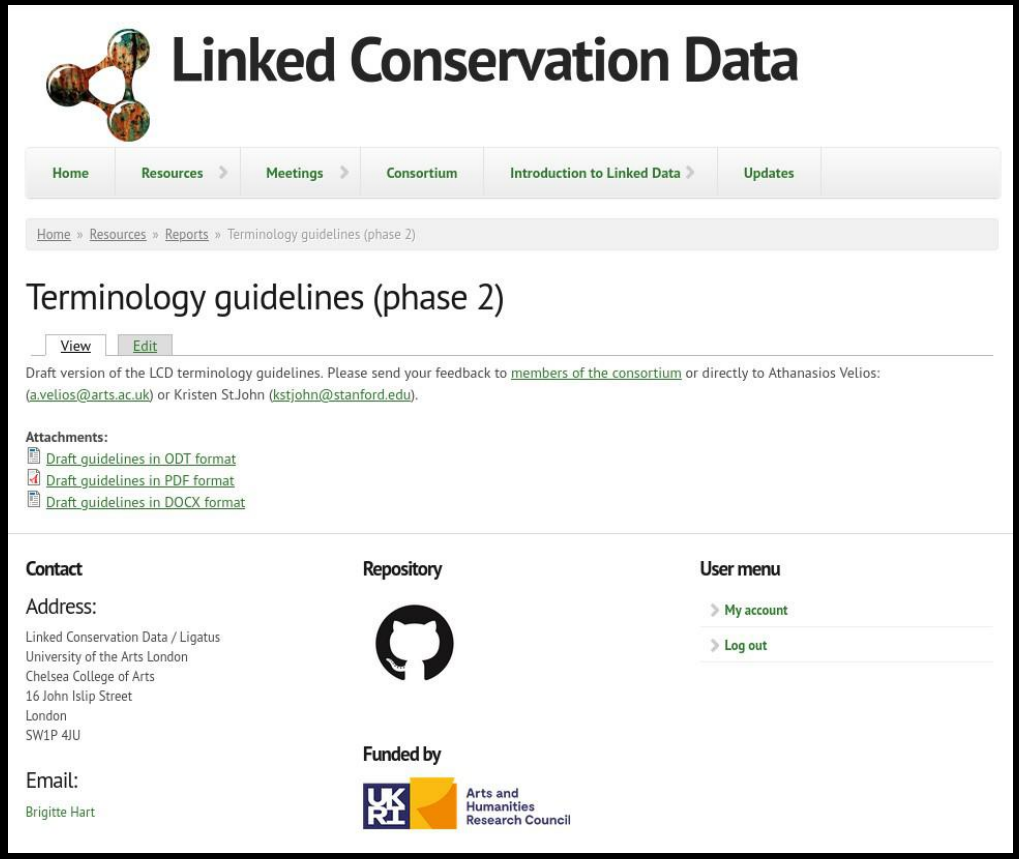
LCD Terminology Working Group

Vocabulary guidelines

Edited by: Athanasios Velios, Kristen St. John
Contributions by: Anastasia Axaridou, Ceri Binding, Nicola Carboni, Kirsten Dunne, John Graybeal, Ryan Lieu, Joseph Padfield, Eleni Tsouloucha, Jon Ward, Marcia Zeng and others.

Linked Conservation Data is funded by:

UKRI Arts and Humanities Research Council



Please send comments:
https://www.ligatus.org.uk/lcd/output/193

Future work

- Planning next phase:
  - process vocabularies
    - those which are easy to work with
    - those which are of interest to consortium
    - those ready to adopt LOD
  - populate LCD terminology portal

Thank you

- LCD terminology working group
  - Alberto Campagnolo, Anastasia Axaridou, Ceri Binding, Claudia Marinica, Douglas Tudhope, Eleni Tsoulouha, John Graybeal, Jon Ward, Joseph Padfield, Karen Waldermar, Kristen St.John, Layna White, Marcia Zeng, Maria Theodoridou, Michelle Barger, Nicola Carboni, Ryan Lieu, Stephen Stead