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Charming the word snake – Terminology work and language checking with Python

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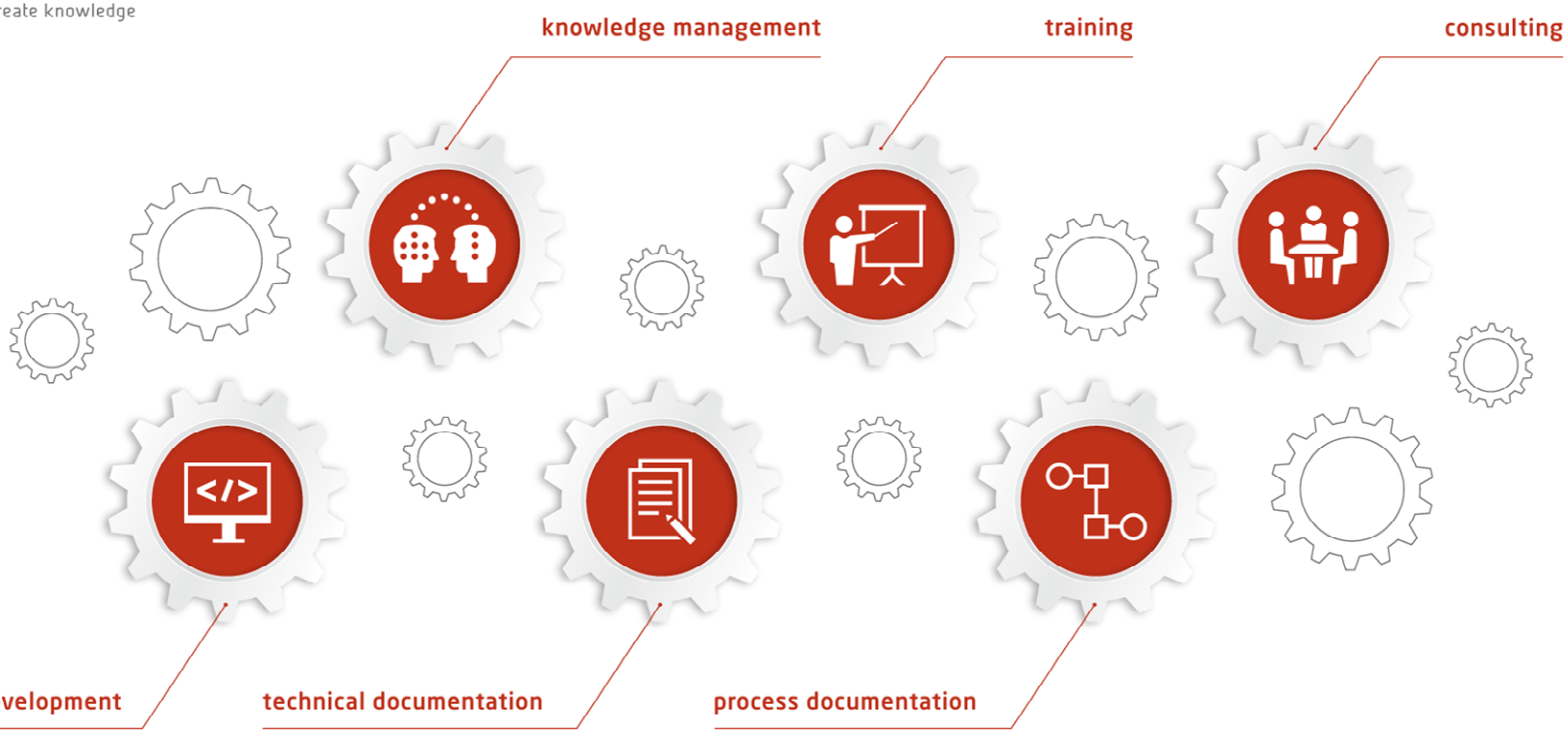

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Your friendly snake charmers

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Technical Communicator

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Part 1 - Introduction

Part 2 - Terminology extraction

Part 3 - Checking writing rules

Part 4 - Outlook and discussion

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Scope

- Implement powerful tools in just a few days, using only free open-source software.
- Find a starting point for terminology work.
- Start with a specific research question.

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Survey questions

1. How do you work with terminology?
   a) I have not started yet.
   b) I work with Excel lists.
   c) I use a terminology software.
2. Do you have any experience with programming Python?
   a) Yes.
   b) No, but I am familiar with other languages.
   c) No, I have no programming experience at all.

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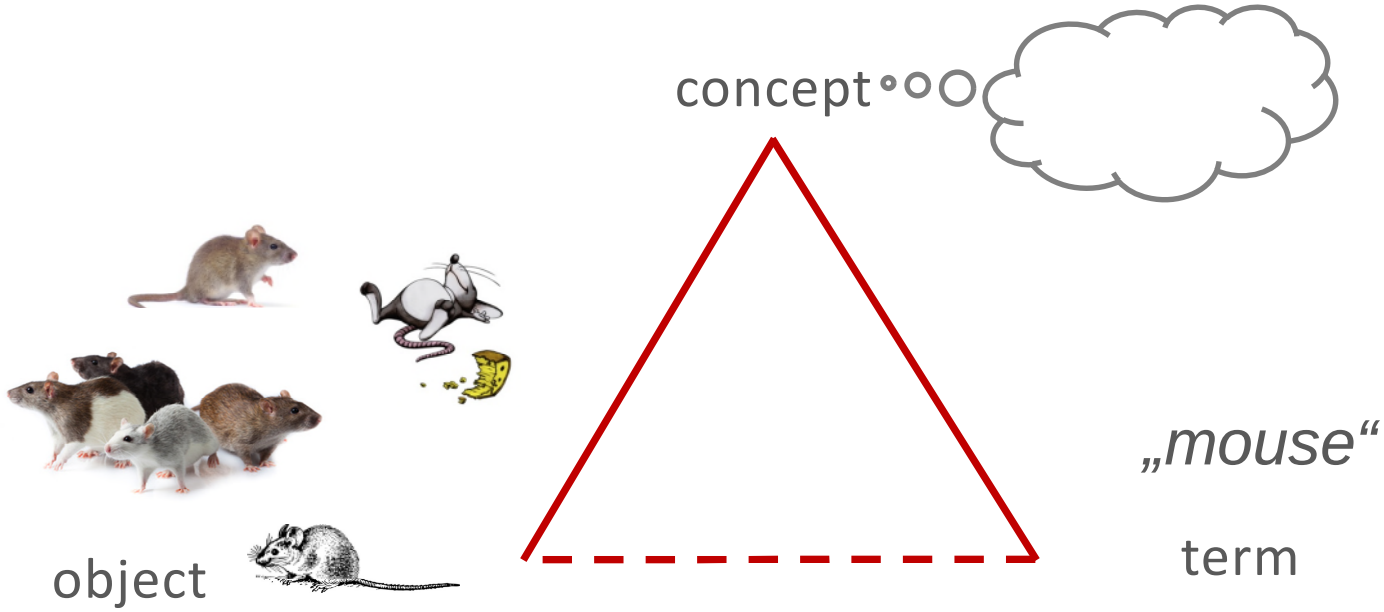
Terminology: Triangle of Meaning



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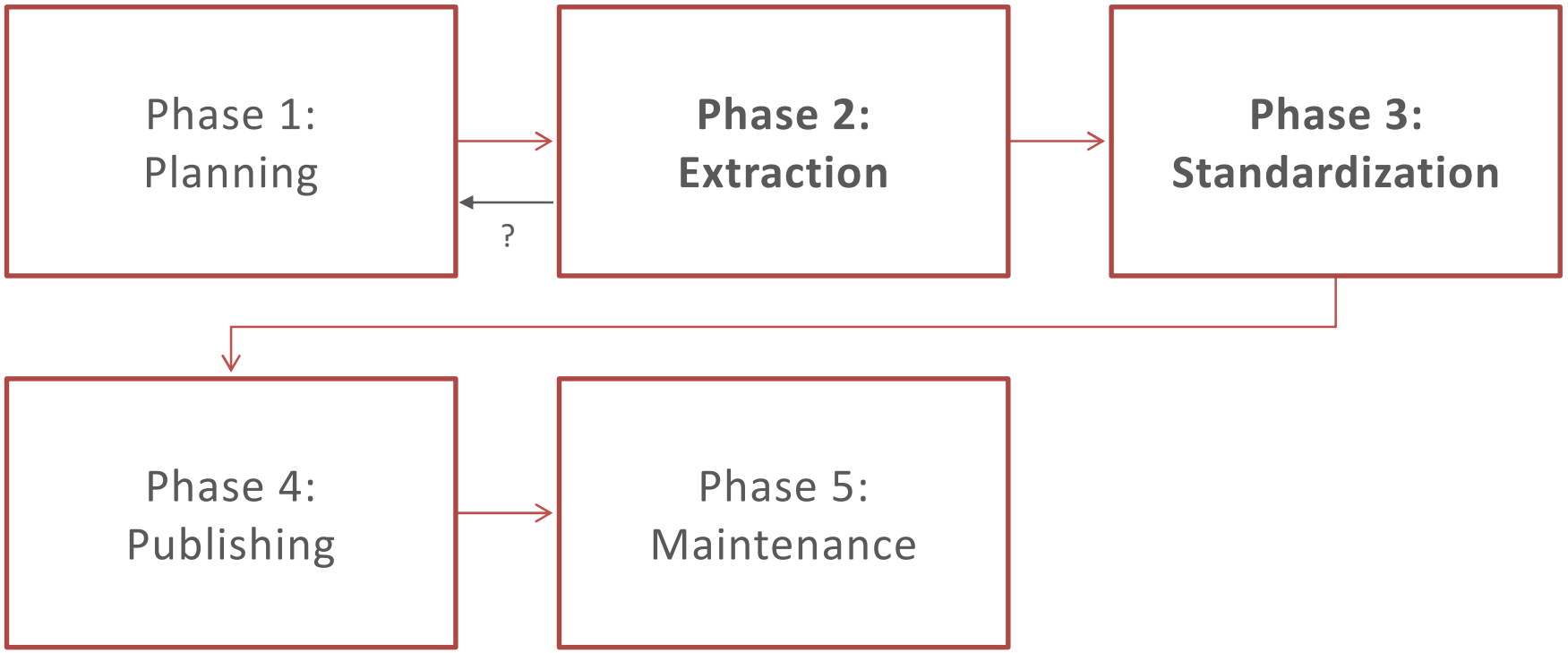
Terminology projects



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Metadata useful for Standardization

Concept level
ID
Subject area
Definition
Source

Term level
Language
Term
Status
Source
Part of speech
Context
Comment

Concept level
ID
Subject area
Definition
Source

Term level
Language
Term
Status
Source
Part of speech
Context
Comment

Standardization

Generate automatically

- Term, source, context, POS, definition

Complete with terminology work

- Concept, subject field, status, relations between concepts

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Concept Level						Language Level			Term Level					
2	Concept ID	Subject field	Project	Status	ID Related concept	Relation	Definition	Comments	Source	Term	Usage	Source	Comment	Context	POS
3	1	A	Terminology	In review	2	parent	Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua.			XX	deprecated	http://www.someurl.de			noun
4	1	A	Terminology	In review	2	parent	Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua.			xx	preferred	http://www.someurl.de			noun
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Live programming

⇨ Jupyter notebook

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Summary: Terminology extraction

Feed text into spacy‘s language model.

Use language model to extract one-word terms and part-of-speech tags.

Add sample sentences for context.

Add definitions from 3rd-party source where possible.

Write results into CSV file for further processing.

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Questions?

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Summary: Checking writing rules

Feed text into spacy‘s German language model.

Find forbidden words based only on their canonical form.

Find overly long words by counting syllables and letters.

Find complicated sentences by counting words and commas.

Find nominalizations by examining POS tags and suffixes.

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Advanced use cases

- Building domain-specific terminology from web content
- Integration scenarios with Docs-as-Code or CCMS
- Automated reports on text quality

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Limitations of DIY approach

- No real-time-checks
- Not integrated in editor
- No propositions of allowed terms
- No „linguistic intelligence“

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Questions?

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References

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- Al Sweigart: *Automate the Boring Stuff with Python* (https://automatetheboringstuff.com/)
- Python 3: The programming language (https://www.python.org/)
- Anaconda: Package manager for data science (https://www.anaconda.com/)
- Jupyter Notebook: Creating documents with live code (https://jupyter.org/)
- spacy: NLP library (https://www.spacy.io)
- tabulate: Formatting output as tables (https://github.com/astanin/python-tabulate)
- json: Reading and writing JSON files (https://docs.python.org/3/library/json.html)
- csv: Reading and writing CSV files (https://docs.python.org/3/library/csv.html)

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How did you like our tutorial today?

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