

- Skills for the European
- Open Science
- Commons

Preparing FAIR Learning Objects

WP2 T3

Supporting

eosc



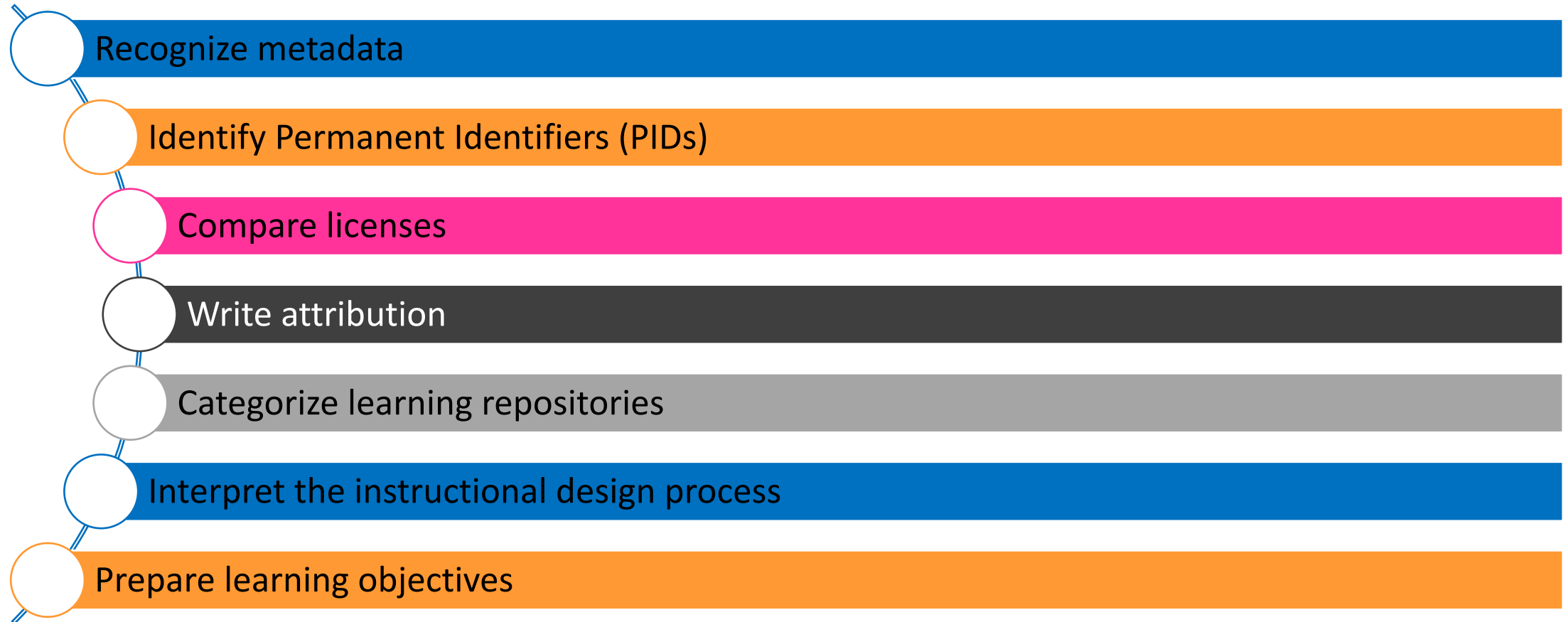
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Learning Objectives



Agenda



Metadata

- metadata = structured information that describes, explains and locates a resource
 - WHO created the resource
 - WHAT is the content of the resource
 - WHEN was the data resource
 - WHERE is the location of the resource
 - WHY the data was resource



Digitalbevaring.dk

Metadata Digital Preservation by Jørgen Stamp. The illustration is copyright of digitalbevaring.dk and shared under a [CC BY 2.5 Denmark license](https://creativecommons.org/licenses/by/2.5/dk/)

The RDA Minimal Metadata for Learning Resources

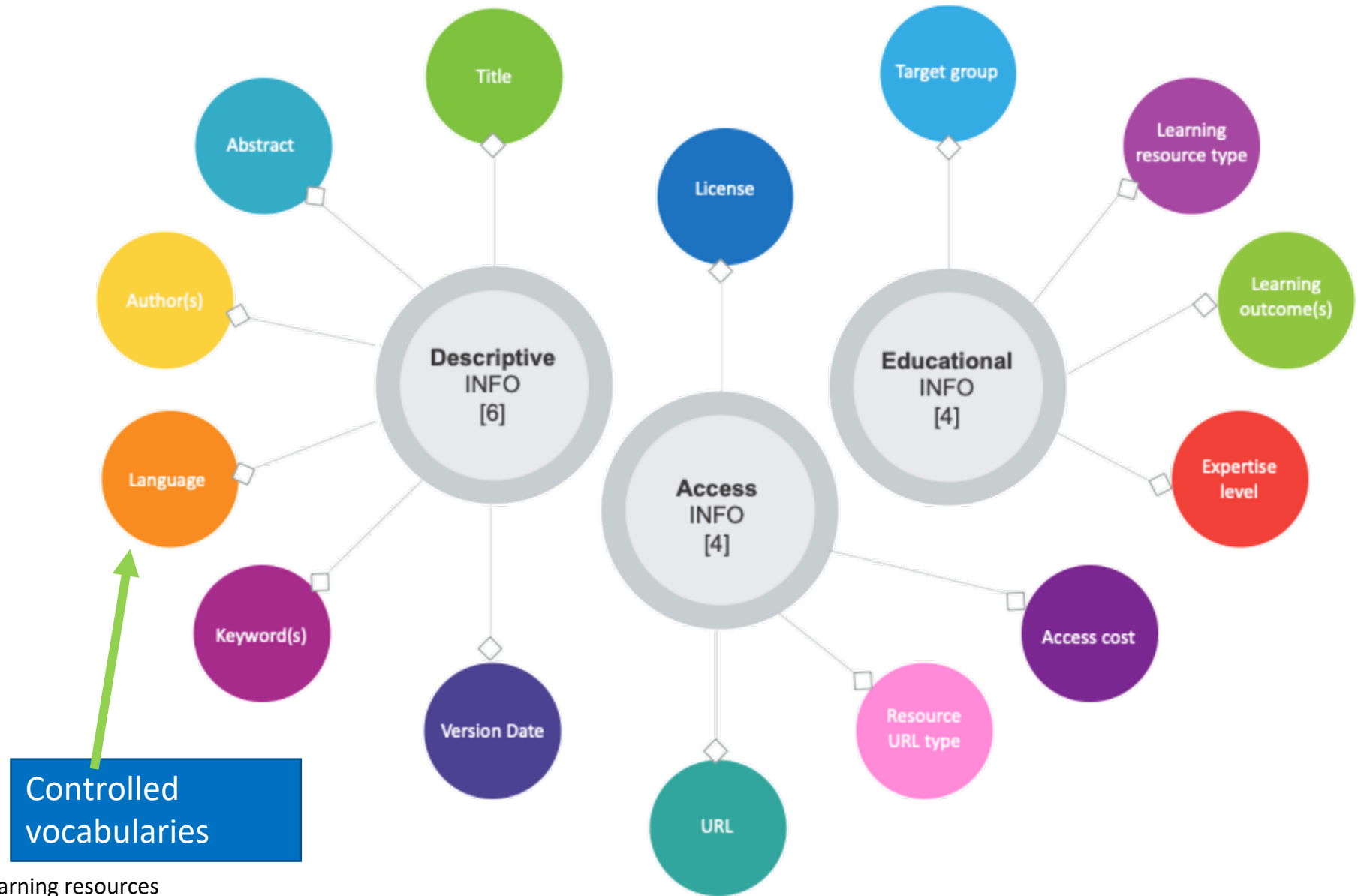
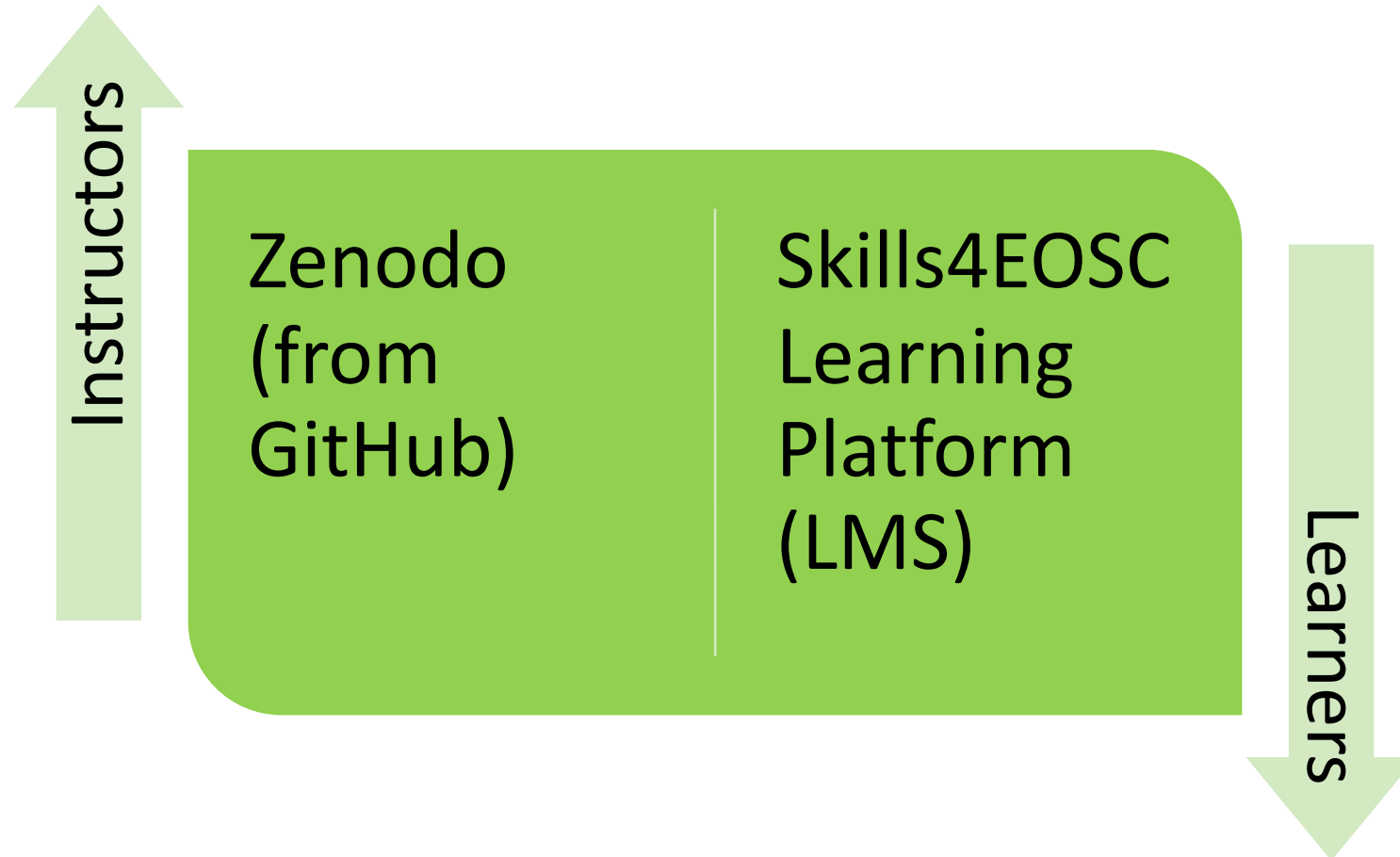


Image: Minimum set of metadata for learning resources

Taken from Hoebelheinrich, Nancy J, Biernacka, Katarzyna, Brazas, Michelle, Castro, Leyla Jael, Fiore, Nicola, Hellström, Margareta, Lazzeri, Emma, Leenarts, Ellen, Martinez Lavanchy, Paula Maria, Newbold, Elizabeth, Nurnberger, Amy, Plomp, Esther, Vaira, Lucia, van Gelder, Celia W G, & Whyte, Angus. (2022). [Recommendations for a minimal metadata set to aid harmonised discovery of learning resources](#) on Zenodo licensed under [CC BY 4.0](#)

Learning materials repositories



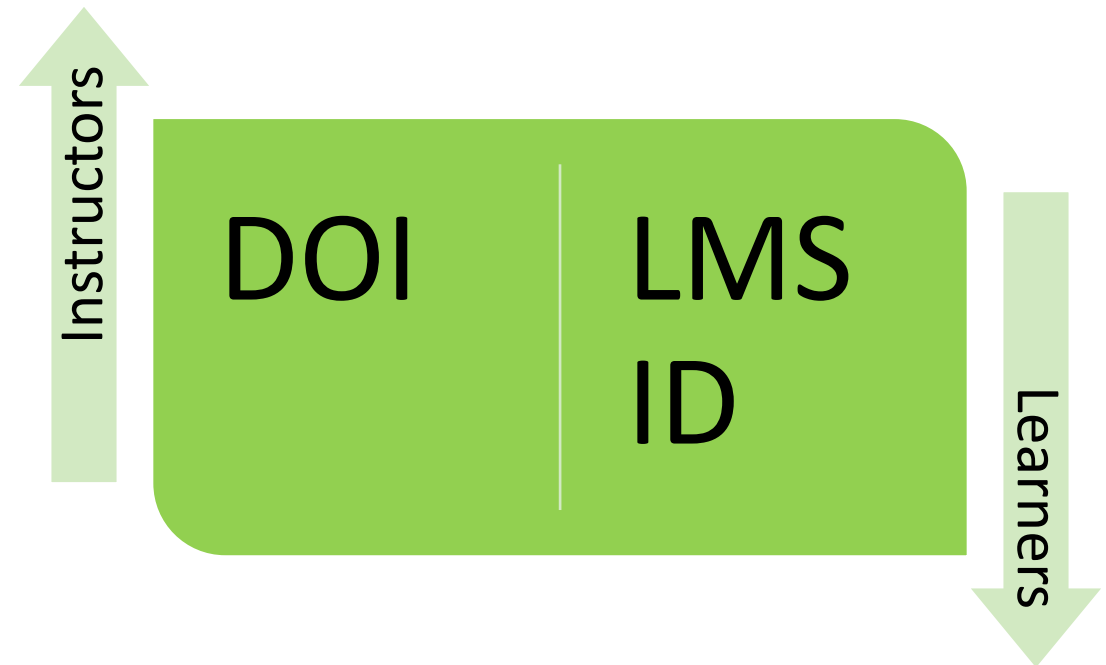
PIDs

Type of metadata that uniquely tags a digital object

- Leads to landing page with the listed digital object and its metadata
 - Actual access to the digital object from this page may be restricted

Helps distinguish between

- different materials
- different versions of the same material



IPR

INTELLECTUAL PROPERTY



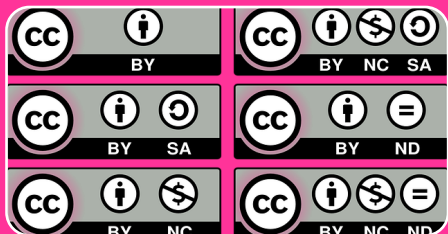
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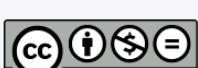


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Attribution-ShareAlike	BY-SA		Yes	Yes	Yes	Yes
Attribution-NonCommercial	BY-NC		Yes	Yes	No	No
Attribution-NonCommercial-ShareAlike	BY-NC-SA		Yes	Yes	No	No
Attribution-NoDerivatives	BY-ND		Yes	No	Yes	No
Attribution-NonCommercial-NoDerivatives	BY-NC-ND		Yes	No	No	No

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- Moral right - **always needed**
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 - Author - who allows you to use the work (name and link)
 - Source - where can the work be found (link added to title)
 - License - how can the work be used (name and link to the license)
- [CC Recommended practices for attribution](#)

Title

Author

Source

License

Attribution examples

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Citing

Allows authors to provide the source of any quotations, ideas, and information that they include in their own work based on the copyrighted works of other authors

The amount of information quoted must be very limited

“Fair Use” of copyright law

- Sole purpose: illustration for teaching or scientific research with attribution
- Varies across countries

Lets attribute

Write attribution for the following learning resources that you have decided to incorporate in your learning materials:

- image from <https://creativecommons.org/2021/12/02/unesco-recommendation-on-open-science-ratified/>
 - TRIPLE TRAINING on Open Research Europe slides from <https://project.gotriple.eu/triple-open-science-training-series/>
 - slide 3 from Why open science? presentation by Sarah Jones <https://slideplayer.com/slide/12073970/>
- Lesson 1: The What from <https://github.com/opensciency/sprint-content/blob/main/ethos-of-open/lesson1-intro-to-open-science.md>

Are you able to find all TASL elements for each example?

What are the pitfalls of not using attribution?

Instructional Design

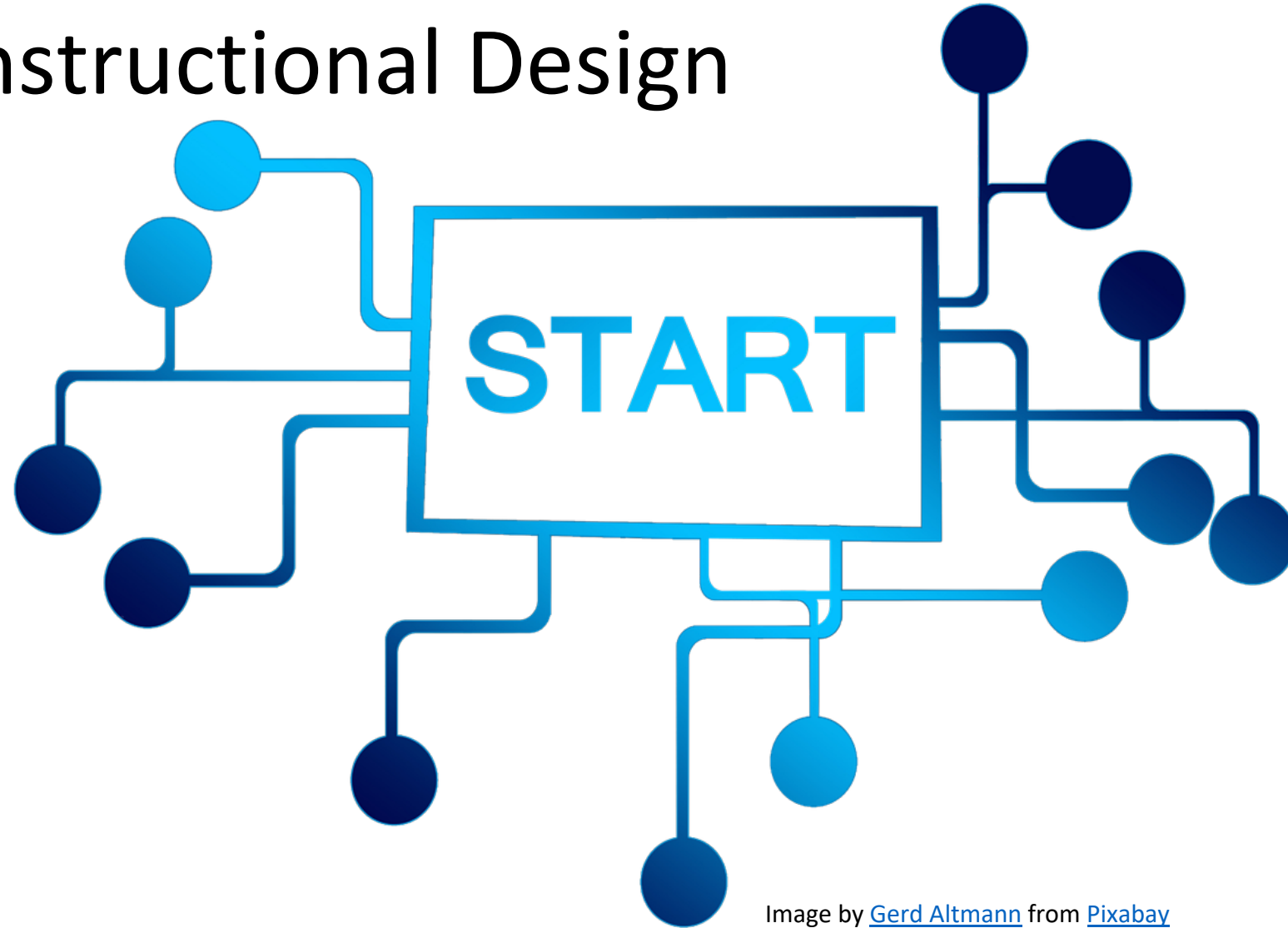
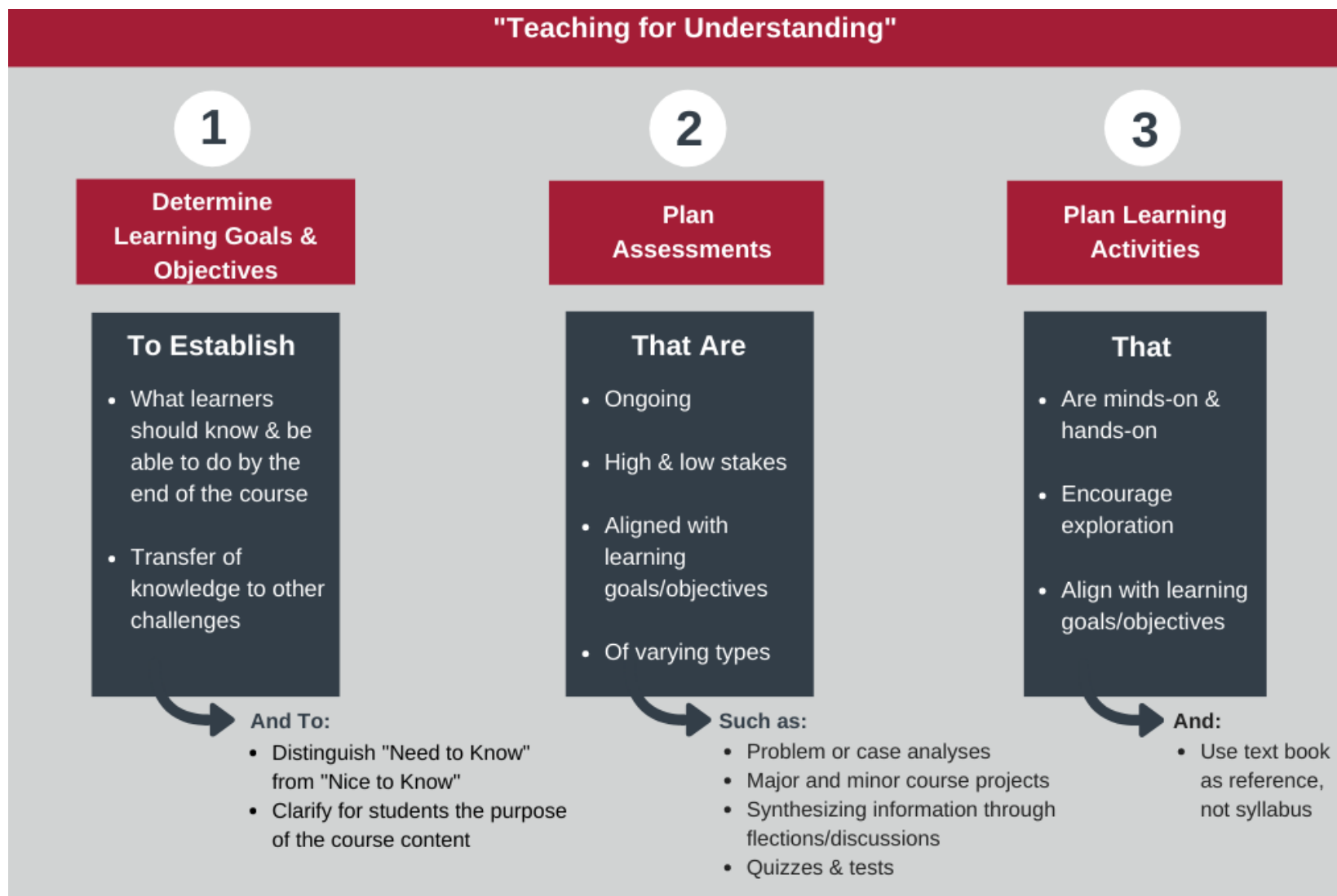


Image by [Gerd Altmann](#) from [Pixabay](#)

Backward Instructional Design



"[Backward design model](#)" from [Muhlenberg College](#) licensed under the [CC BY-NC 4.0](#).

Step 1

- clear definition of the **overarching aspects and considerations** related to the learning materials that are going to be created

Purpose of learning material

- when and how the learning materials can be used and for what purposes

Target Audience

- the primary audience for the learning materials
- is there anything specific that needs to be taken into account, such as cultural context

Prerequisites

- what does the target audience need to know or understand before starting the learning process
- use names and links to other learning materials if possible

Overall Scope of the learning materials

- is it going to be a single learning object or an aggregation of some sort such as a course

Learning Objectives

- what competencies will be gained after successfully completing the learning process

Learning Objectives

Learning objectives refer to observable and measurable (SMART)

- Knowledge
- Skills
- Attitudes

Focus on results of the learning experiences

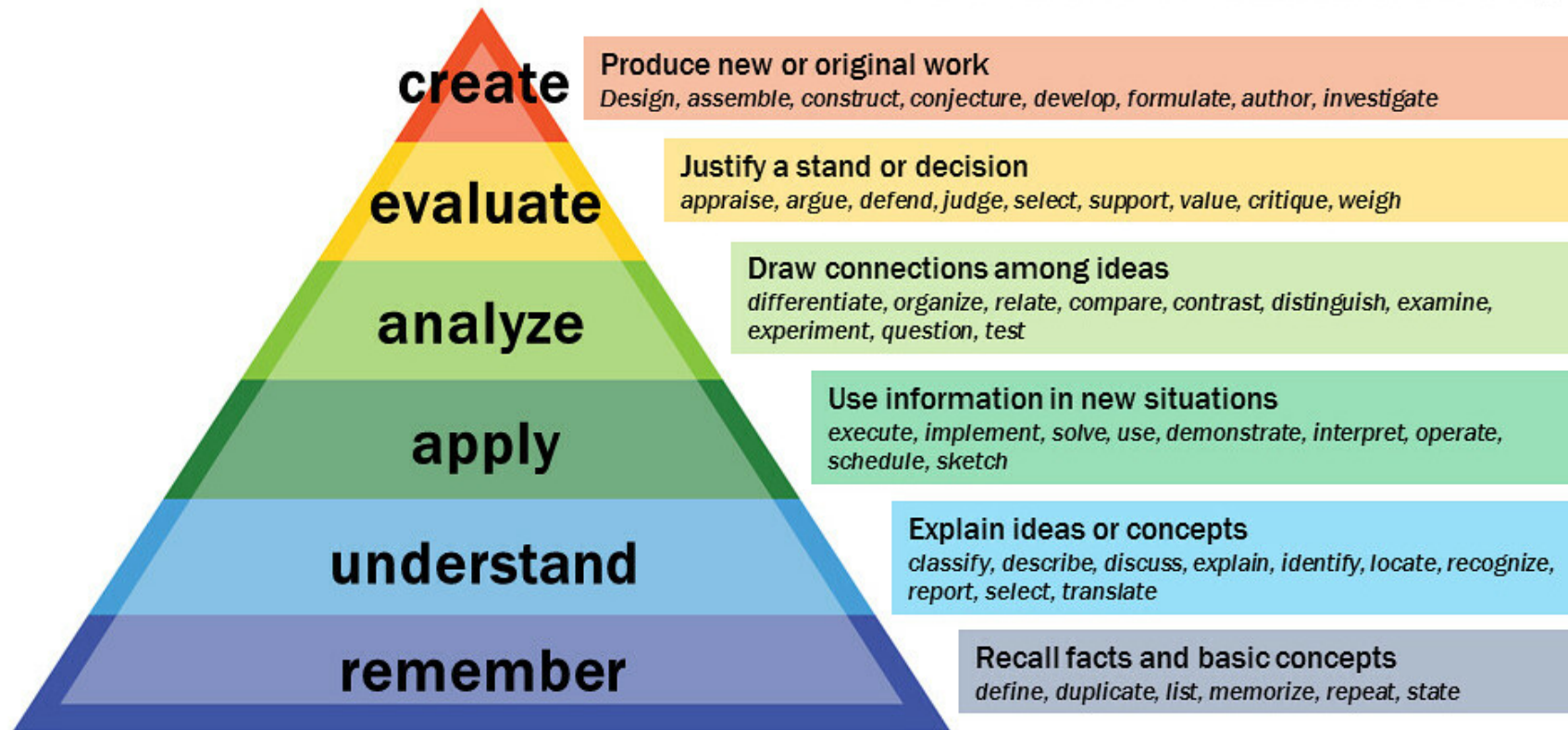
- reflect the desired end of the learning experience, not the means or the process
- answer the question, "Why should a learner take this unit anyway?"

Anatomy of Learning Objectives

- an **action** word that identifies the performance to be demonstrated
- a **learning** statement that specifies what learning will be demonstrated in the performance

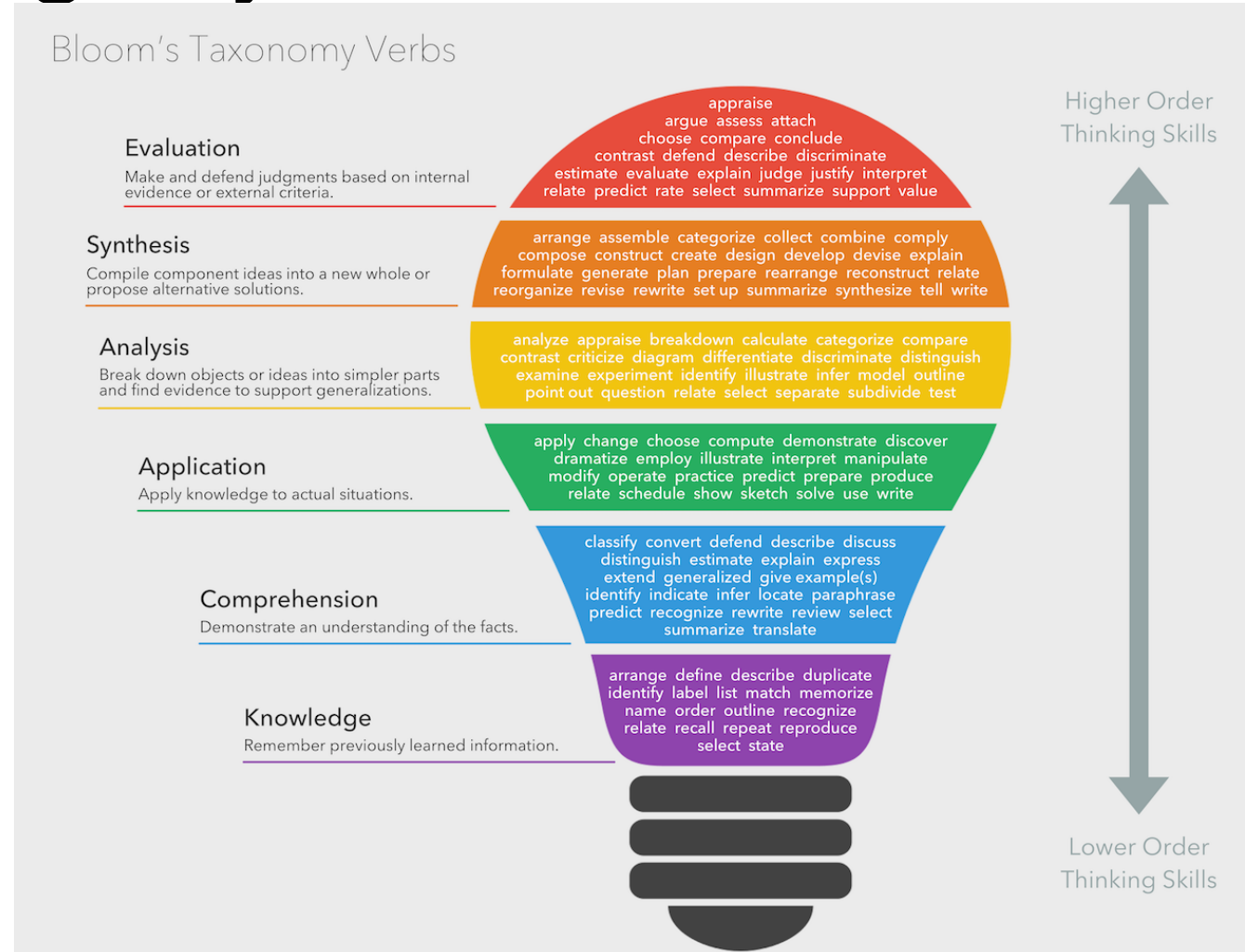
Learning Objectives – the Knowledge domain

Bloom's Taxonomy



"[Bloom's Revised Taxonomy](#)" by [Vanderbilt University Center for Teaching](#) licensed under the terms of the [CC-BY-2.0](#).

Learning Objectives Verbs



[Bloom's taxonomy](#) by [Fractus Learning](#). (2023, July 10). In [Wikipedia](#) licensed under the terms of [CC BY-SA 4.0](#).

Ideation

You are in stage 1 of creating an Open Science training course for policy makers

Define the essential elements of your training course:

- purpose
- target audience
- prerequisites
- scope
- min 3 learning objectives

Which of these elements are going to be part of the metadata describing your newly created learning materials?

Summary

FAIR learning object

- Offered to learners and instructors
- Described with metadata using the RDA schema
- Uniquely tagged
- Stored in a repo
- CC Licensed

Learner-centric learning materials

- Step 1: Focus on the goal and learning objectives

- Skills for the European
- Open Science
- Commons



Supporting



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Thank you!

Any questions before we continue?

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