Intensive Course

Data Management Planning

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I – DMP 101

Learning Outcomes:

- Explain the purpose and content of a data management plan

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Data Management Plan (DMP)

A. A formal document used to plan and support data management activities by anticipating needs and requirements in a (research) project, facility or institution

B. A bureaucratic demand of funding agencies that we draft because we have to and then archive in the basement

Data Management Plan (DMP)

- Many funding agencies do require that grant proposals be accompanied by a DMP that demonstrates intent to comply with the FAIR data principles

- But being forced to do it should not detract from the value of doing it properly

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DMP Content

A DMP should describe:

○ The project (or institution or facility) to which it applies

■ Its goal

■ Its methods

■ Its funding status

■ The contact person
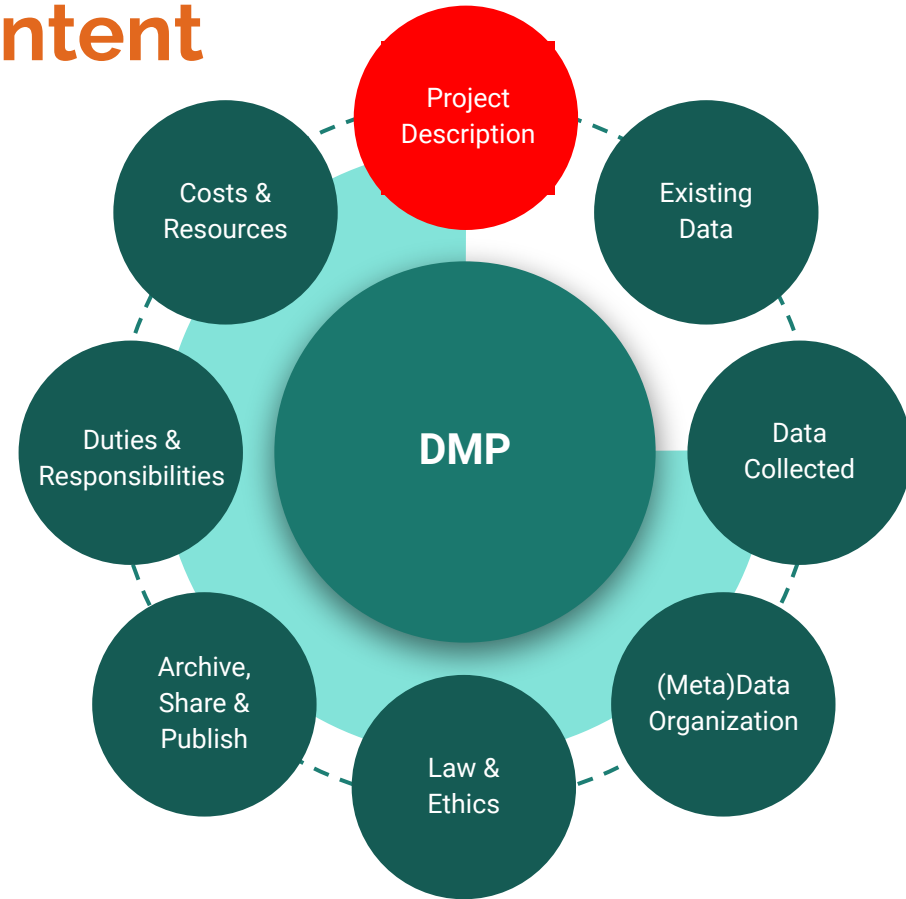
DMP Content

A DMP should describe:

○ Any pre-existing data

- Including data that belongs to the team behind the DMP and external data

- Their usage licenses

- Their type and scope

- Their volume

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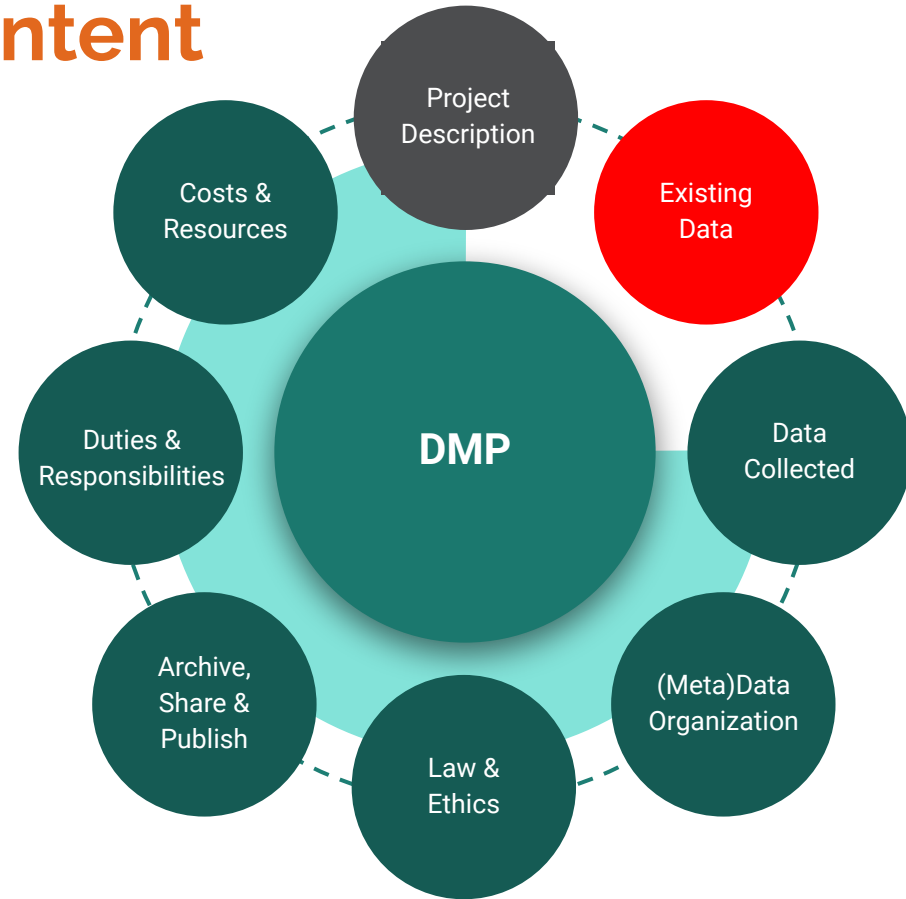
DMP Content

A DMP should describe:

- Data to be collected
  - Their type
  - The methods
  - Their volume
  - Their purpose

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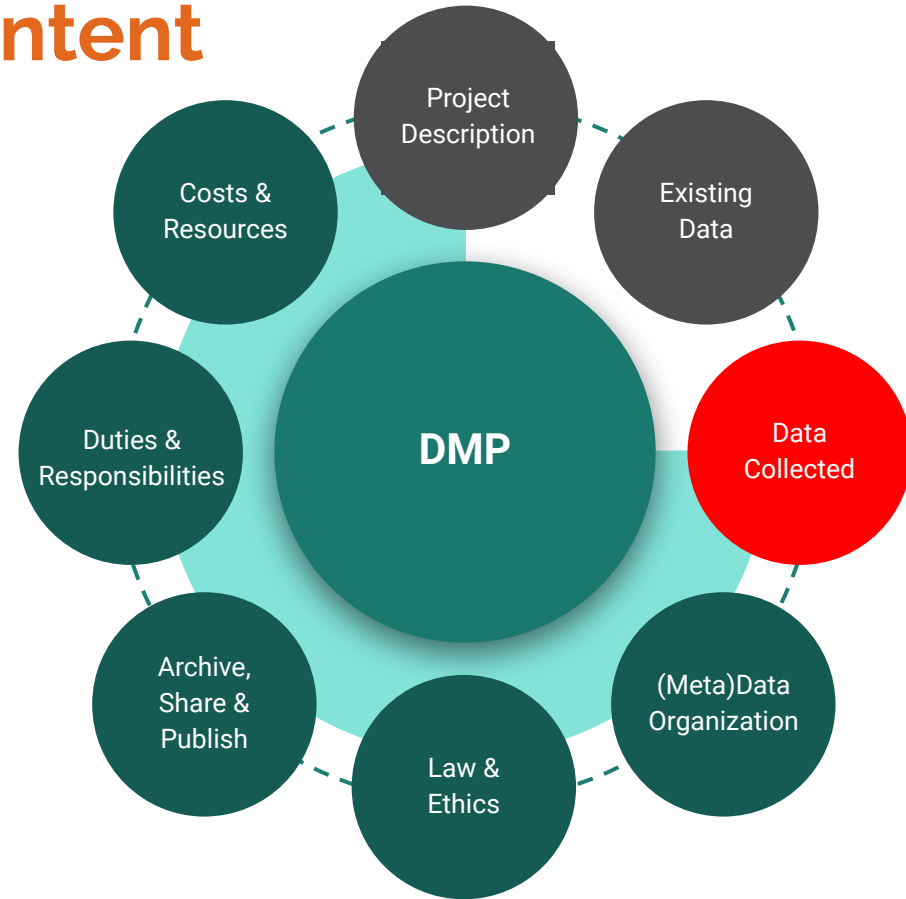
DMP Content

A DMP should describe:

- How collected and/or existing data and metadata will be organised

  - File formats

  - Data structures
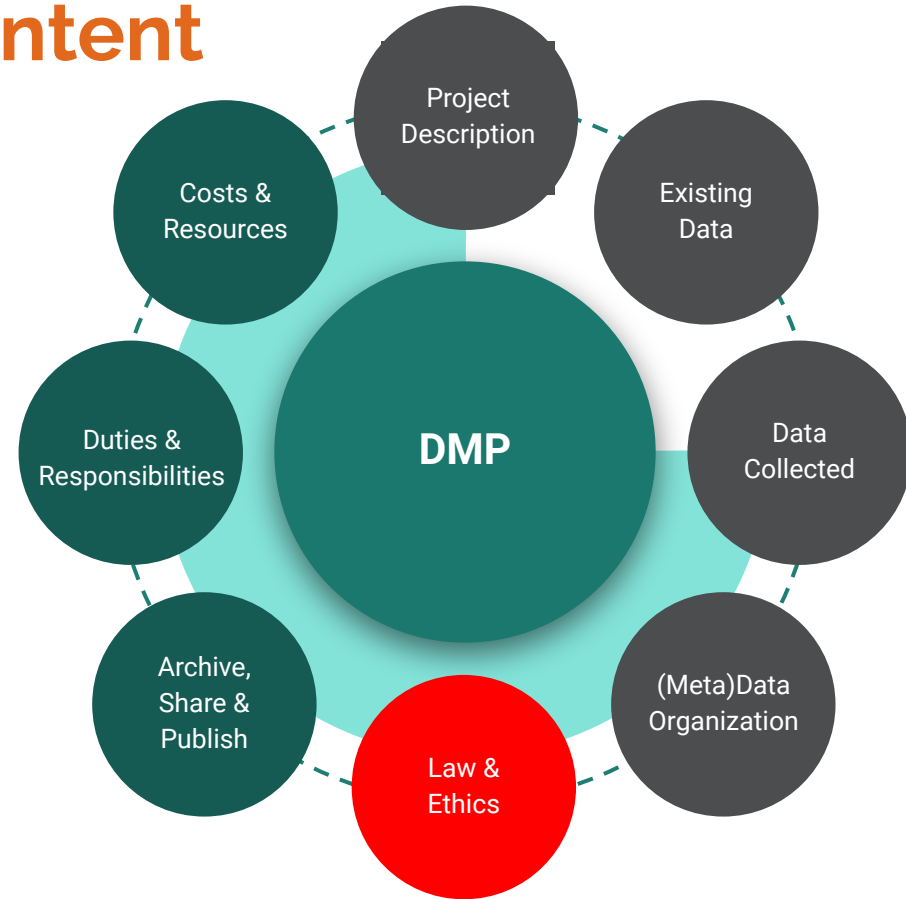
  - File system organisation

  - Metadata standards

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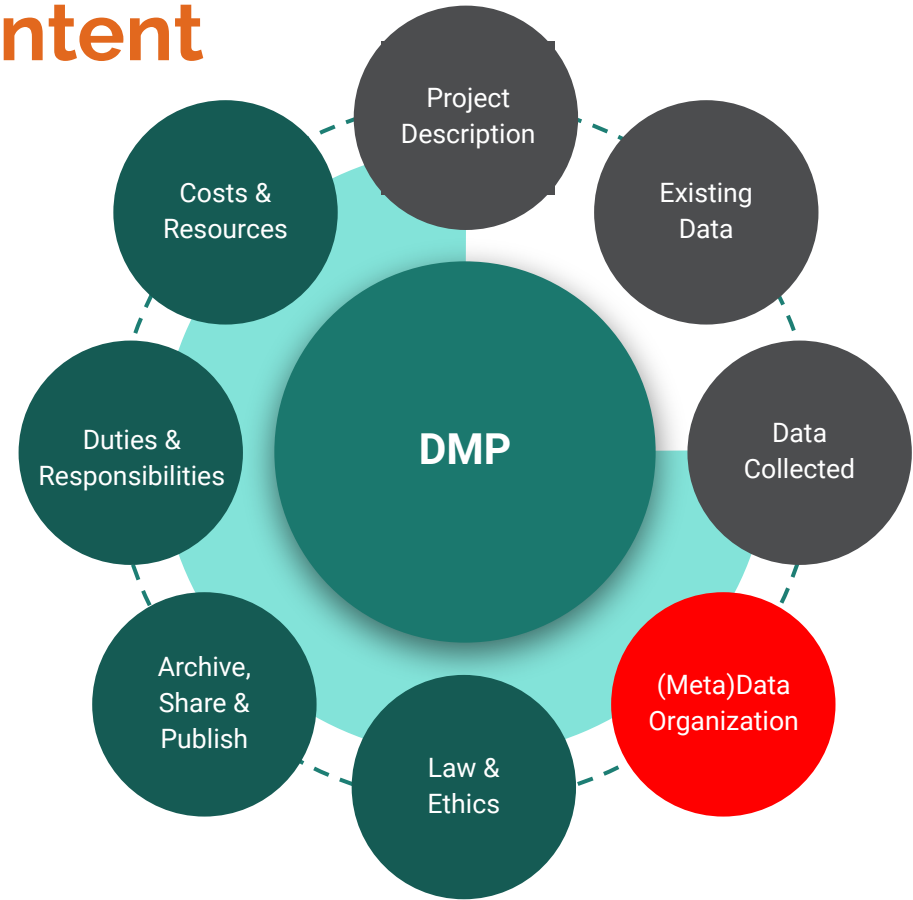
DMP Content

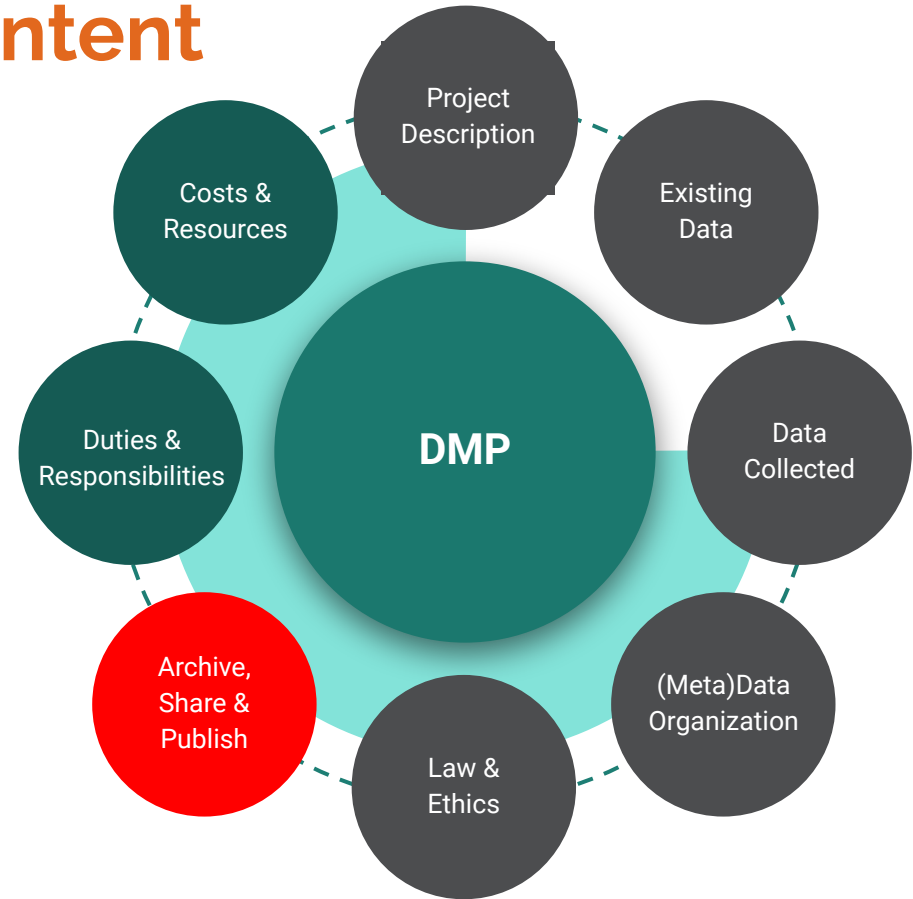**A DMP should describe:**

○ Legal and ethical aspects pertaining to the data

   ■ Whether there is personal data (and how GDPR compliance will be ensured)

   ■ Whether there is sensitive data (and how it will be handled)

- DMP
- Project Description
- Existing Data
- Data Collected
- (Meta)Data Organization
- Law & Ethics
- Archive, Share & Publish
- Duties & Responsibilities
- Costs & Resources
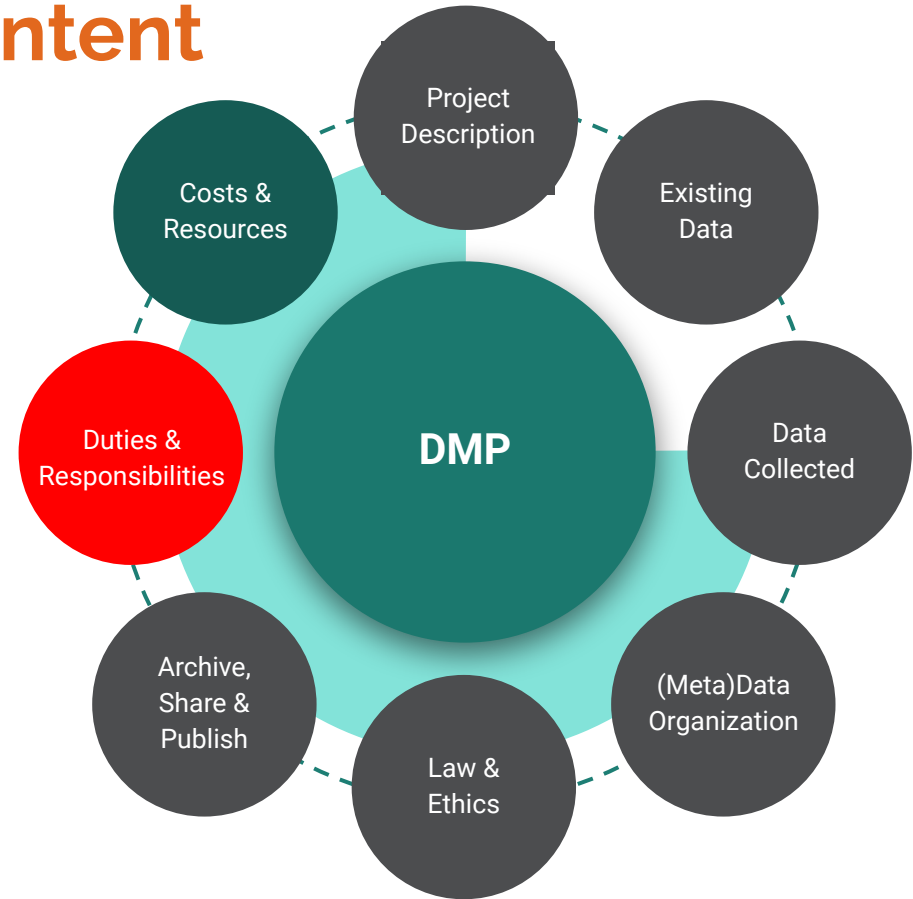
DMP Content

A DMP should describe:

○ How data will be preserved and/or shared:

   ■ For how long it will remain archived

   ■ Where it will be published

   ■ What will be the license and accessibility

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DMP Content

A DMP should describe:

○ The duties and responsibilities of everyone with a significant role in the project/institution

- Data owner

- Data steward

- Data protection officer

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DMP Content

A DMP should describe:

- All resources (existing or to be acquired) and their usage and/or acquisition costs
  - Hardware
  - Software
  - Human Resources

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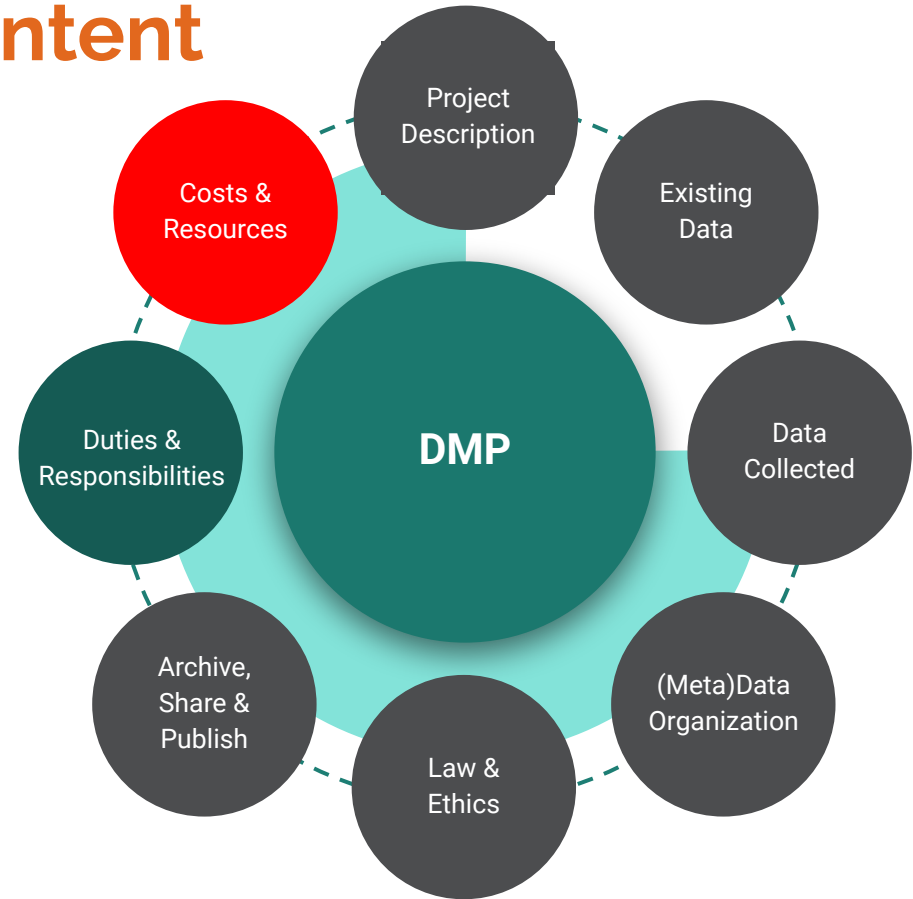
DMP Integration

○ A project's DMP should not be made in a silo

○ It should reuse relevant parts of institutional or facility DMPs if they exist, or at least contemplate any infrastructure provided by your institution (e.g. storage, compute, institutional repository, ethical committee)

■ E.g. project DMP < lab DMP < institutional DMP
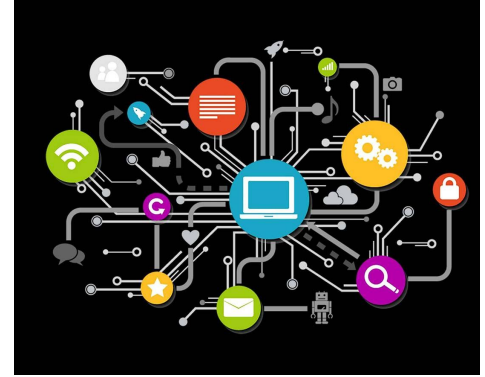
Machine-Actionable DMP

- Machine and human readable descriptions

- FAIRer

- Extensible

- Could enables automated policy enforcement

Current DMPs

```
<admindata>
    <question>Who is the Principle Investigator?</question>
    <answer>The PI is John Doe from the JDU</answer>
</admindata>
```

maDMPs

Reuse of existing standards

Use of persistent identifiers

Use of controlled vocabularies

```
"dc:creator":[{
    "foaf:name":"John Doe",
    "@id":"orcid.org/000-1111-2222-3333",
    "foaf:mbox":"mailto:jdoe@jdu.edu",
    "madmp:institution":"JDU-John_Doe_University"
}],
```

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DMP Challenges

- **Too many DMP templates out there:**
  - Not a problem if you have to do a DMP for a grant application (the funder specifies the template)
  - But if you want to a DMP for internal consumption, choosing a template can be challenging

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DMP Challenges

○ **Several online tools available:**

■ DSW and argos are more customizable and produce maDMPS

■ DMPOnline is simpler and easier to use

DMP Challenges

○ **Which tool to use?**

	DSW	Argos	DMPOnline	DMPTool	DataWiz	easyDMP
Template Selection	✓	✓	✓	✓	✓	✓
Template Creation	✓	✗	✗	✗	✗	✓
Funder Templates	✓	✓	✓	✓	✓	✓
Machine-Actionability	✓	✓	✓	✓	✓	✓

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Hands-On

Learning Outcomes:

- Draft a data management plan

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DSW

○ An online platform for drafting and sharing DMPs (and more)

○ You can define/select knowledge models that serve as basis for DMP templates

○ There are several instances available online

○ We have a training instance available at: https://training-biodata-pt.ds-wizard.org/

  ■ Again, do not use this instance beyond this course

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Group Exercise

1. Open our training instance of DWS at:
   https://training-biodata-pt.ds-wizard.org/

2. Register

3. Create a Data Management Plan for the [mock project](#)

   ■ Go to Project -> Create -> Custom -> Life Sciences Model

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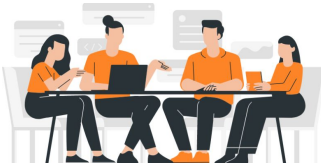
Thank You!

Questions?

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