Research Data Management and Data Management Plans (DMP)

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Why? «The Researcher Benefits»

- The digitale age

- Increased possibilities for sharing and reuse

- New collaborations

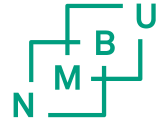- Increased overview of own and research group's research results

Why? «Requirements from the funding agencies»

- New requirement from the Norwegian Research Council about the Data Management Plan (for applications and agreements) as of 1 jan 2018.

- Has been an EU requirement for several years.
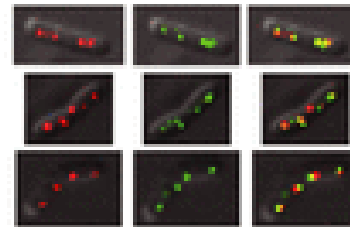
- Research Ethics and quality control

What is Research Data?

Research data are all registrations/records/reports of numbers, texts, pictures and sounds generated or created during research projects.
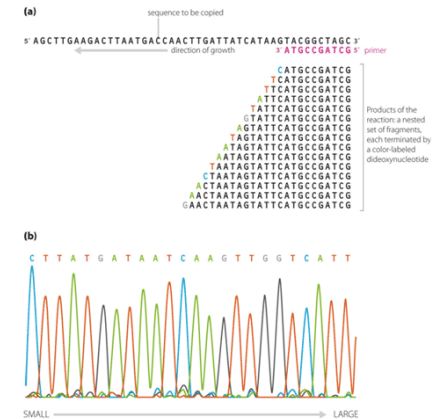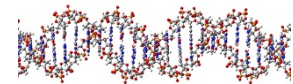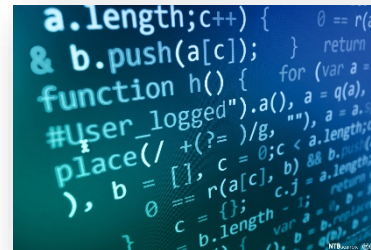
Questionnaire

Pictures

Sequencing data

Data from the field

Algorithms

And more…

Data lifecycle

Data lifecycle

Creating data

Storage

Giving access to and re-using data

DMP+

Processing and analyzing data

Archiving/ deposit

Archiving and preserving data
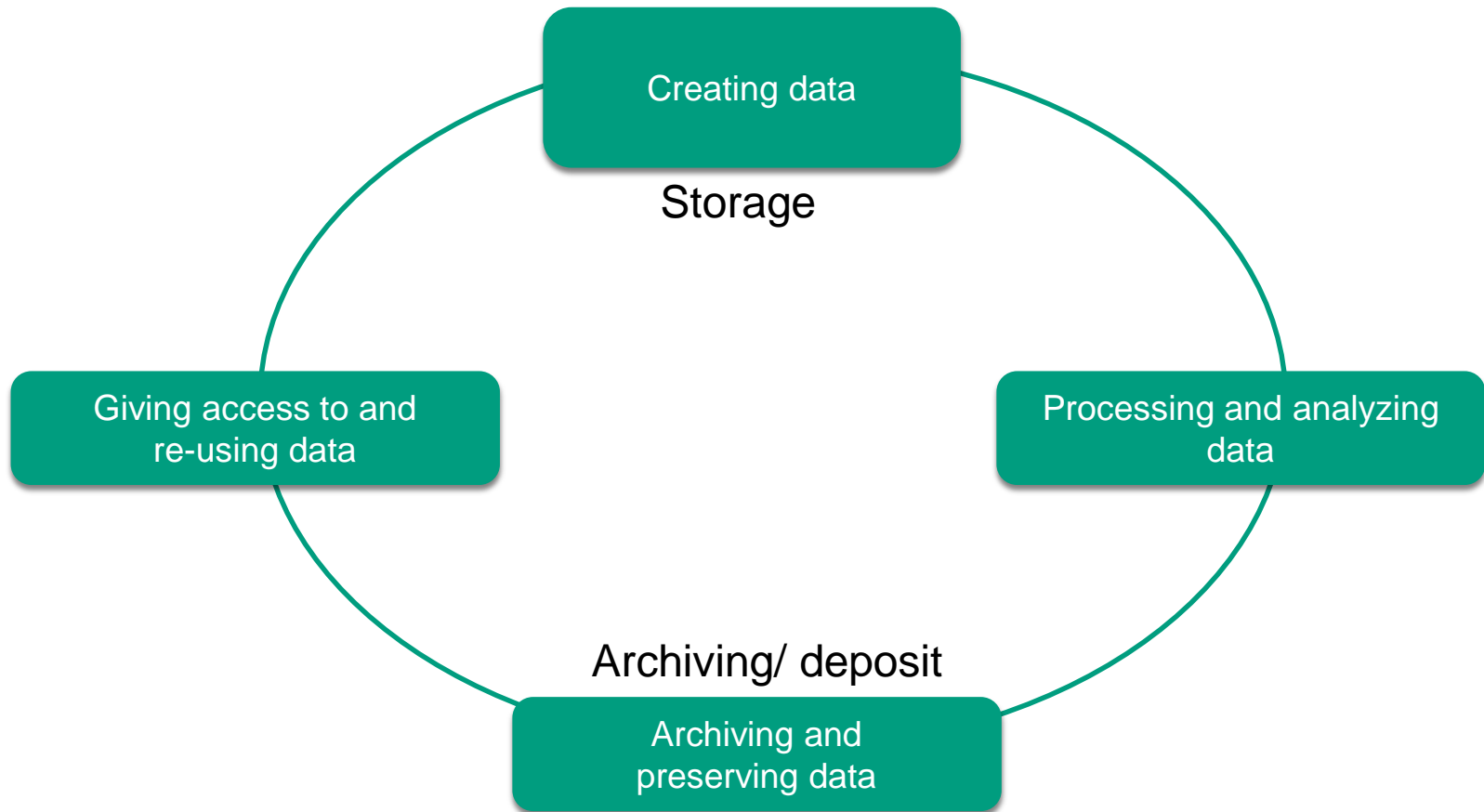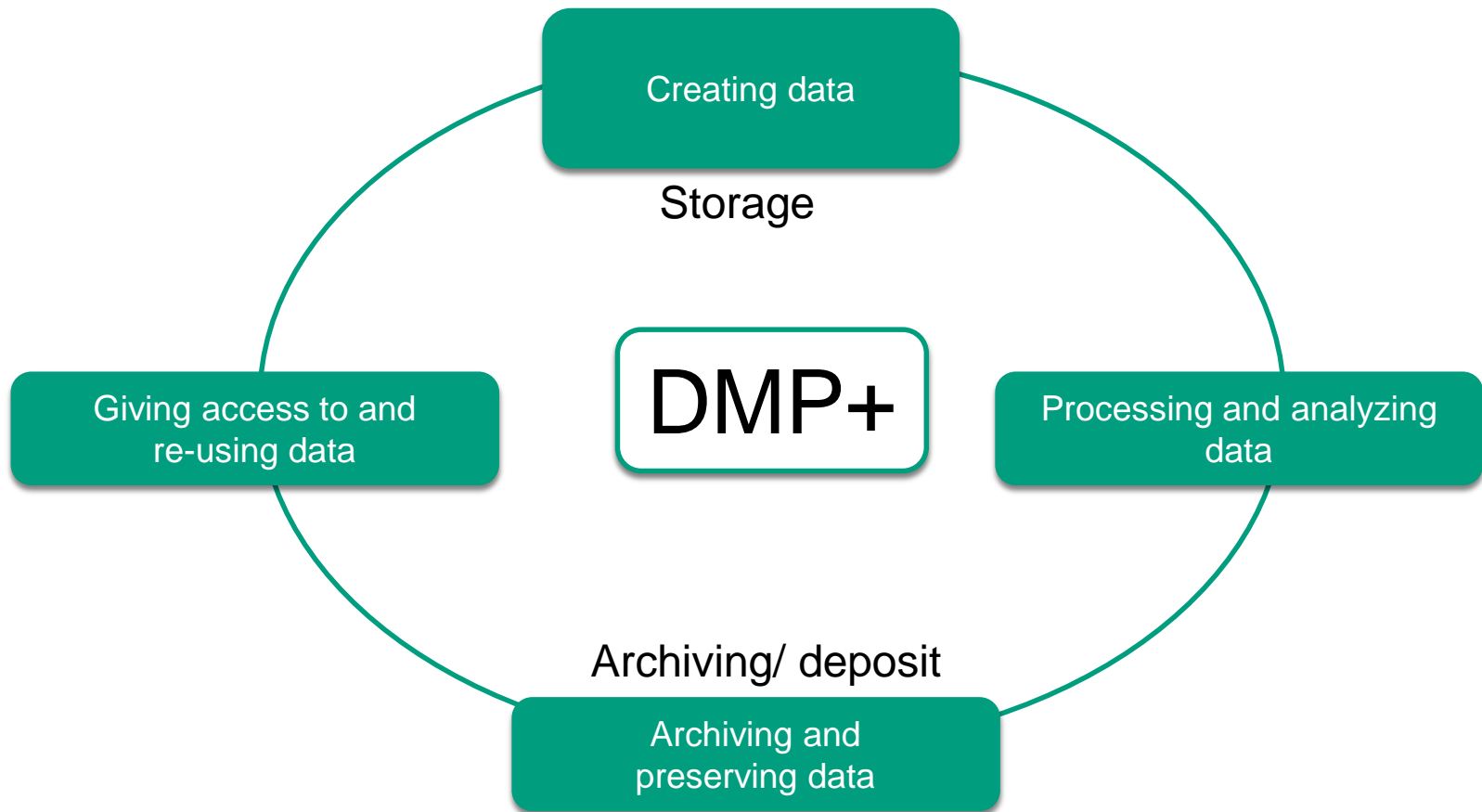
Data Management Plans (DMP)

- A Data Management Plan (DMP) should describe:

  – Type and scope of research data generated in a project

  – How the data will be stored

  – How the data will be archived

  – How data will be made available (if possible) after the project is completed

- DMP's must be according to the FAIR principles.

- **NMBU recommends NSD's Data Management Plan (Feide logon)**

Policy and guidelines

- [National strategy on access to and sharing of research data](#) (Ministry of Education and Research Aug 2017)

- [Policy for Open Access to Research Data](#) (The Research Council of Norway Dec 2017)

- [Guidelines Research Data Management at NMBU](#) (Apr 2018)

Webpages

Canvas course

- https://nmbu.instructure.com/courses/4825

Storage of data in ongoing projects

- **«Normal datasets»:** Data generated in ongoing projects must, as a rule, be stored at the NMBU server (W:).

- **External cooperation (should not be used as the primary place for storage):** Sharing data using Office365 and OneDrive – NMBU services

- **Large datasets and calculations:** Storage and computing power (calculations) at NIRD - UNINETT/ Sigma 2 service

- **Personal data with sensitive information:** Storage at Tjenester for Sensitive Data (TSD) – UiO service

- **Collection of servey data og interviews**: Nettskjema – UiO service

Deposit or archiving data

- Research data upon which scientific publications is based must be archived in national or international archives.

- «**Normal datasets**»: As of January 2019 students and researchers at NMBU can deposit data in NMBU Open Research Data – NMBU service (University Library)

- **Large datasets:** Deposit of data at NIRD - UNINETT/ Sigma 2 service

- **Personal data with sensitive information:** Deposit at Norsk Senter for Forskningsdata (NSD)

- It is also possible to deposit data in other national, international and domain specific archives compliant to international standards (FAIR).

- Recommendation - Do not deposit your data via journals!

Making data available - data sharing

All research data must be archived, however not all data COULD be made openly available.

- *Safety measures*

- *Personal data*

- *Other legal matters*

- *Commercial provisions*

- *Other conditions*

«It should be known that you have a data set, but others should not necessarily have full open access to the (raw) data»

Data Management Plan (DMP)

FAIR principles

- FAIR is an acronym for the words Findable, Accessible, Interoperable og Reusable (gjenfinnbare, gjenbrukbare, skal kunne håndteres maskinelt og ha et konsistent vokabular)

- Research data must be of a quality enabling it to be found and possible to reuse.

- Both **data and metadata** must be in abled for mechanical handling and that consistent vocabulary is used (interoperable).

- The Archives must fulfill the FAIR principles.

- The Data Management Plans must be according to the FAIR principles.

Privacy and research

Privacy advisor for NMBU:

- Norsk senter for forskningsdata (NSD) works as a **privacy advisor** for projects undertaken by students and employees at NMBU and who will handle research data with personal information.

- The NMBU contact person for research with personal information is Jan Olav Aarflot from the Research Support Office.

- NMBU also has a Data Protection Officer (Deliotte)

Data protection in research

Duty to report

If you are to handle personal data in a research project this has to be reported to NSD. Check if you are required to report your project here.

Storage of research data with personal information (personal data) may be done at Tjenester for Sensitive Data (TSD).

Research data with personal information may be **archived/ deposited** at NSD.

NMBU guidelines

- The project leader have filled in a Data Management Plan (DMP) at the start of a project (continuous process)
- Data is stored at NMBU server or at national/ international platforms in ongoing projects.
- Data is tagged with metadata.
- Data is deposited in archives at the end of a project/ publication.
- Data is made open and available <u>when/ if</u> possible.

- Data is only stored at the local hard drive (C: disk).
- Data is only stored at Office365
- Data is only stored at an external hard drive.
- Data is stored in Dropbox.

Questions and comments?