Requirements
from funding bodies & institutions

Korbinian Bösl
Data management coordinator
ELIXIR Norway/Digital Life Norway

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

19/12/2017

National strategy on access to and sharing of research data

Research data must be as open as possible, as closed as necessary

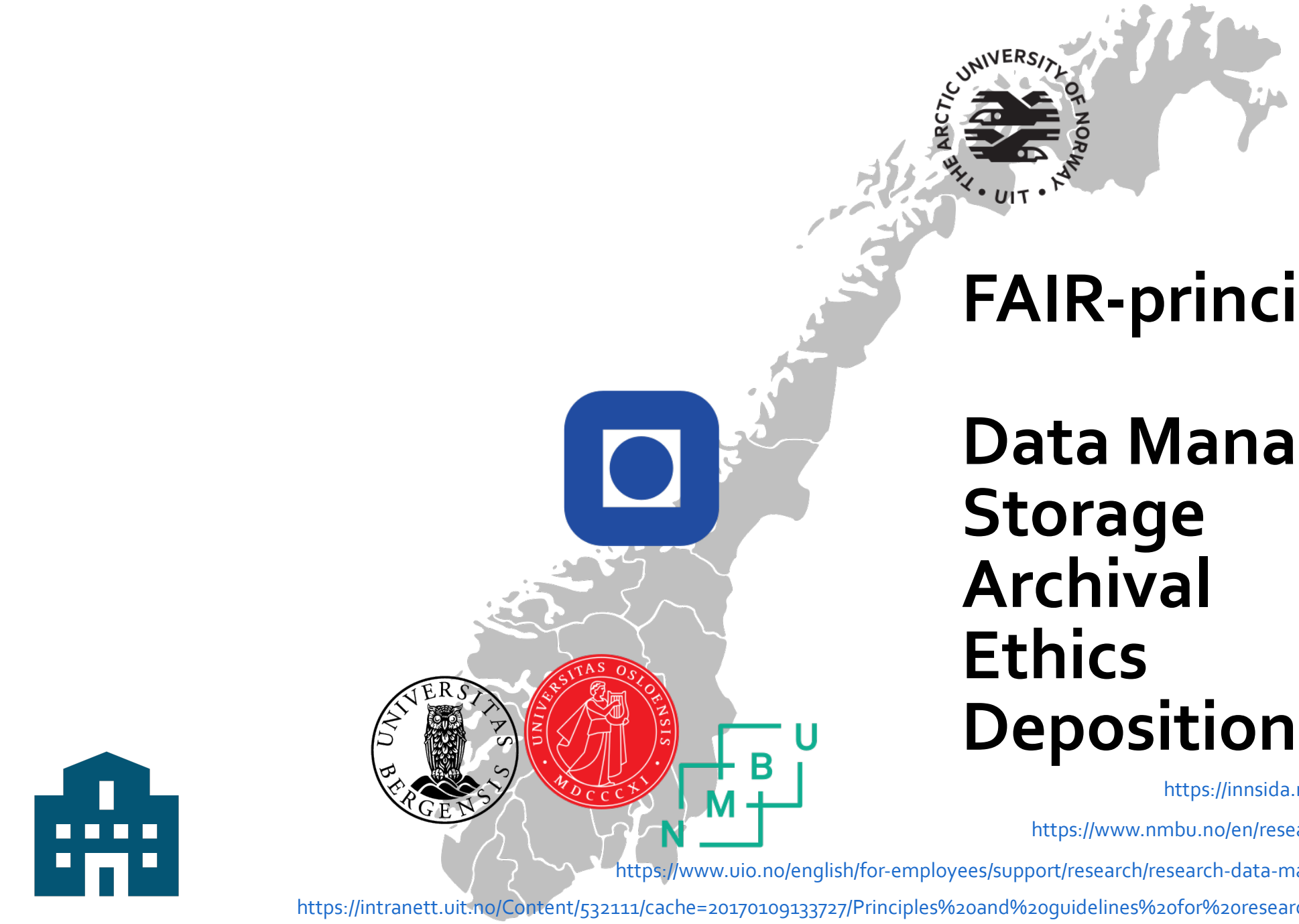
Research data should be managed and curated to take full advantage of their potential.

Decisions concerning archiving and management of research data must be taken within the research community

…
The Government expects:

the research institutions to develop procedures for (i) approving data management plans
…

https://www.regjeringen.no/en/dokumenter/national-strategy-on-access-to-and-sharing-of-research-data/id2582412/



FAIR-principles

Data Management Plan
Storage
Archival
Ethics
Deposition

https://innsida.ntnu.no/wiki/-/wiki/English/NTNU+Open+Data

https://www.nmbu.no/en/research/for_researchers/researchdata/node/34680

https://www.uio.no/english/for-employees/support/research/research-data-management/policies-and-guidelines/index.html

https://intranett.uit.no/Content/532111/cache=20170109133727/Principles%20and%20guidelines%20for%20research%20management%20at%20UiT_010917.pdf

The Research Council of Norway's Policy for Open Access to Research Data

December 2017

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

Research data…

The Research Council of Norway's Policy for Open Access to Research Data

December 2017

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

The Research Council of Norway's Policy for Open Access to Research Data

December 2017

Research data...

...must be stored/archived in a safe and secure manner.

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

The Research Council of Norway's Policy for Open Access to Research Data

December 2017

Research data...

...must be stored/archived in a safe and secure manner.

...must be made accessible for reuse.

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

The Research Council of Norway's Policy for Open Access to Research Data

December 2017

Research data...

- ...must be stored/archived in a safe and secure manner.
- ...must be made accessible for reuse.
- ...should be made accessible at an early stage [latest at publication]

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

The Research Council of Norway's Policy for Open Access to Research Data

December 2017

Research data...

...must be stored/archived in a safe and secure manner.

...must be made accessible for reuse.

...should be made accessible at an early stage [latest at publication]

...must be accompanied by standardised metadata.

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

The Research Council of Norway's Policy for Open Access to Research Data

December 2017

Research data...

- ...must be stored/archived in a safe and secure manner.
- ...must be made accessible for reuse.
- ...should be made accessible at an early stage [latest at publication]
- ...must be accompanied by standardised metadata.
- ...must be provided with a license for access, reuse and redistribution.

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

The Research Council of Norway's Policy for Open Access to Research Data

December 2017

Research data...

- ...must be stored/archived in a safe and secure manner.
- ...must be made accessible for reuse.
- ...should be made accessible at an early stage [latest at publication]
- ...must be accompanied by standardised metadata.
- ...must be provided with a license for access, reuse and redistribution.
- ...should preferably be made accessible at no charge.

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

The Research Council of Norway's Policy for Open Access to Research Data

December 2017

Research data...

- ...must be stored/archived in a safe and secure manner.
- ...must be made accessible for reuse.
- ...should be made accessible at an early stage [latest at publication]
- ...must be accompanied by standardised metadata.
- ...must be provided with a license for access, reuse and redistribution.
- ...should preferably be made accessible at no charge.
- ... must be described in a data management plan.

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

The Research Council of Norway

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/se_rdm_practical_guide_final.pdf

The Research Council of Norway

Description & Re-use

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/se_rdm_practical_guide_final.pdf

The Research Council of Norway

Description & Re-use

Documentation & Data quality

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/se_rdm_practical_guide_final.pdf

The Research Council of Norway

Description & Re-use

Documentation & Data quality

Storage & Backups

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/se_rdm_practical_guide_final.pdf

The Research Council of Norway

- Description & Re-use
- Documentation & Data quality
- Storage & Backups
- Legal & Ethical requirements

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/se_rdm_practical_guide_final.pdf

The Research Council of Norway

- Description & Re-use
- Documentation & Data quality
- Storage & Backups
- Legal & Ethical requirements
- Sharing & Preservation

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/se_rdm_practical_guide_final.pdf

The Research Council of Norway

- Description & Re-use
- Documentation & Data quality
- Storage & Backups
- Legal & Ethical requirements
- Sharing & Preservation
- Responsibilities & Resources

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/se_rdm_practical_guide_final.pdf

The Research Council of Norway

- Description & Re-use
- Documentation & Data quality
- Storage & Backups
- Legal & Ethical requirements
- Sharing & Preservation
- Responsibilities & Resources
- Alignment with FAIR-principles

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/se_rdm_practical_guide_final.pdf

The Research Council of Norway

27.01.2021

Update by Science Europe

https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/

The Research Council of Norway

27.01.2021

Update by Science Europe

including evaluation rubric

https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/

The Research Council of Norway

27.01.2021

Update by Science Europe

including evaluation rubric

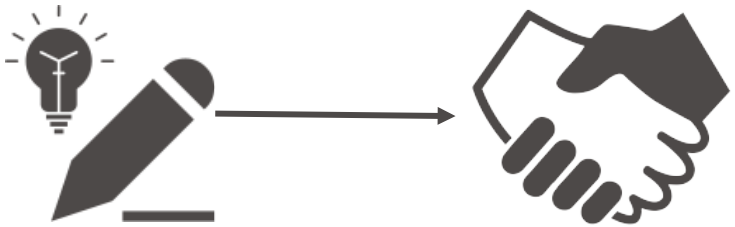
RCN does not [yet?] refer to the updated guide

https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/

The Research Council of Norway

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

The Research Council of Norway



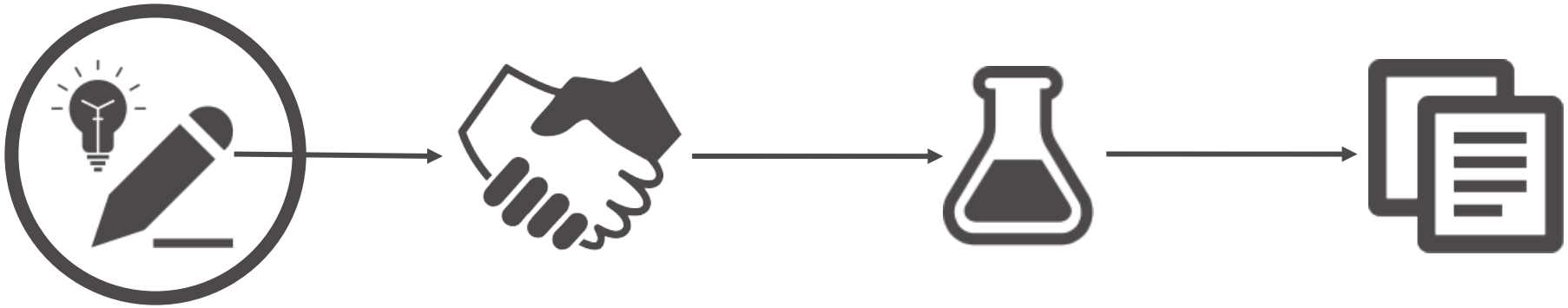
Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

The Research Council of Norway

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

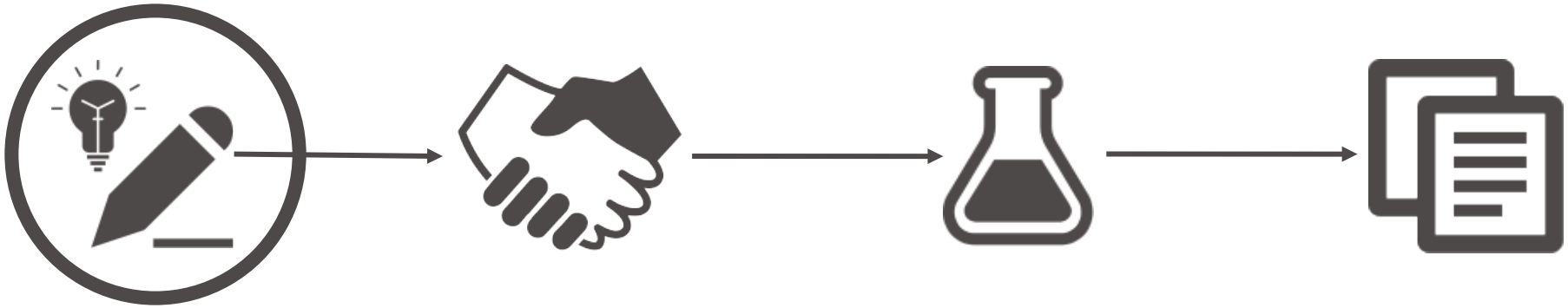
The Research Council of Norway

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



No DMP required

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



No DMP required

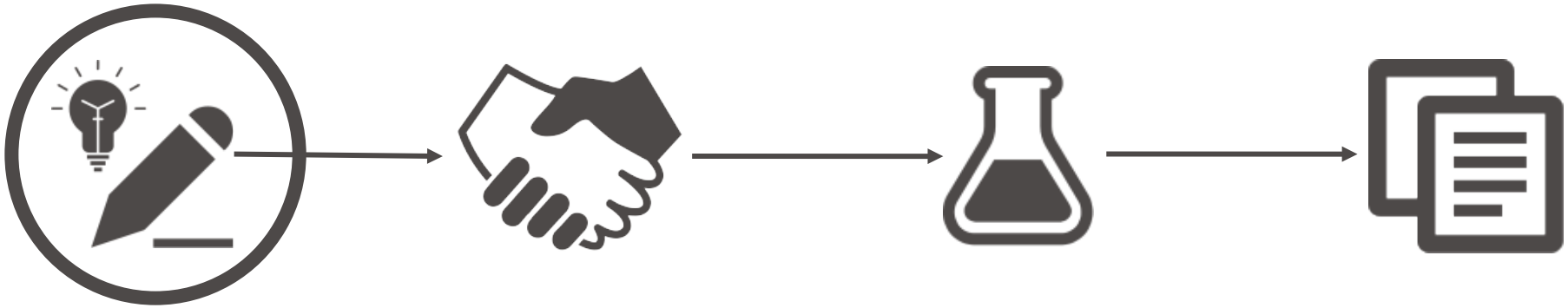
But you should consider:

§§ Ethical and Legal aspects

Storage and computing (budgeting?)

Budgeting for DM-personnel & time effort

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

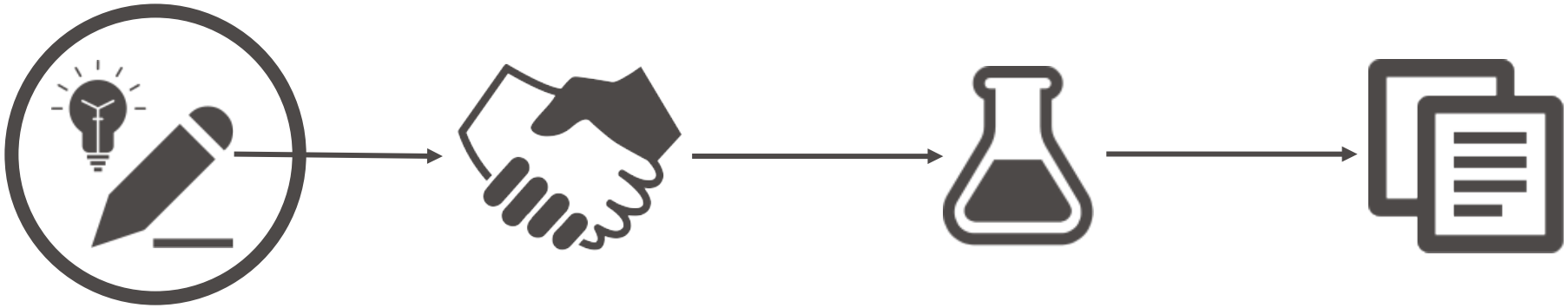


No DMP required

- Examples:

  REK approval necessary (for sharing of data?)

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



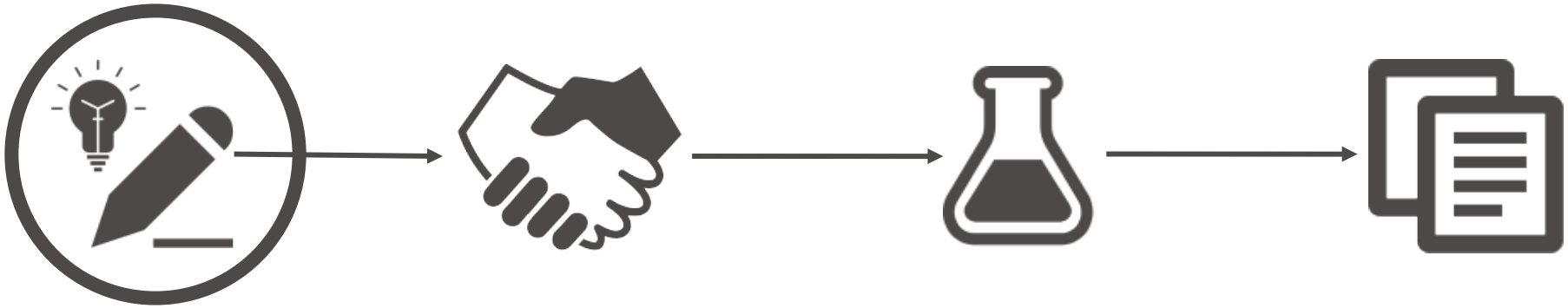
No DMP required

- Examples:

  REK approval necessary (for sharing of data?)

  GDPR considerations

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



No DMP required

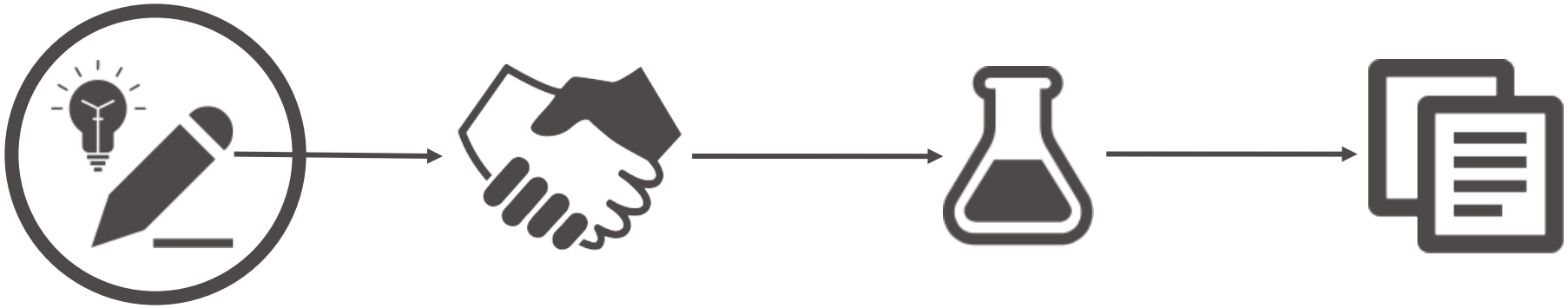
- Examples:

  REK approval necessary (for sharing of data?)

  GDPR considerations

  IPR aspects

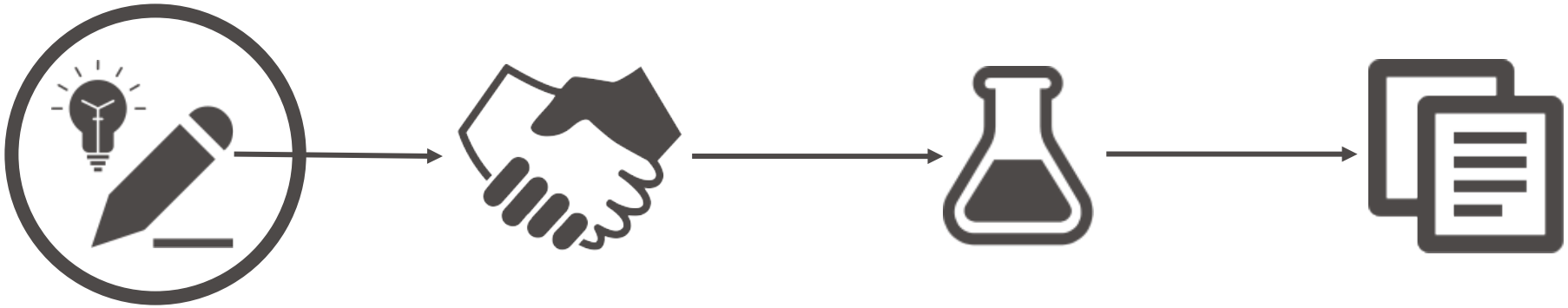
Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



No DMP required

- Examples:
  - REK approval necessary (for sharing of data?)
  - GDPR considerations
  - IPR aspects
  - Which Research Ethical Guidelines apply for this project?

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

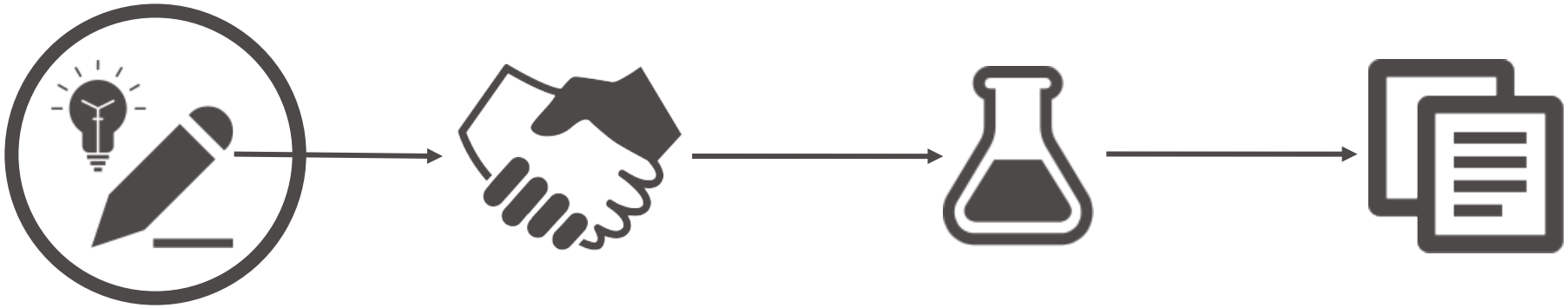


No DMP required

Examples:

Is access to computing/storage secured?

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



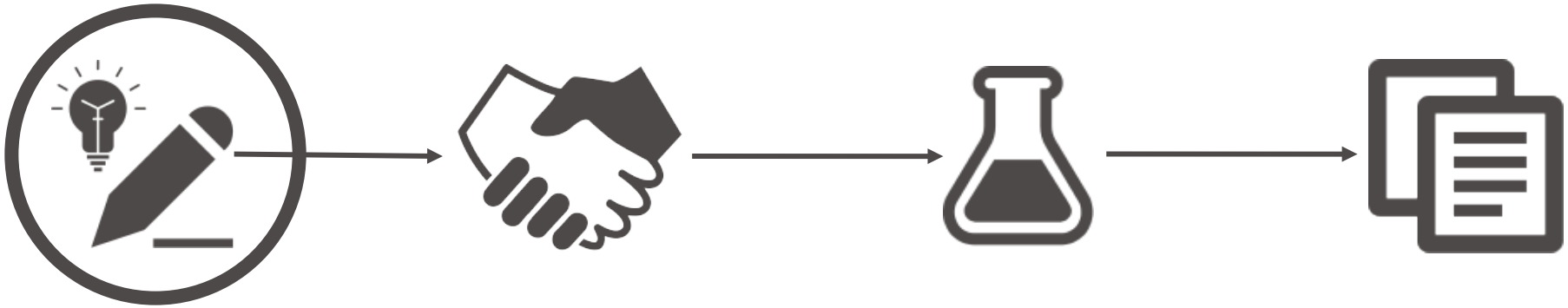
No DMP required

Examples:

Is access to computing/storage secured?

Will we have to pay for data storage (of sensitive data?)

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



No DMP required

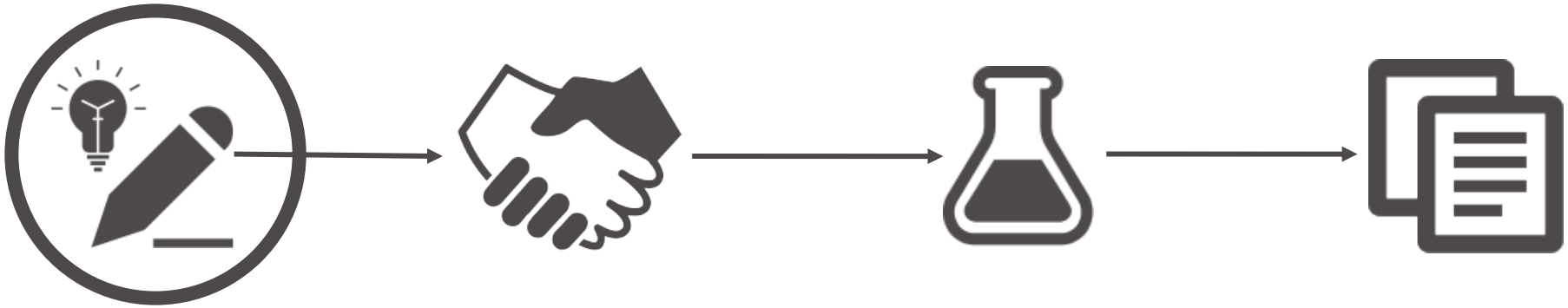
Examples:

Is access to computing/storage secured?

Will we have to pay for data storage (of sensitive data?)

How will data be accessed & transferred?

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

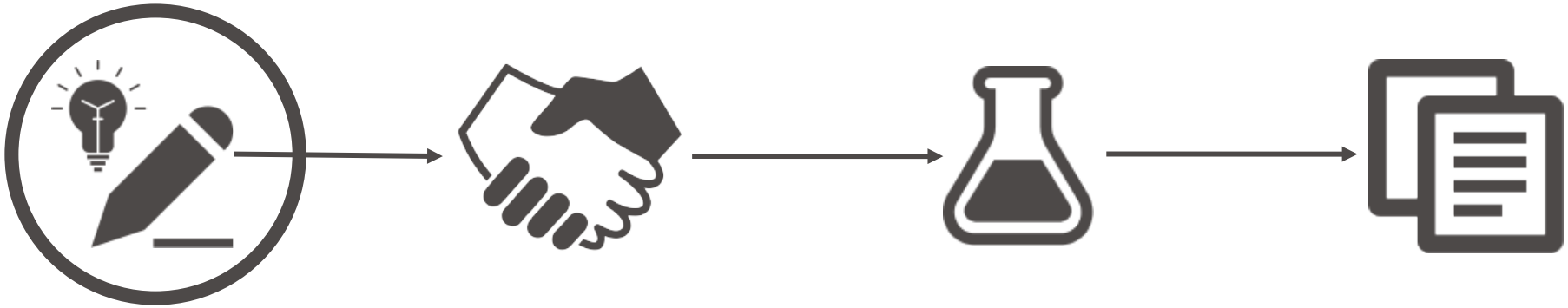


No DMP required

Examples:

Will we need help from a Data Steward (and budget for this)?

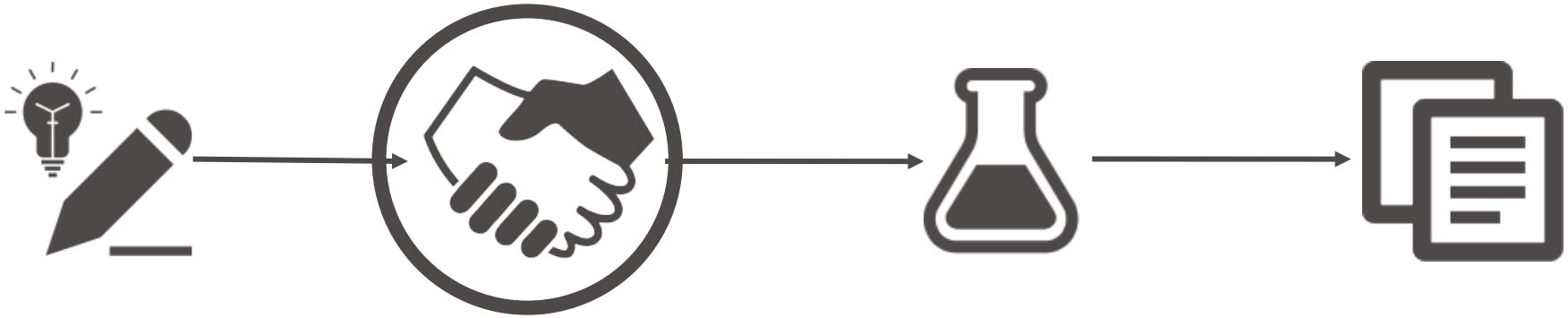
Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



No DMP required

- Examples:
  Will we need help from a Data Steward (and budget for this)?
  Will we need with data analysis, data warehousing or deposition?

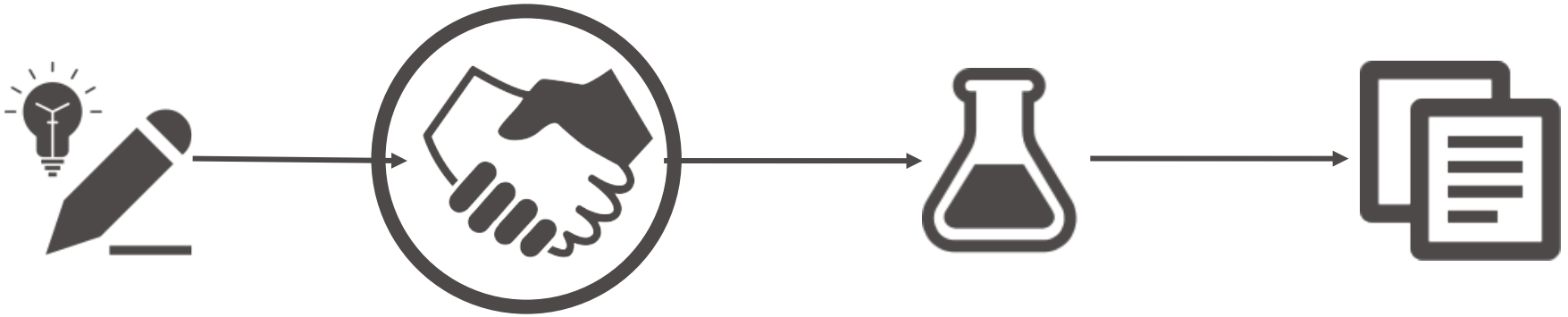
Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



Full DMP required

If you decide that a data management plan is not needed, you must provide an explanation.

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

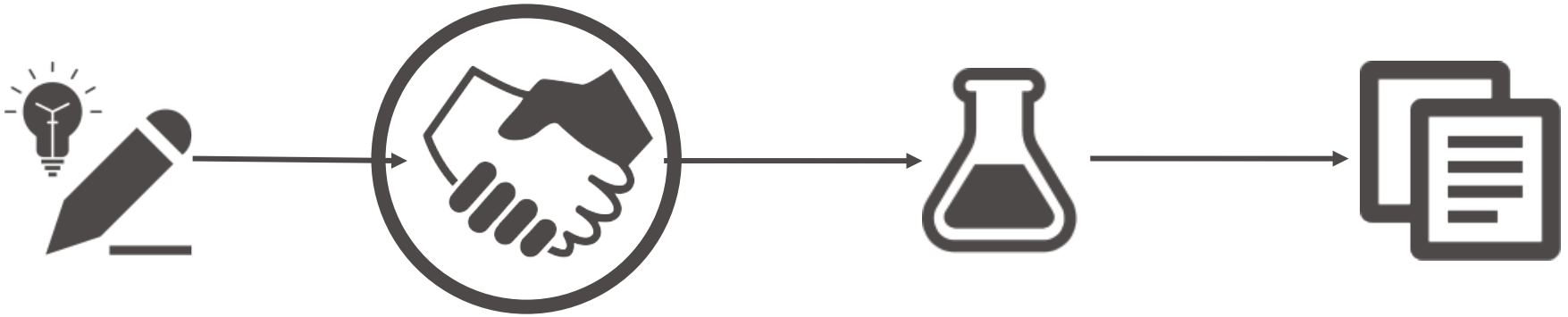


Full DMP required

If you decide that a data management plan is not needed, you must provide an explanation.

- I don’t know of any - do you?

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



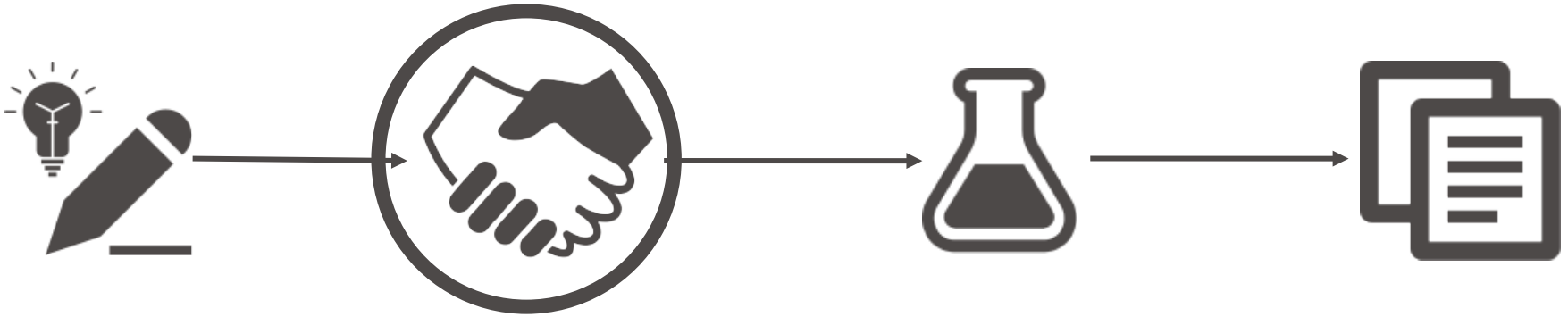
Full DMP required

If you decide that a data management plan is not needed, you must provide an explanation.

- I don’t know of any - do you?

Even if you only reuse others data, you should describe where and how it is accessible & how your processed data can be accessed or reproduced?

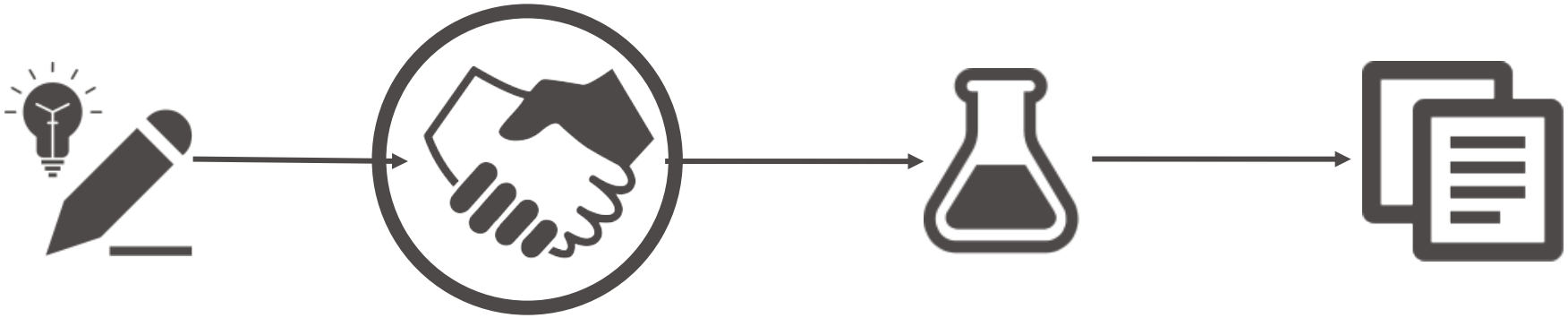
Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



Full DMP required

Documentation, formats, volume

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

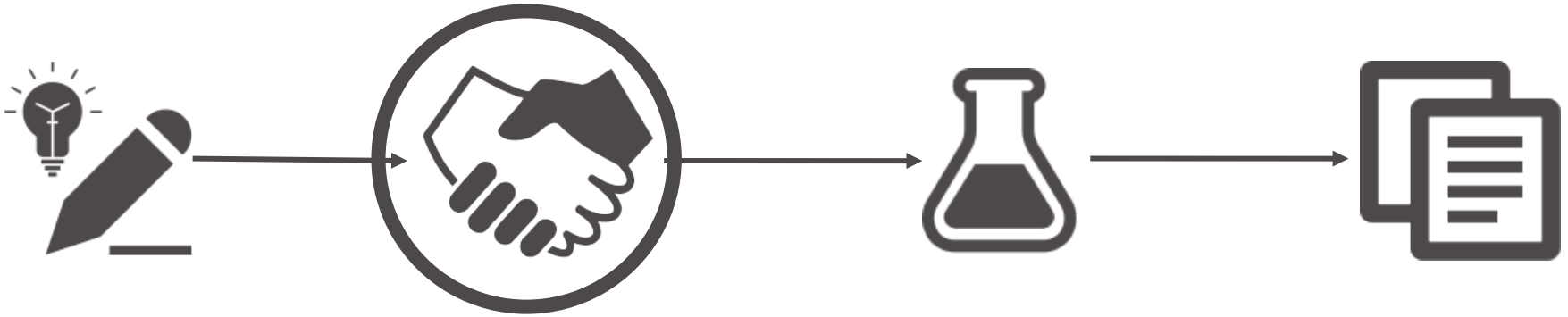


Full DMP required

Documentation, formats, volume

Quality assurance including Metadata standards

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



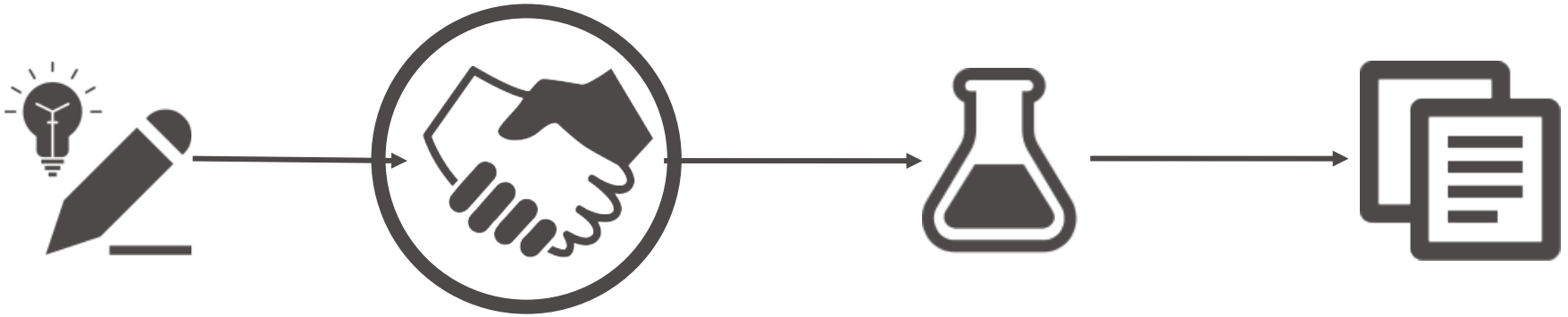
Full DMP required

Documentation, formats, volume

Quality assurance including Metadata standards

Backup during project

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



Full DMP required

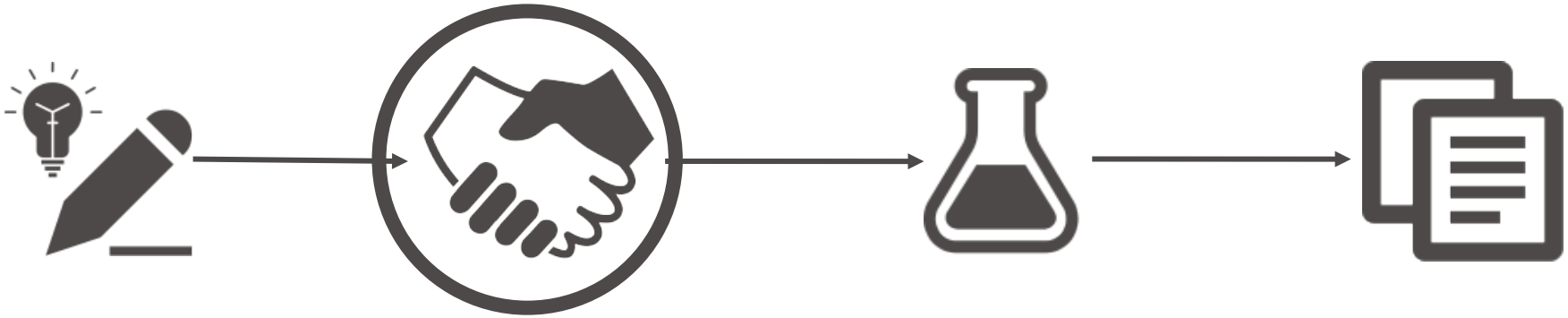
Documentation, formats, volume

Quality assurance including Metadata standards

Backup during project

Sharing & Preservation

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



Full DMP required

Documentation, formats, volume

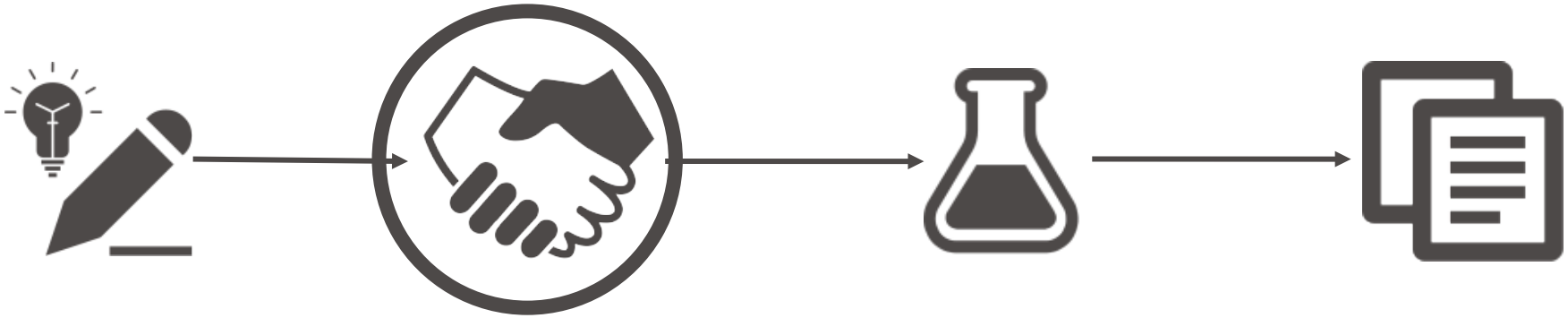
Quality assurance including Metadata standards

Backup during project

Sharing & Preservation

Ethical and Legal aspects - including IPR

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



Full DMP required

Documentation, formats, volume

Quality assurance including Metadata standards

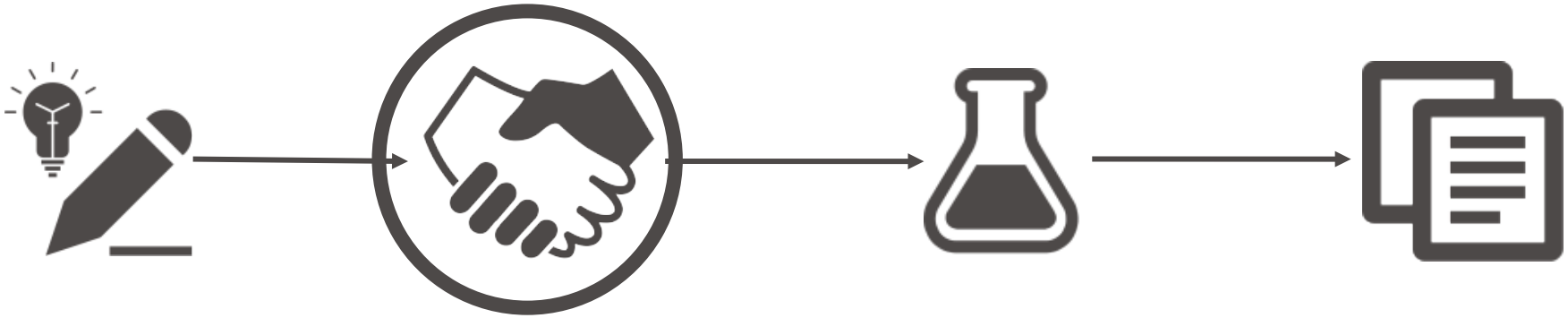
Backup during project

Sharing & Preservation

Ethical and Legal aspects - including IPR

Who is responsible in the project?

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

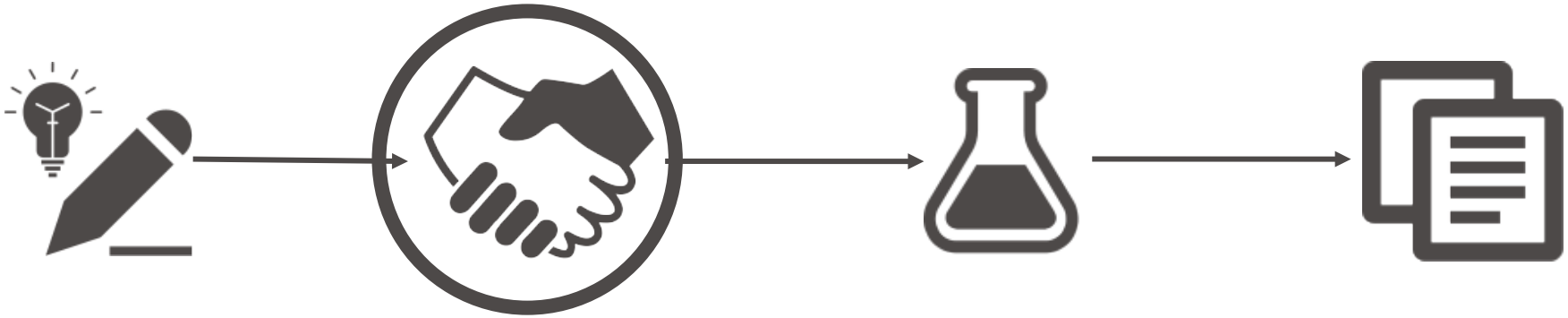


Full DMP required

Documentation, formats, volume
Quality assurance including Metadata standards
Backup during project
Sharing & Preservation
Ethical and Legal aspects - including IPR
Who is responsible in the project?

To which trustworthy repository will the data be submitted?

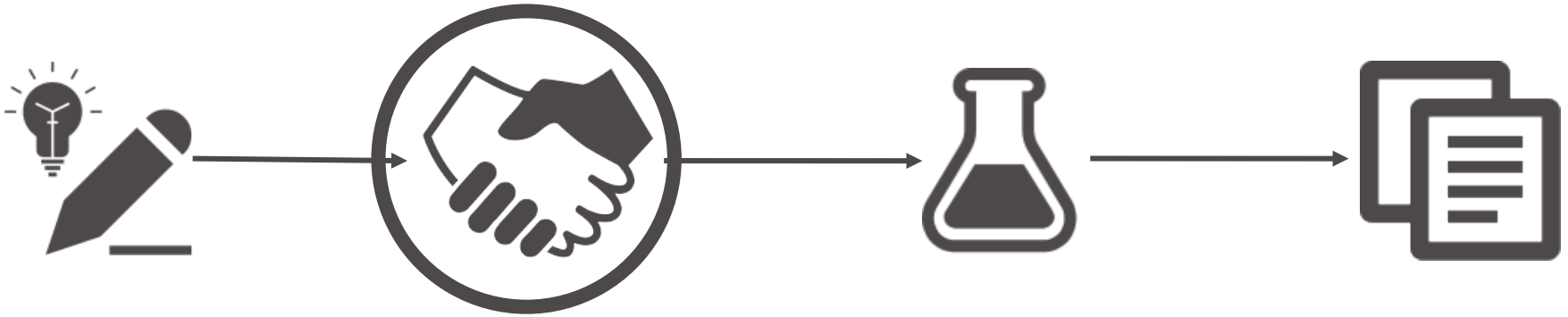
Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



Full DMP required

Data management plans are to be made public and openly accessible.

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



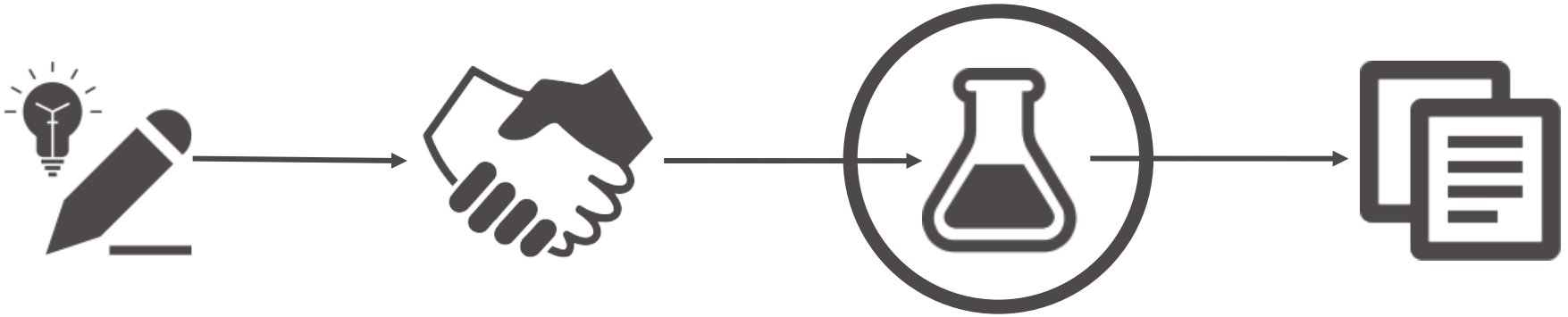
Full DMP required

Data management plans are to be made public and openly accessible.

One possibility:

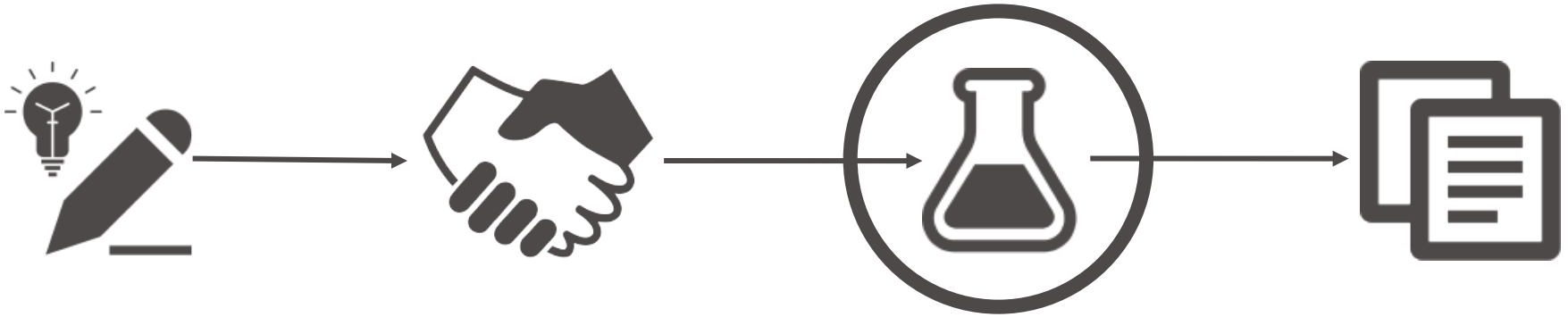
zenodo

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



DMP is constantly updated

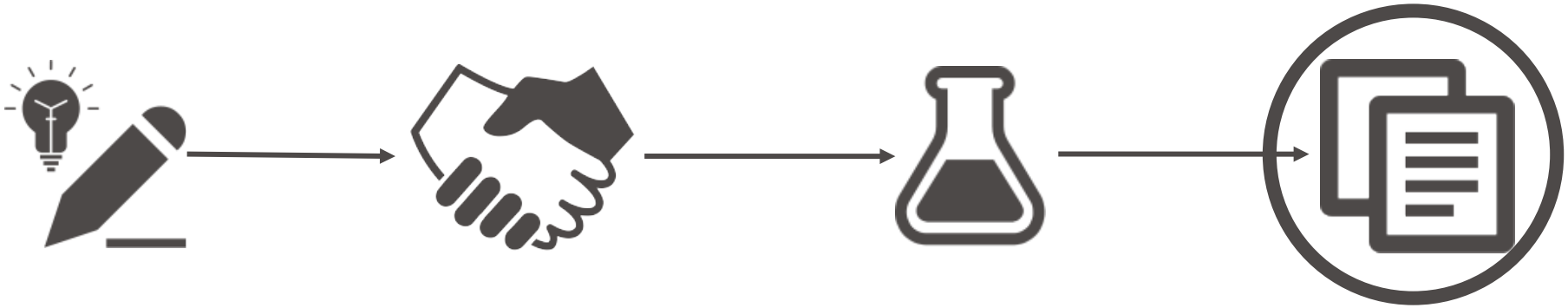
Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



DMP is constantly updated

… changes to the plan don’t have to be reported to RCN

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License



Final version of the data management plan in connection with the final report of the project.

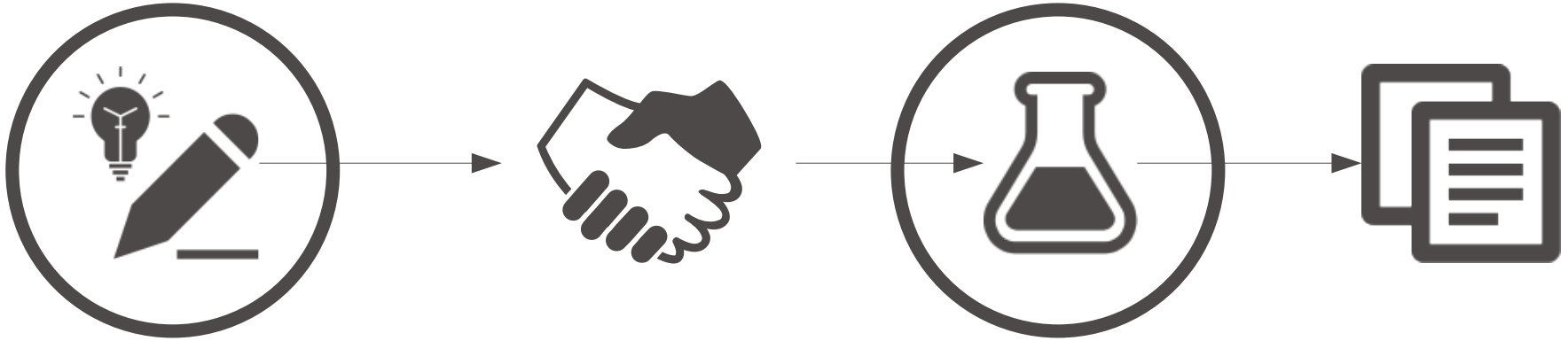
Data is deposited to trustworthy repository

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License

European Commission

Horizon 2020 → Horizon Europe

Open Research Data Pilot (ORD pilot)
Default since 2017 → mandatory 2021



DMP
outline

DMP

- **After 6 month**
- **Update upon significant changes**

Horizon 2020 → Horizon Europe

Data summary

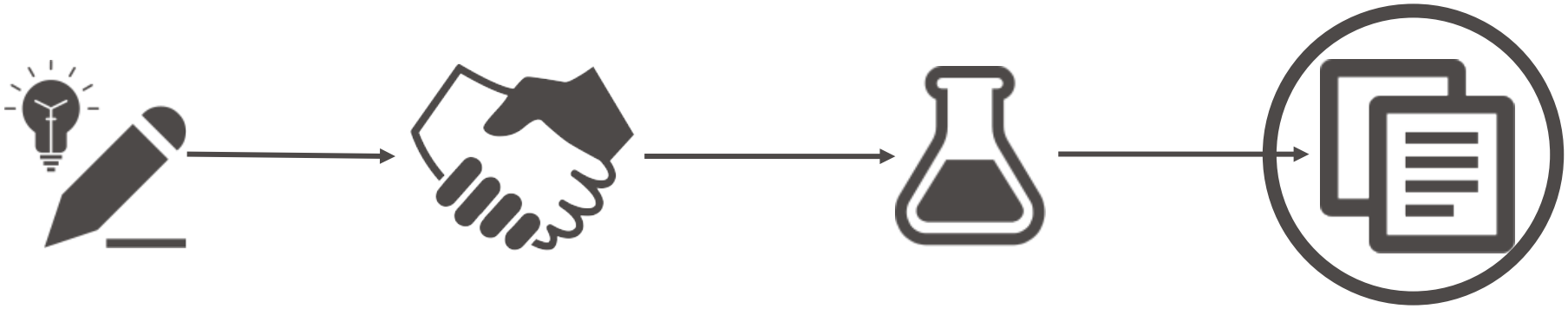
FAIR data implementation

Resources

Data security

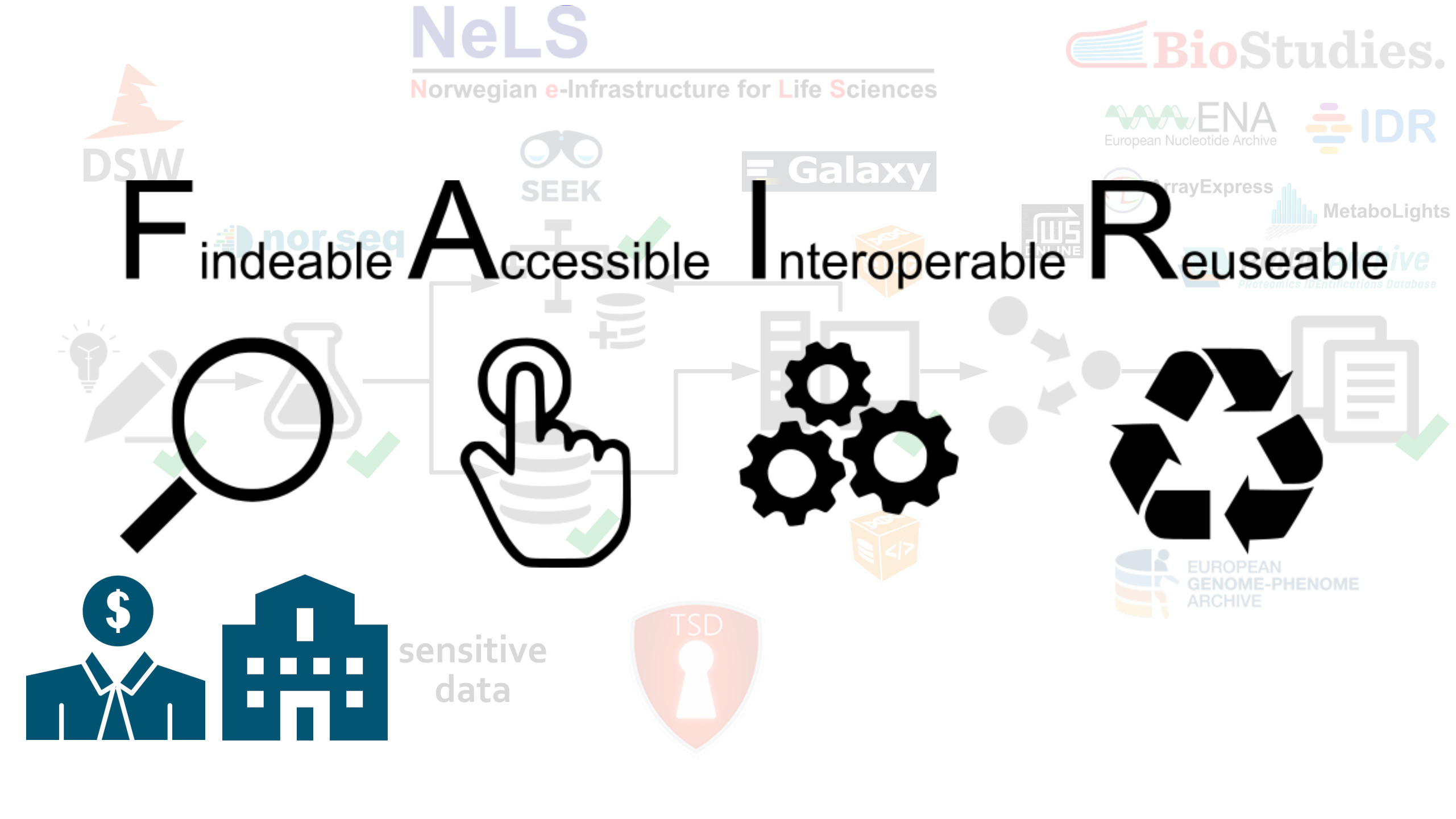
Ethics

https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf



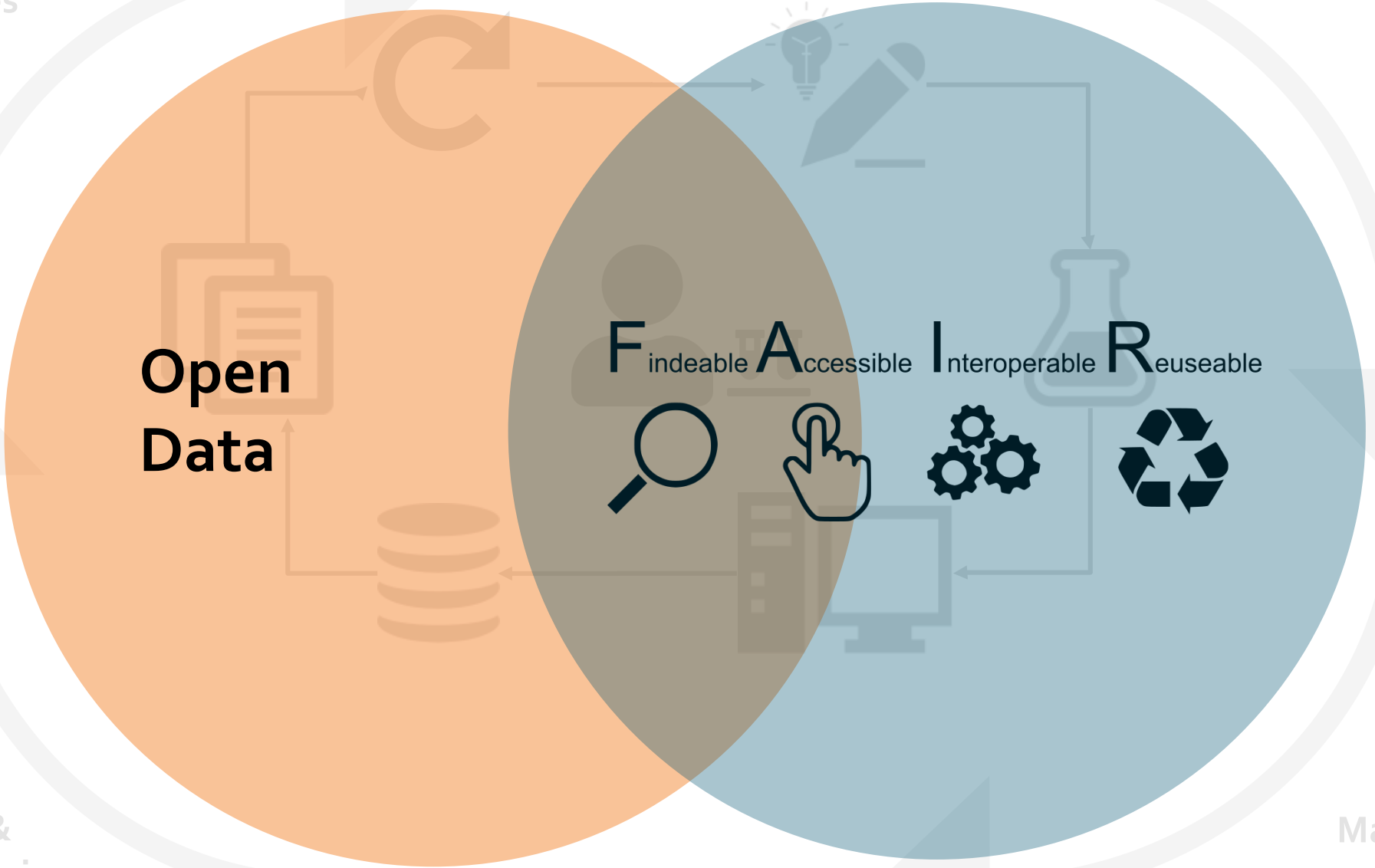
In addition major publishers also ask your data to be deposited

Illustrative Icons from Font Awesome licensed under Creative Commons Attribution 4.0 International License


NeLS
Norwegian e-Infrastructure for Life Sciences
BioStudies.
ENA
European Nucleotide Archive
IDR
DSW
SEEK
Galaxy
ArrayExpress
MetaboLights
nor seq
Findeable
Accessible
Interoperable
Reuseable
EUROPEAN
GENOME-PHENOME
ARCHIVE
sensitive
data
TSD

Data catalogues & registries

Data creation & deposit



Archives & Data repositories

Managing active data

“As open as possible - as closed as necessary”

SCIENTIFIC DATA

Amended: Addendum

OPEN

SUBJECT CATEGORIES

» Research data

» Publication characteristics

Comment: The FAIR Guiding Principles for scientific data management and stewardship

Mark D. Wilkinson *et al.*[#]

Received: 10 December 2015

Accepted: 12 February 2016

Published: 15 March 2016

There is an urgent need to improve the infrastructure supporting the reuse of scholarly data. A diverse set of stakeholders—representing academia, industry, funding agencies, and scholarly publishers—have come together to design and jointly endorse a concise and measureable set of principles that we refer to as the FAIR Data Principles. The intent is that these may act as a guideline for those wishing to enhance the reusability of their data holdings. Distinct from peer initiatives that focus on the human scholar, the FAIR Principles put specific emphasis on enhancing the ability of machines to automatically find and use the data, in addition to supporting its reuse by individuals. This Comment is the first formal publication of the FAIR Principles, and includes the rationale behind them, and some exemplar implementations in the community.

Mark D. Wilkinson et al. https://doi.org/10.1038/sdata.2016.18 licensed under Creative Commons Attribution 4.0 International License

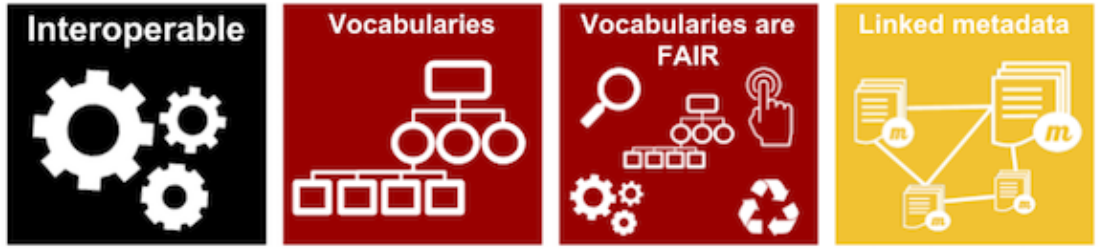
FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

Identifiers.org

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

Identifiers.org

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License



community metadata standards

+

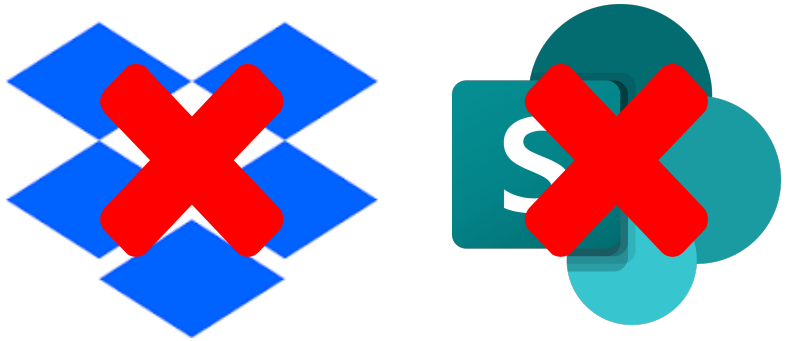
FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

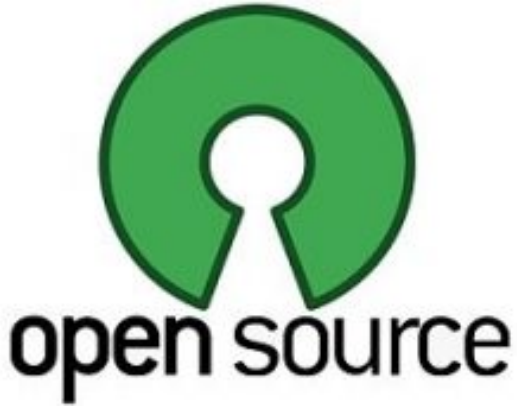
elixir Deposition Databases

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

HTTP, FTP, SMTP, …





FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

EUROPEAN
GENOME-PHENOME
ARCHIVE

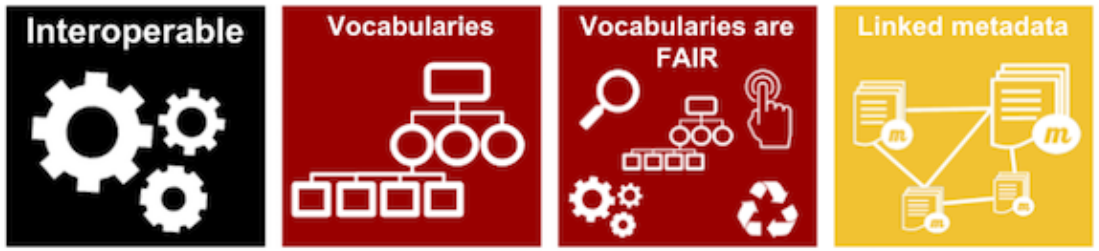
FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

EUROPEAN
GENOME-PHENOME
ARCHIVE

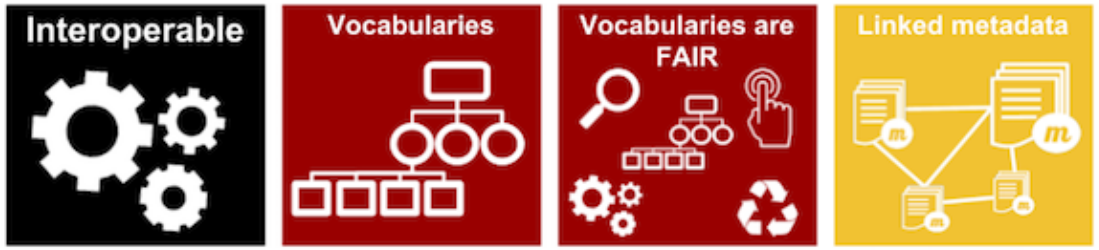
FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

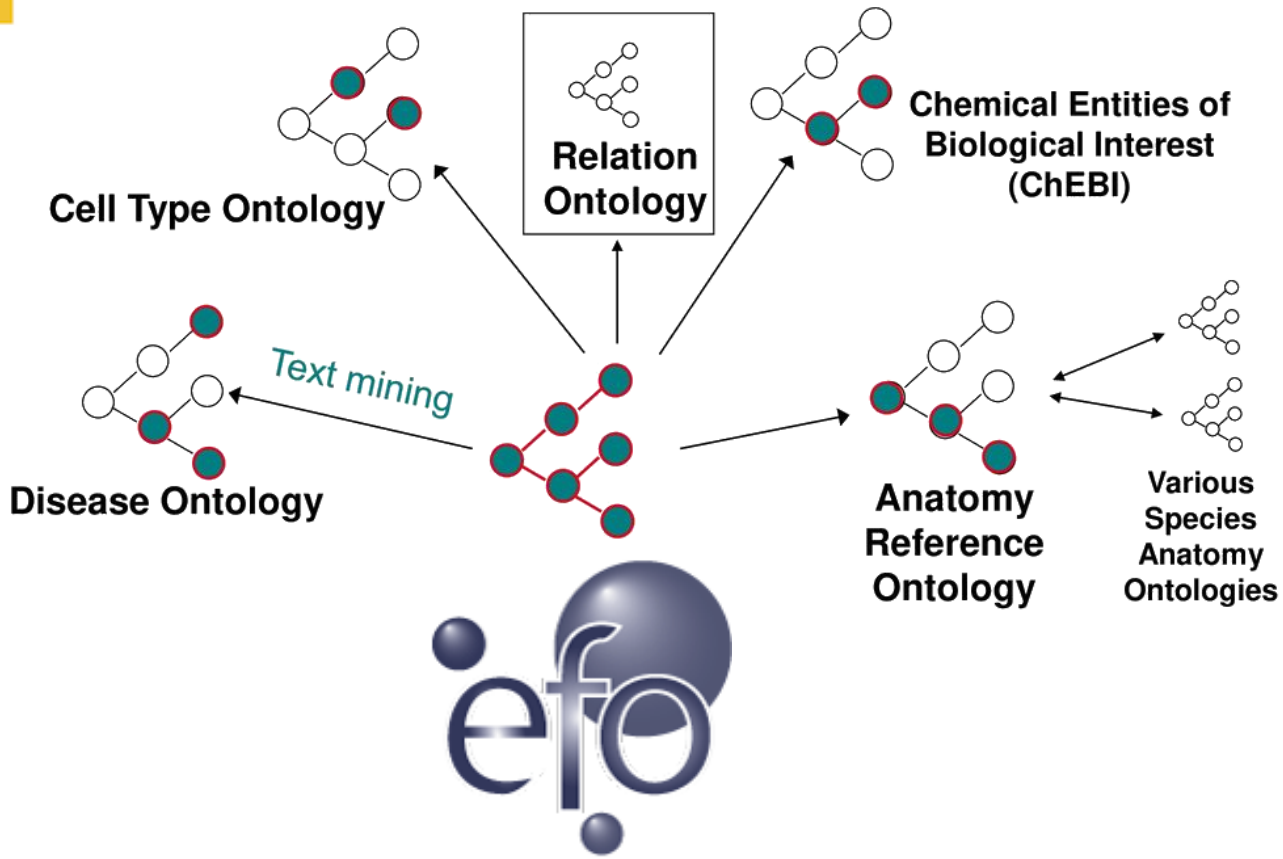
EUROPEAN
GENOME-PHENOME
ARCHIVE

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

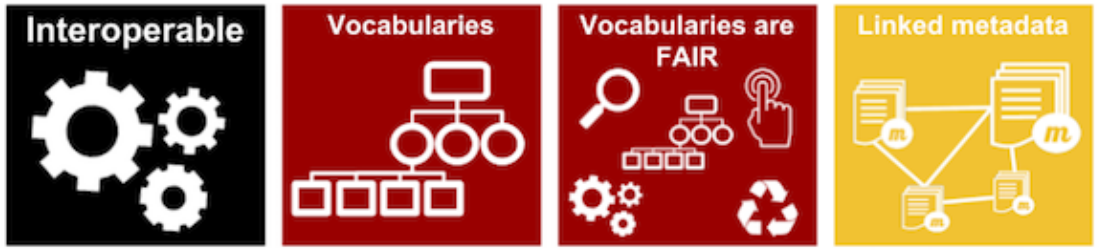


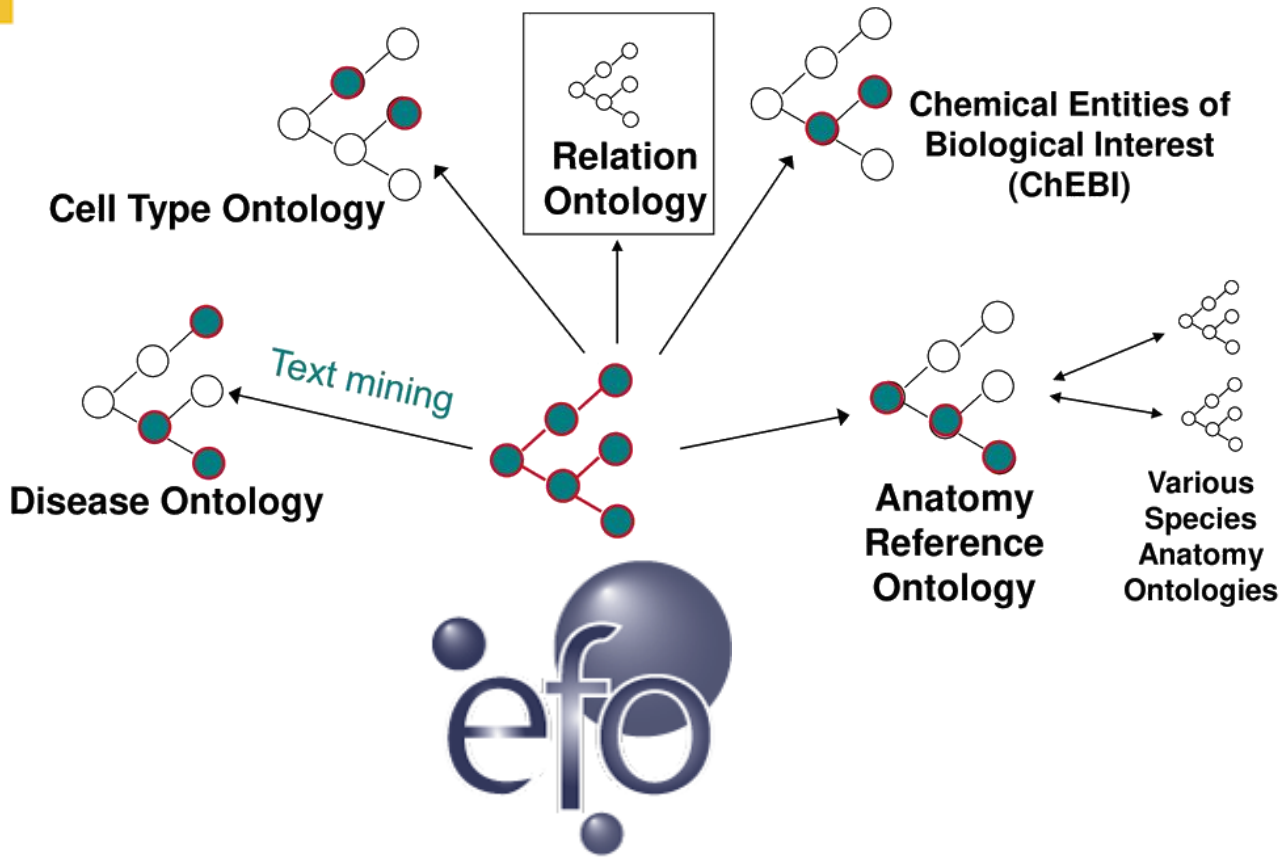
FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License



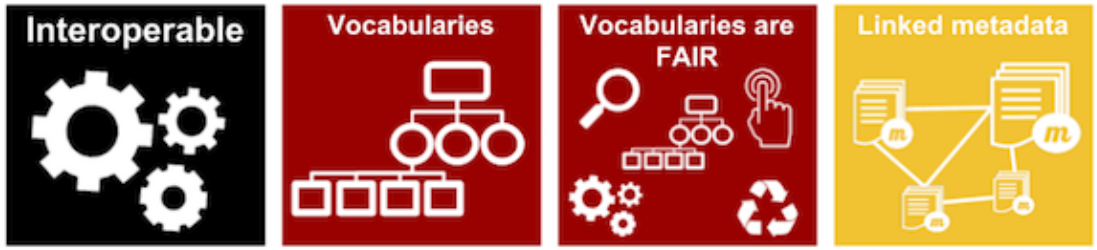


FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License





FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License



UniProt


```
−<rdf:RDF xml:base="http://purl.uniprot.org/uniprot/">
  −<owl:Ontology rdf:about="http://purl.uniprot.org/uniprot/">
      <owl:imports rdf:resource="http://purl.uniprot.org/core/"/>
    </owl:Ontology>
  −<rdf:Description rdf:about="http://purl.uniprot.org/uniprot/C8V1L6">
      <rdf:type rdf:resource="http://purl.uniprot.org/core/Protein"/>
      <reviewed rdf:datatype="http://www.w3.org/2001/XMLSchema#boolean">false</reviewed>
      <created rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2009-11-03</created>
      <modified rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2020-02-26</modified>
      <version rdf:datatype="http://www.w3.org/2001/XMLSchema#int">56</version>
      <mnemonic>C8V1L6_EMENI</mnemonic>
      <citation rdf:resource="http://purl.uniprot.org/citations/16372000" rdf:ID="_C8V1L6-citation-16372000"/>
      <citation rdf:resource="http://purl.uniprot.org/citations/19146970" rdf:ID="_C8V1L6-citation-19146970"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/embl-cds/CBF71237.1"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/string/162425.CADANIAP00007466"/>
      <rdfs:seeAlso rdf:resource="http://rdf.ebi.ac.uk/resource/ensembl.transcript/CBF71237"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/hogenom/CLU_021795_2_0_1"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/inparanoid/C8V1L6"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/oma/RRMTQWD"/>
      <rdfs:seeAlso rdf:resource="http://purl.orthodb.org/odbgroup/896650at2759"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/gene3d/3.30.70.330"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/interpro/IPR012677"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/interpro/IPR035979"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/interpro/IPR000504"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/interpro/IPR006529"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/pfam/PF00076"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/smart/SM00360"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/supfam/SSF54928"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/tigrfams/TIGR01642"/>
      <rdfs:seeAlso rdf:resource="http://purl.uniprot.org/prosite/PS50102"/>
      <recommendedName rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#SIPA684070976E05B6F"/>
      <organism rdf:resource="http://purl.uniprot.org/taxonomy/227321" rdf:ID="_kb.C8V1L6_up.organism_6AB496E3E603B26C"/>
      <encodedBy rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#gene-MD5E291E4AD4C1ECECBE4D4D7FE32B9BC83"/>
      <annotation rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#SIPDCBF72D556B4C17A"/>
      <annotation rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#SIP600E1880AC5770AE"/>
      <annotation rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#SIP49AA1FD79CA811F6"/>
      <annotation rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#SIP7BCFB6F4503520CE" rdf:ID="_kb.C8V1L6_up.annotation_A9BB48146985900B"/>
      <annotation rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#SIP8811C283D149FFCC" rdf:ID="_kb.C8V1L6_up.annotation_6100E1840F3E6B30"/>
      <annotation rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#SIP1B2DE488903A2A87" rdf:ID="_kb.C8V1L6_up.annotation_4F93D190499FD709"/>
      <annotation rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#SIP301EE22FBBD02E62" rdf:ID="_kb.C8V1L6_up.annotation_B4852F7C86362ED8"/>
      <annotation rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#SIP4A6D84E3CC0142B3" rdf:ID="_kb.C8V1L6_up.annotation_FE1C22F76AA453DB"/>
      <existence rdf:resource="http://purl.uniprot.org/core/Inferred_from_Homology_Existence"/>
      <classifiedWith rdf:resource="http://purl.uniprot.org/keywords/508" rdf:ID="_kb.C8V1L6_up.classifiedWith_27D8C345566F5B54"/>
      <classifiedWith rdf:resource="http://purl.uniprot.org/keywords/539" rdf:ID="_kb.C8V1L6_up.classifiedWith_66DE634CA7CD240C"/>
      <classifiedWith rdf:resource="http://purl.uniprot.org/keywords/1185" rdf:ID="_kb.C8V1L6_up.classifiedWith_239F467843ABCFE3"/>
      <classifiedWith rdf:resource="http://purl.uniprot.org/keywords/694" rdf:ID="_kb.C8V1L6_up.classifiedWith_7EE88433D3D268B0"/>
      <classifiedWith rdf:resource="http://purl.obolibrary.org/obo/GO_0000243" rdf:ID="_kb.C8V1L6_up.classifiedWith_obo.GO_0000243"/>
      <classifiedWith rdf:resource="http://purl.obolibrary.org/obo/GO_0016607" rdf:ID="_kb.C8V1L6_up.classifiedWith_obo.GO_0016607"/>
      <classifiedWith rdf:resource="http://purl.obolibrary.org/obo/GO_0071004" rdf:ID="_kb.C8V1L6_up.classifiedWith_obo.GO_0071004"/>
      <classifiedWith rdf:resource="http://purl.obolibrary.org/obo/GO_0089701" rdf:ID="_kb.C8V1L6_up.classifiedWith_obo.GO_0089701"/>
      <classifiedWith rdf:resource="http://purl.obolibrary.org/obo/GO_0008187" rdf:ID="_kb.C8V1L6_up.classifiedWith_obo.GO_0008187"/>
      <classifiedWith rdf:resource="http://purl.obolibrary.org/obo/GO_0030628" rdf:ID="_kb.C8V1L6_up.classifiedWith_obo.GO_0030628"/>
      <classifiedWith rdf:resource="http://purl.obolibrary.org/obo/GO_0006397" rdf:ID="_kb.C8V1L6_up.classifiedWith_obo.GO_0006397"/>
      <classifiedWith rdf:resource="http://purl.obolibrary.org/obo/GO_0008380" rdf:ID="_kb.C8V1L6_up.classifiedWith_obo.GO_0008380"/>
      <sequence rdf:resource="http://purl.uniprot.org/isoforms/C8V1L6-1"/>
      <attribution rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#attribution-4D7F72A356C1855D0A9FA246AE0C711F"/>
      <attribution rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#attribution-E3AA1198D64AFFBCC64F0CE694EA8E54"/>
      <attribution rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#attribution-C5B03FC1845F8B79A72469B45442767E"/>
      <attribution rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#attribution-0B18EE4B5423117D3F80B78128A3200F"/>
      <attribution rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#attribution-7062DEDA0DB9D7DF2A2BE7AD38A57019"/>
      <attribution rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#attribution-367221EA5BFC27A5AFE9D2DBD051489F"/>
      <attribution rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#attribution-7D5ABB862784077AC8F3594D561C3762"/>
      <attribution rdf:resource="http://purl.uniprot.org/uniprot/C8V1L6#attribution-374C4A047C446855CBD16DE1E6AE8AD6"/>
      <proteome rdf:resource="http://purl.uniprot.org/proteomes/UP000000560#Chromosome%20I"/>
    </rdf:Description>
```


FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

Describe the scope of your data: for what purpose was it generated/collected?

Mention any particularities or limitations about the data that other users should be aware of.

Specify the date of generation/collection of the data, the lab conditions, who prepared the data, the parameter settings, the name and version of the software used.

Is it raw or processed data?

Ensure that all variable names are explained or self-explanatory

Clearly specify and document the version of the archived and/or reused data.

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

Describe the scope of your data: for what purpose was it generated/collected?

Mention any particularities or limitations about the data that other users should be aware of.

Specify the date of generation/collection of the data, the lab conditions, who prepared the data, the parameter settings, the name and version of the software used.

Is it raw or processed data?

Ensure that all variable names are explained or self-explanatory

Clearly specify and document the version of the archived and/or reused data.

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

Ideal:

creative commons

OPEN KNOWLEDGE FOUNDATION

But also more closed license possible - has to be defined !

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

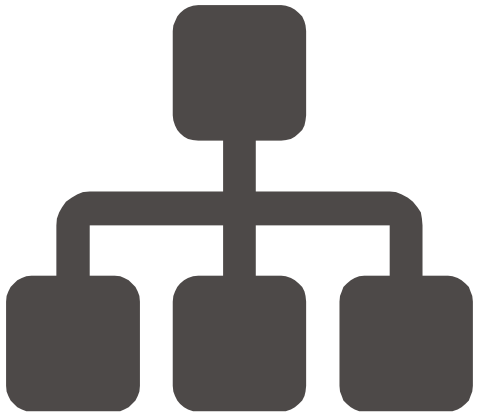
Where does the sample come from?

Where other analysed performed on the same sample?

On what is this based?

Which reference data was used?

….



FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

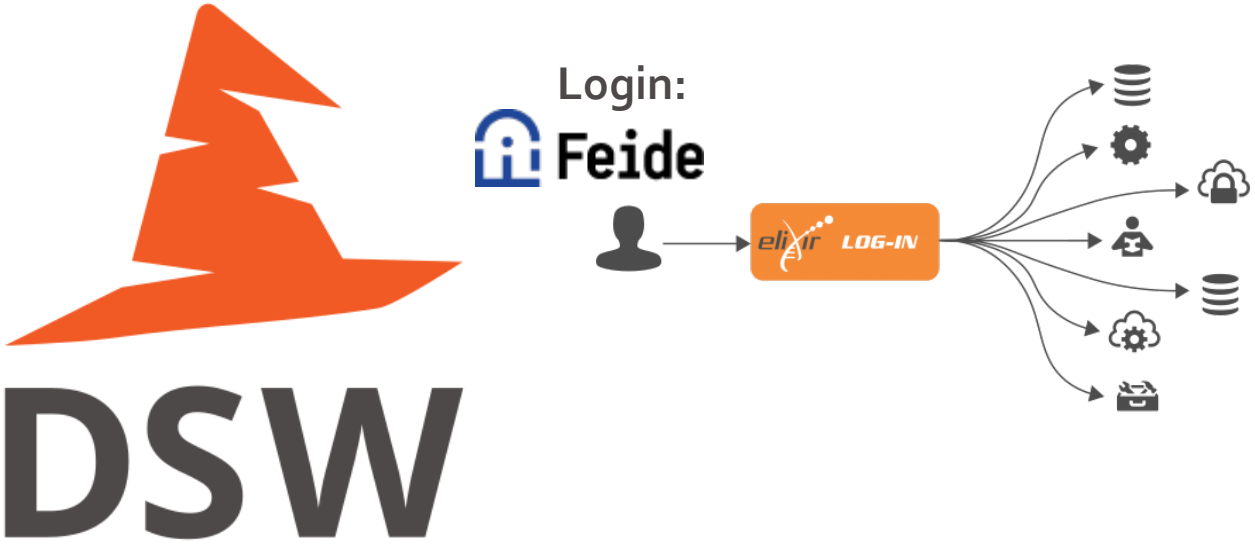
MAGE-TAB
EFO
MIAME
ISA-TAB
PDBx/mmCIF

FAIRsharing

FAIR illustrations icons from ARDC 2018 licensed under Creative Commons Attribution 4.0 International License

Data Stewardship Wizard

Adapted for users & laws
in Norway



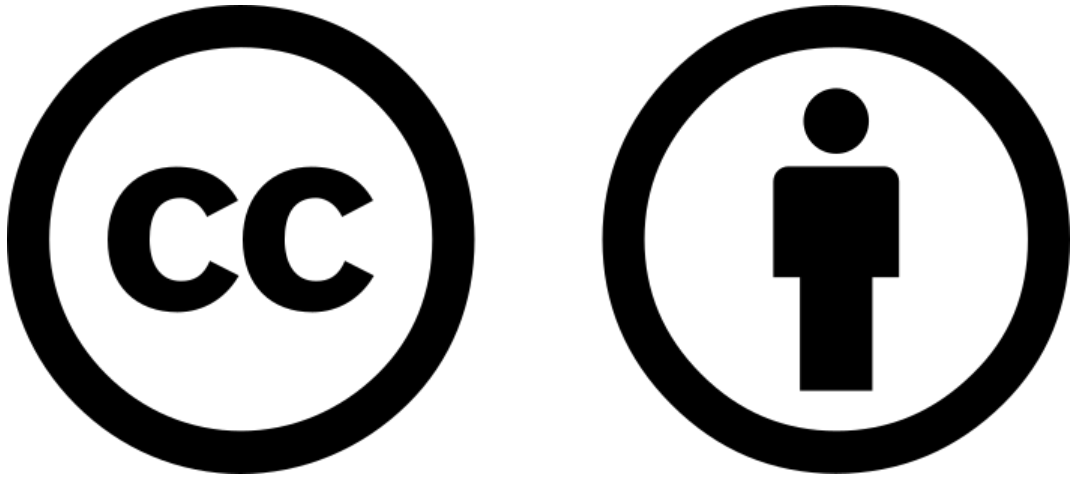
compatible

SCIENCE EUROPE

DSW

elixir-no.ds-wizard.org

European Commission



Except where otherwise noted, this work is licensed under:
https://creativecommons.org/licenses/by/4.0/