The DMP in the Research Data Ecosystem

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Data < Information < Knowledge < Wisdom

Data < Power < Domination < Wealth
Progressive Construction of an ecosystem

Collect and exploit data
Open Science for efficiency

Right to be forgotten
Explicit consent
Accountability of stakeholders
Privacy by design

Open science

GDPR
2003

Awareness in Europe of necessary protection of personal data

- Progressive digitization of data
- Easier access through Internet
- Sprawling development of GAFA
General Data Protection Regulation
since 25 May 2018
French adaptation: Loi n°2018-493 du 20 juin 2018
Consciousness that data, in general, is a common good (in the sense of open pastures of the Middle Ages)

« The Open Science Framework »
History of the European Regulation

• 2002: Emergence of the Open access concept in Europe
• 2012: Recommandation to deposit research data
• 2014: Open research data: pilots on voluntary basis
• 2016: Introduction of FAIR principes
• 2017: Data Management Plan in EC applications
• 2020: DMP is mandatory for public funding

« As open as possible, as closed as necessary »
Open Science does not mean Open Bar
Open data means FAIR data

FINDABLE
● Means that the existence of data sets is public information
● Persistent Identifiers + Rich Metadata + indexed data repositories

ACCESSIBLE
● Means that the rules to access the dataset are defined and public
● Standard Communication protocols + authentification + Metadata

INTEROPERABLE
● Means that the dataset respect the standards when available
● Semantic standards (ontologies) + technical standards

REUSABLE
● Means that the dataset is annotated enough as to be re-used by third parties
● Usage licence + provenance + community standards
Data Management Plans

DMP = Tool to conceive and organise projects

• Generate the appropriate questions
  • Identify responsibilities ++++
  • Identify ethical issues
  • Discuss «raw data/ intermediate data / final results»
  • Identify necessary know-how
  • Identify needs and necessary resources
  • Define Intellectual Property issues

• Push to adopt good practices
  • Respect of standards / sources/ formats /...
  • Data safety / preservation
  • Good communication with the public at large

• Anticipate requirements from third-parties
  • Research Funding Agencies
  • Scientific Journals
  • Academic and Industry potential partners
2020

Launch of the ICM-DMP & Support services

ICM-DMP on OPIDOR
Adapted to Neurosciences
Data Management team
Funding bodies

Open science policy

Application

DMP Slight description

FUNDDED !!!

Project’s deliverables

D1 – 6 months: first DMP

D2 – Mid-project: DMP adjustments

D3 – End: Final DMP

At each stage, we can help: OPIDoR and/or dmp@icm-institute.org
ICM DMP – How to get it?

https://dmp.opidor.fr/
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ICM DMP template is integrated into the OPIDoR DMP portal
→ can be completed online (and updated !)
→ can be reviewed by the DMP team (improvements, advices)
→ easy way to exchange

For any questions about DMP: dmp@icm-institute.org
Standard tools to comply with the DMP quality criteria

Standard tools at ICM to support you

- RedCAP
  - Production stage

- OMERO
  - Production stage

- XNAT
  - Pre-production stage

- Automatization of pipelines (in progress)

- Contact and support: dmp@icm-institute.org
OMERO as an Example

Ideal tool to produce FAIR data

• Findable:
  • unique and permanent identifier: images, datasets, projects
  • Original metadata captured at import of images
  • Metadata are indexed in a searchable resource
  • Direct URLs to image IDs

• Accessible:
  • Collaborative access levels
  • Plug-ins & API available
  • Secured web access and desktop client access

• Interoperable:
  • Images in OMERO exported and shared in the standard open format OME-TIFF. 150 and proprietary formats
DMP Training sessions

Useful for everyone as an introduction to quality data management

- Date: 4 February
- Content (adapted to neurosciences)
  - How to collect
  - How to organize data collections
  - Types of data, size of files
  - Formats, naming, documentation
  - Metadata: standards
  - Versioning
  - Interoperability
  - Storage, back-ups, security
  - Data protection, consent, intellectual property
  - Data sharing, types of license
  - Archiving

Click [here](#) for registration
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