

maDMP4LS: integration of DMP OPIDoR in the French infrastructure landscape

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Machine Actionable DMPs for Life Sciences



A wealth of information for all involved parties:

- Researchers
- Bioinformatic platforms
- DMP hosts
- Funders

How to exploit this information ?

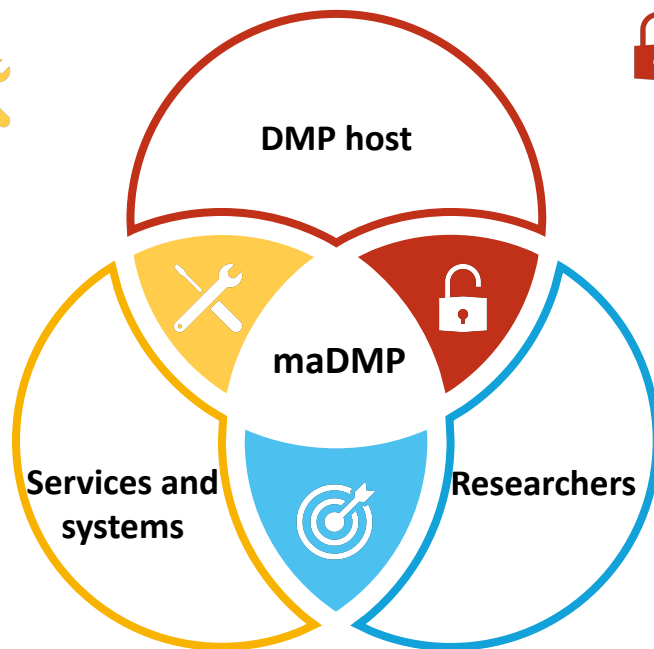
Objective: transform the DMP file into a machine actionable data structure and integrate it in the French bioinformatics landscape.

The benefits of a machine actionable DMP

Data Management



- Better management of resources
- DMP up to date
- Ensuring FAIRness of data



FAIR access



- Fostering safe FAIR principles application
- Share as much as possible
- Protect the data as much as needed

Communication



- Understanding the specific needs of the researcher
- Less work for the researcher (avoiding double capture)
- Better visibility for facilities

- Located at the IRISA lab in Rennes
- Bioinformatic facility, giving access to informatic tools to researchers.
- Member of IFB
- Several solutions:
 - Cluster
 - Web portal to access tools from Galaxy
 - Virtual environments using Genostack
- Cesgo tools for collaboration

<https://www.genouest.org/>
<https://www.cesgo.org/fr/>

Online tool allowing drafting of DMPs

Based on DMP Roadmap 

Adapted to meet the French community needs:

- Research Outputs support (July 2019)
- Easy use of templates
- Edition features
- Compliance with GDPR
- Growing community and ecosystem

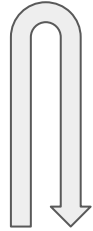
DMP : 7303
Templates : 43
Users : 8250



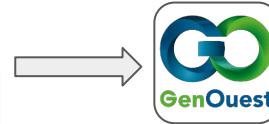
The screenshot shows the 'Rédiger' (Draft) tab of the DMP OPIDoR online tool. The interface is in French and includes a navigation bar at the top with links: Informations générales, Produits de recherche, Modèle choisi, Rédiger, Partager, Demande d'assistance conseil, and Télécharger. The main content area is divided into three sections, each with a 'tout développer' (expand) and 'tout réduire' (collapse) link. The first section, 'Description des données et collecte des données ou réutilisation de données existantes', contains three expandable fields: 'Description générale du produit de recherche', 'Est-ce que des données existantes seront réutilisées ?', and 'Comment seront produites/collectées les nouvelles données ?'. The second section, 'Documentation et qualité des données', contains two expandable fields: 'Quelles métadonnées et quelle documentation (par exemple mode d'organisation des données) accompagneront les données ?' and 'Quelles seront les méthodes utilisées pour assurer la qualité scientifique des données ?'. The third section, 'Exigences légales et éthiques, code de conduite', contains two expandable fields: 'Quelles seront les mesures appliquées pour assurer la protection des données à caractère personnel ?' and 'Quelles sont les contraintes juridiques (sensibilité des données autres qu'à caractère personnel, confidentialité, ...) à prendre en compte pour le partage et le stockage des données ?'.

Demo steps

2. Get the project informations



3. Get the project going



1. Fill the DMP

Next steps

2. Get the project informations



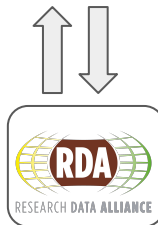
1. Fill the DMP



3. Get the project going



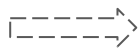
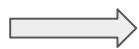
5. Bidirectionnal data transfer



4. Export and Import to and from RDA format

6. DMP integration in SEEK

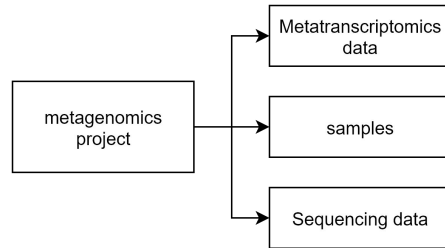




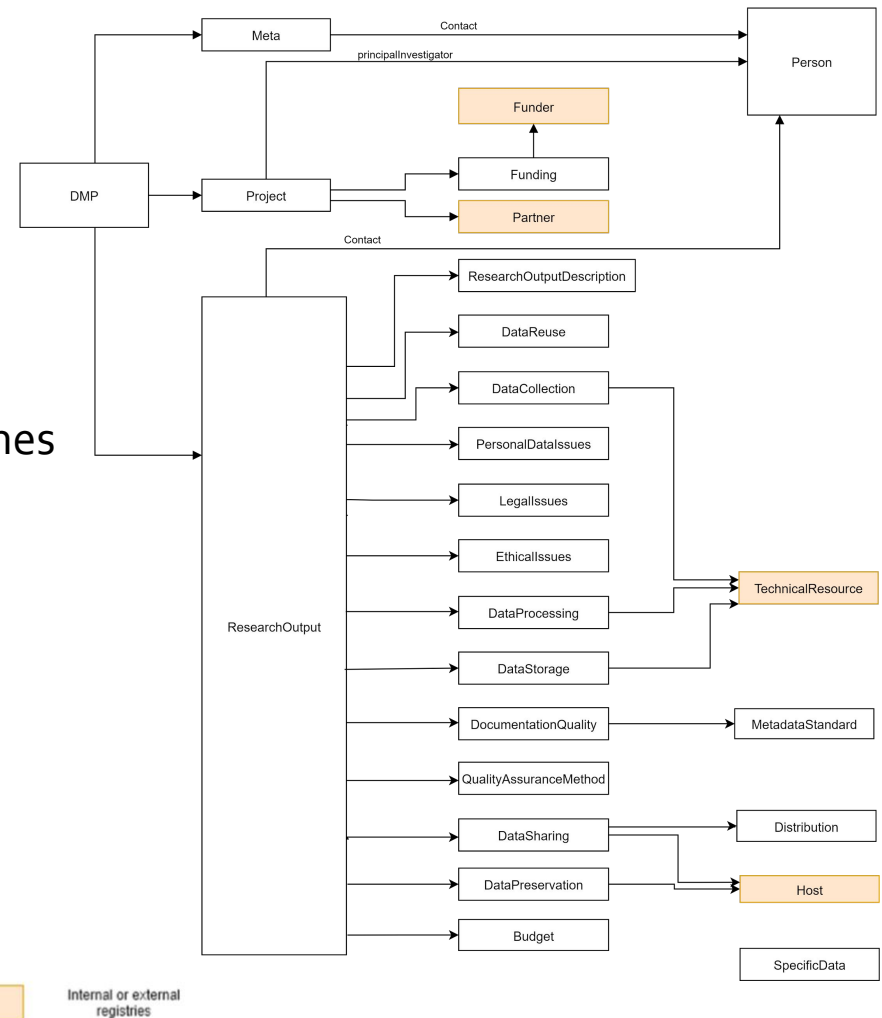
Model overview

Top-level entries :

- Meta : metadata on the project
- Project : info about the project
- researchOutput : one or several outcomes of the project



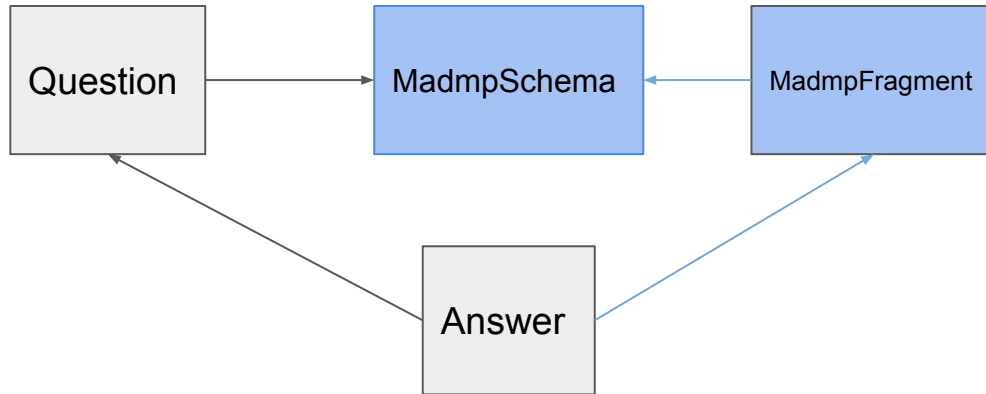
research outputs examples



Internal or external
registries

Implementing the new structure

- Maintain the roadmap Plan structure
 - allows compatibility with “legacy” plans & the production of “non-structured” DMPs
- New answer format : Structured
 - Choice between Form Templates



Implementing the new structure

Forms are dynamically built from JSON Templates

Ex: DataSharing Form

```
"reusability": {  
  "type": "string",  
  "description": "Potentiel de réutilisation des données et",  
  "label@fr_FR": "Potentiel de réutilisation",  
  "label@en_GB": "Reusability",  
  "tooltip@fr_FR": "Potentiel et/ou limite de réutilisation",  
  "tooltip@en_GB": "Potential and/or limits of data resusab",  
  "example@fr_FR": "Réutilisation pour de futures recherche",  
  "example@en_GB": "Reuse for future research or other purp",  
  "form_label@fr_FR": "Potentiel de réutilisation",  
  "form_label@en_GB": "Reusability"  
},  
"
```

Reusability

ex: Reuse for future research or other purposes (education, innovation, reproduction/transpa


Implementing the new structure

Forms can call to others templates

Ex: Project Form

```
"funding": {
  "type": "array",
  "table_header@fr_FR": "Financier : identifiant du financement",
  "table_header@en_GB": "Funder: funding identifier",
  "items": {
    "type": "object",
    "class": "Funding",
    "properties": {
      "dbid": {
        "type": "number"
      }
    },
    "template_name": "FundingStandard",
    "required": [
      "dbid"
    ]
  },
  "minItems": 1,
  "description": "Source(s) de financement d'un projet ou d'une activité",
  "label@fr_FR": "Sources de financement",
  "label@en_GB": "Funding",
  "form_label@fr_FR": "Indiquer les sources de financement du projet",
  "form_label@en_GB": "Indicate the funding of the project"
},
```

Indicate the funding of the project

Funder: funding identifier	Actions
Agence Nationale de la Recherche : ANR-20-THIA-0012	 

Create

Implementing the new structure

Ex: Project Form

Sub forms open in
a modal window

The screenshot shows a web application interface with a modal window open. The modal window is titled "Financiers" and contains the following fields:

- Nom du financeur**: Agence Nationale de la Recherche
- Identifiant**: <http://dx.doi.org/10.13039/501100001665>
- Type d'identifiant**: DOI
- Politique de données**:
 - Titre**: La politique science ouverte de l'ANR
 - Identifiant**: <https://anr.fr/fr/lanr-et-la-recherche/engagements-et-valeurs/la-science-ouverte/>
 - Type d'identifiant**: URL
- Sélectionnez une valeur de la liste ou saisissez une nouvelle.**: A dropdown menu with a blue 'X' icon.
- Identifiant du financement**: ANR-19-DATA-0017
- Statut du financement**:
 - Sélectionnez une valeur de la liste.**: A dropdown menu with the value "Approuvé" selected and a blue 'X' icon.
- Close** and **Sauvegarder** buttons.

The background shows a sidebar with various navigation options and a main content area with a "Créer" button and a "Date de début du projet" field.