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 the 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.
• Located at the IRISA lab in Rennes
• Bioinformatic facility, giving access to informatic tools to researchers.
• Part 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 : 5735
Templates : 37
Users : 6400

https://dmp.opidor.fr
Demo steps

1. Fill the DMP

2. Get the project informations

3. Get the project going
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:

- metagenomics project
  - metatranscriptomics data
  - samples
  - Sequencing data
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

MadmpSchema

Question

MadmpFragment

Answer
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 reusabil",
    "example@fr_FR": "Réutilisation pour de futures recherch",
    "example@en_GB": "Reuse for future research or other pur",
    "form_label@fr_FR": "Potentiel de réutilisation",
    "form_label@en_GB": "Reusability"
},
```
Implementing the new structure

Forms can call to others templates

Ex: Project Form

```json
"funding": {
  "type": "array",
  "table header@fr.FR": "Financeur : 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"
}
```
Implementing the new structure

Ex: Project Form

Sub forms open in a modal window
Next steps

2. Get the project informations

3. Get the project going

1. Fill the DMP

5. Bidirectionnall data transfer

4. Export and Import to and from RDA format

6. DMP integration in SEEK