



Data Management Plans, principles and practice

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Wrap up and Conclusions

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Lessons learnt (1): for researchers

- ✓ Open availability of research publications and data fosters scientific progress and brings benefits to scholars by increasing their visibility and impact (citation advantage, new metrics: social media impact).
- ✓ *Open access* does not just mean *free to read* but also *free to re-use, distribute, exploit and mine*, permitting the deployment of more effective research practices (text and data mining, data infographics and visualization, mash-ups...).
- ✓ Researchers should keep control over research results by retaining the right to share them in *open access*.
- ✓ Researchers should choose open archiving infrastructures (repositories) that permit reuse and possibly remain independent from private interests.
- ✓ Researchers should share not only their publications but also their data and possibly every step of their research practice (research notebooks).

Lessons learnt (2): for institutions

- ✓ Open access should not be turned into a bureaucratic requirement for purely administrative purposes.
- ✓ Institutions should promote open access by rewarding sharing practices and by reforming research evaluation criteria.
- ✓ Institutions should show the advantages and the benefits of open science for researchers by building services on top of their institutional repositories.
- ✓ Admin/library/technical staff should collaborate and involve researchers in service planning and development.
- ✓ Community-specific repository services are preferred to institutional ones: institutions should partner with research associations to build and support co-operative initiatives to keep them independent from private interests.
- ✓ National and international coordination is needed: institutions should network and develop common guidelines, tools and infrastructures.

Lessons learnt (3): on data sharing

- ✓ Data underlying publications should always be made openly available for research validation.
- ✓ Main research funders are beginning to require open availability of research data (H2020 pilot).
- ✓ Data sharing requires careful planning from the early stages of research to address technical and legal issues in the correct way.
- ✓ The Data Management Plan is the tool that permits to focus on the main issues involved in data sharing.
- ✓ Data management plan requirements should be standardized both by institutions and funders in order to reduce the bureaucratic burden on the researchers.
- ✓ Researchers need training, assistance, tools and infrastructures to manage and make research data open.
- ✓ There are many resources already available that can be shared and adapted.

Conclusions

Italian universities and research institutions are taking their first steps in research data management and open availability.

They can take advantage of the expertise and the resources developed internationally in order to get started and activate support services.

However common guidelines and tools would greatly help the adoption of best practices and the development of quality standards for services.

Moreover a national coordination seems to be particularly strategic for the setting up and maintenance of technical infrastructures, services and tools that need investments and funding.

We suggest that APRE, the Agency for the Promotion of European Research in close collaboration with the Ministry of Education, University and Research (MIUR) and CRUI will act as a catalyst for a national coordination action to define common national policies, service strategies and participation in international initiatives and infrastructures.