

esade

# Data Management Guidelines

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Do Good. Do Better.

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This presentation was prepared by Esade's Research Office & Legal department for educational purposes. The information provided is consistent with the current data management policies and guidelines (and it may vary).

The presentation was adapted from University of Cambridge Research Data Centre

# 01

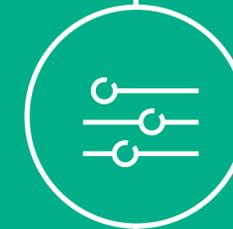
## Creating your data

There are many decisions to make about managing your data before you even start creating/collecting it!



### Data management plan (DMP)

Many funding institutions now require a DMP to be submitted with the grant application.



### Choosing formats

It's important to consider which hardware & software you will use to collect & store your data.



Addressing issues related to Intellectual property rights as these affect the way both you and others can use your research outputs.



### Data protection & ethics

Any research that involves working with humans (participants in the research or experiment) independent of its nature or topic, must be revised by Esade's Committee on the Use of Human Subjects in Research (CUHSR).



## Data management plan (DMP)

Your best starting point is to create a data management plan, whether you are required to prepare one or not.

A proper data management plan created at the beginning of the project can save you a lot of time during data collection, and also when consolidating your data towards the end of the project.

If you want to be able to reuse your data or manage collaboration with colleagues, it helps to plan for that from the beginning. Decisions you make about which software to use, how to organise, store and manage your data, and the consent agreements you would have to negotiate, will all affect what is possible to do, and what data is shareable in the future.

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## Data management plan (DMP)

Planning for your data management needs and activities will help ensure that:

- **You have adequate technological resources** (e.g. storage space, support staff time).
- **Your data will be robust** and free from versioning errors and gaps in documentation.
- **Your data is backed up and safe** from sudden loss or corruption.
- **You can meet legal and ethical requirements.**
- **You are able to share your finalised data publicly**, if you and/or your funder desires.
- **Your data will remain accessible and comprehensible** in the near, middle, and distant future.



## Data management plan (DMP)

### What do research funders expect?

Most funders **expect you to prepare a data management plan when applying for a research grant**. Additionally, some funders, will require you to regularly **review your data management plan** and make all necessary amendments while managing your grant.

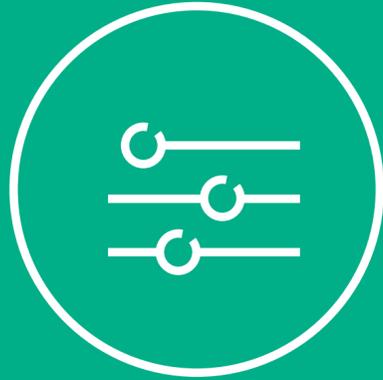
### Where do I start?

Much of research data management is simply good research practice so you will already be some way down the line. **Data plans are just a way of ensuring (and/or showing) that you have thought about how to create, store, backup, share and preserve your data.**

### What should I cover in my data plan?

The best way to start is to look for what your funder expects you to cover in your Data Management Plan. You can check this on your funder's website. If your funder does not provide guidance on data plans, have a look at this DMP template developed by the **Consorci de Serveis Universitaris de Catalunya** [here](#) - this might be a good starting point.

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## Choosing formats

In planning a research project, it is important that you consider which file formats you will use to store your data.

These are likely to be some of the key factors in your decision-making:

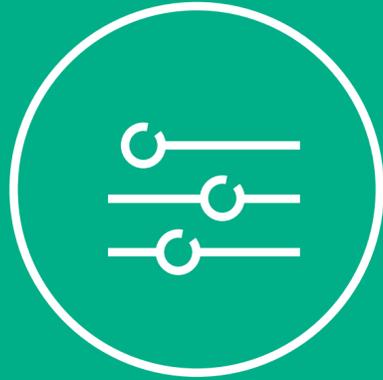
- What **software and formats** you or your colleagues have used in past projects.
- Any discipline-specific norms (and any peer support that comes with them).
- What software is compatible with hardware you already have.
- Whether you have funding for new software.
- How you plan to analyse, sort, or store your data.

But you should also consider:

- What formats will be **easiest to share with colleagues** for future projects.
- What formats are at **risk of obsolescence**, because of new versions or their dependence on particular software.
- What formats **will allow you to open and read your data** in the future.
- What formats will **be the easiest to annotate with metadata** so that you and others can interpret them days, months, or years in the future.



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## Choosing formats Software

### Esade's Software and research tools:

You should only use Software and online tools that Esade has a contract with/or institutional accounts:

→ We have Qualtrics licence for all our researchers

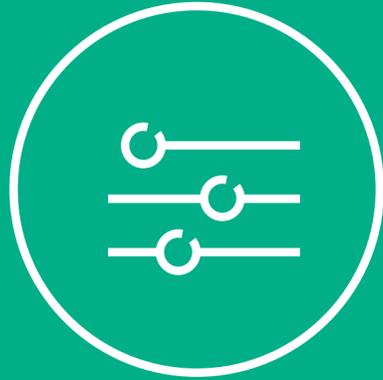
For more information visit:

Resources & tools for research →

Or contact our IT department:

→ TIC: Centre Atencio Usuaris at [cau@esade.edu](mailto:cau@esade.edu)

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## Choosing formats

### Best formats for preservation:

If you are not aware of any disciplinary standards these are some good file formats for the preservation of the most common data types:

- Textual data: XML, TXT, HTML, PDF/A (Archival PDF)
- Tabular data (including spreadsheets): CSV
- Databases: XML, CSV
- Images: TIFF, PNG, JPEG (note: JPEGs are a format which lose information when shared and re-saved, so only use them if you are not concerned about image quality)
- Audio: FLAC, WAV, MP3

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## Intellectual property rights (IPR)

(e.g. copyright, patents) affect the way both you and others can use your research outputs.

**Failure to clarify rights at the start of the research process can lead to unexpected limitations to:**

- Your research.
- Its dissemination.
- Future related research projects.
- Associated profit or credit.

**Esade defines full Intellectual Property Rights as:**

- Intellectual Property includes, without limitation, any patents, patent applications, inventions (whether patentable or not), copyrights, trade secrets, trademarks, service marks, trade names, domain names, software (including source code and object code), databases, graphics or data (hereinafter referred to as “**Intellectual Property**”).
- Intellectual Property conceived, first reduced to practice, developed, produced or composed by Esade’s personnel, whether alone or with others, will be owned by Esade (hereinafter referred to as “**Esade Intellectual Property**”).



## Intellectual property rights (IPR)

### Who can help me with IPR questions?

Queries concerning IPR conditions in the sponsorship or funding agreement under which your research at Esade is undertaken may be directed in the first instance to the **Research Office** at [research@esade.edu](mailto:research@esade.edu)

For general questions on IPR, contact the **Legal Services Department** [here](#).



## Intellectual property rights (IPR) FAQ

### I own my data - can I do whatever I want with it?

If an agreement is reached with an external sponsor of research or a third party on behalf of and with the knowledge of Esade staff and students, as a condition of sponsorship or research funding Esade staff and students must abide by that sponsor's or third party's terms and conditions, inclusive of intellectual property rights, and data management and dissemination procedures.

In summary: if the sponsor or funder of your research requires you to share your data, you are obliged to do so.

### Can I use materials that I find online?

It depends on how those materials are licensed. **IPR is usually in play, even if you don't see a "©" or 'all rights reserved' notice.**



## Intellectual property rights (IPR) FAQ – Data processing agreement vs Data transfer agreement

### Can I share my data with third parties?

If you are working with personal data, we cannot transfer data to third parties without the owner's consent.

Only in case we have to outsource some services, can we share personal data. In this case, it is necessary to sign a **“data processing agreement”**. It is especially relevant in case the data processor is not based in the EU.

In case you need to transfer non-human subject data or completely de-identified human subject data, you need to sign a **“data transfer agreement”**, that sets out the related protections, rights, and obligations of both parties and delineates the specific purpose(s) for which the data may be used.

Ask the **Research Office** at [research@esade.edu](mailto:research@esade.edu) for a data agreement template.

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## Data protection & ethics

If you are working with people for your research project, then you have a duty to ensure that any data you gather and subsequently use is handled correctly by following:

→ Ethical guidelines by **Esade's Committee on the Use of Human Subjects in Research**.

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→ *The CUHSR **website** provides information on applying for an ethics approval, as well as guidance on consent forms and participant information sheets.*

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→ The European General Data Protection Regulation and the **Spanish Data Protection law**, which governs the processing of personal data.



## Data protection & ethics

### Data Confidentiality

Data confidentiality pertains to the treatment of information that a participant has disclosed in a relationship of trust and with the expectation that it will not be divulged to others without permission. Thus, to ensure that the processing of personal information related to all studies conducted in Esade and by Esade researchers will be in full compliance with Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation or “**GDPR**”), appropriate technical and organisational measures shall be implemented in order to ensure a level of security appropriate to the risk.

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## Data protection & ethics FAQ

### Q. What is personal and sensitive data?

Personal data is data relating to a living individual, which allows the individual to be identified from the information itself or from the information plus any other information held by the 'data controller' (or from information available in the public domain). Esade, as a whole, is the data controller.

GDPR also defines some types of data as a special category of personal data, which are considered more sensitive than others. These include:

- Racial or ethnic origin.
- Political opinions.
- Religious beliefs.
- Genomic/biometric data.
- Trade Union membership.
- Health data.
- Sexual life or sexual orientation.
- Criminal offences (although not technically defined as a special category, this data is afforded similar protections).

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## Data protection & ethics

### When collecting data using online platforms

**IP addresses** are deemed personal data if, combined with other data fields, they could allow an individual to be identified.

You should either suppress the collection of this data field at survey design stage or retain it (to prevent duplicate responses until you have attributed to each observation a unique identifier), but then delete this field as soon as you move the data from your survey provider to your **Esade [OneDrive](#)**.



## Q. What does the law require me to do with data protection?

The General Data Protection Regulation gives individuals certain rights, and imposes obligations on those who record and use personal information to be open about how information is used. Researchers working with personal data must:

- Know and communicate your legal basis for collecting and using the data.
- Be transparent with data subjects.
- Process accurately and only what is needed.
- Keep personal data secure.
- Process fairly, considering any ethical risks to the data subject.
- Comply with institutional accountability processes, e.g. ethical review.

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## Data protection & ethics FAQ

**Specifically, all researchers shall guarantee the security of processing pursuant to article 32 of GDPR and all participants (data subjects) in the studies shall be provided with the following information, as far as the processing of their personal data is concerned:**

- the identity and the contact details of the controller;
- the contact details of the data protection officer, where applicable;
- the purposes of the processing for which the personal data are intended as well as the legal basis for the processing;
- where applicable, the legitimate interests pursued by the controller or by a third party;
- the recipients or categories of recipients of the personal data, if any;
- where applicable, the intended transfer of personal data to a third country;
- the period for which the personal data will be stored;
- the existence of the right to request from the controller access to and rectification or erasure of personal data or restriction of processing concerning the data subject or to object to processing as well as the right to data portability, the existence of the right to withdraw consent at any time, and the right to lodge a complaint with a supervisory authority;
- all other information as required by article 13 of the GDPR.



### Example of GDPR disclaimer from a Decision Lab study' Consent form:

<b>Data controller</b>	The Data Controller is the Fundación Esade
<b>Contact</b>	<a href="mailto:lopd@esade.es">lopd@esade.es</a>
<b>Purposes if the processing</b>	Manage the participation in research studies
<b>Legal Basis</b>	Consent, legitimate interest in research studies and compliance with legal obligations
<b>Recipients</b>	The data will be disclosed to [NAME]
<b>Data Management</b>	The data will be deleted when they are no longer necessary for the fulfilment of the purpose that motivated their collection. The most relevant information is kept permanently. The criteria for conservation or elimination are based on the regulatory norms that govern public documentation or documentation derived from the exercise of public functions.
<b>Rights</b>	You may at any time exercise your right to request access to and rectification or erasure of personal data or restriction of processing, or to object to processing. You can address to the Data Protection Delegate via the following address: <a href="mailto:dpo@esade.edu">dpo@esade.edu</a> For more information about data protection, visit: <a href="#">Data protection notice</a>



### Q. Does my project need a review by a university ethics board?

Any research that involves working with humans (participants in the research or experiment) independent of its nature or topic, must be revised by **Esade's Committee on the Use of Human Subjects in Research (CUHSR)**.

### Q. How should I store my sensitive or confidential data?

You should limit physical access to sensitive data or encrypt it (speak with our IT department for help in doing this).

[Read upcoming section 03 & 04 for more information.](#)



### Q. How do I share or publish my findings for research using sensitive or confidential data?

There can be a potential conflict between abiding by data protection legislation and ethical guidelines, whilst at the same time fulfilling funder's and individual's requirements to make research results available.

Ethics committees may believe that any personal or sensitive data should remain confidential. It is important therefore to distinguish between personal and more general data gathered during research.

**Personal data can be disclosed or shared if the individual has given explicit consent and specified the level at which this should be done.** You should always consult with our Ethics Committee if you are unsure whether the data you wish to share or publish can be used.

In most cases, **you may be able to anonymise your data** in order to share and publish it in more detail.

# 02

## Organising your data

Once you create, gather, or start manipulating data and files, they can quickly become disorganised. To save time and prevent errors later on, you and your colleagues should decide how you will name and structure files and folders!



[Naming and organising files](#)



[Documentation and metadata](#)

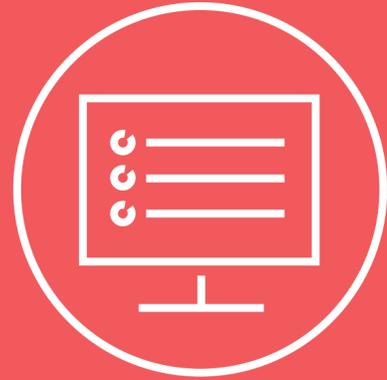


[Managing references](#)



[Organising e-mail](#)

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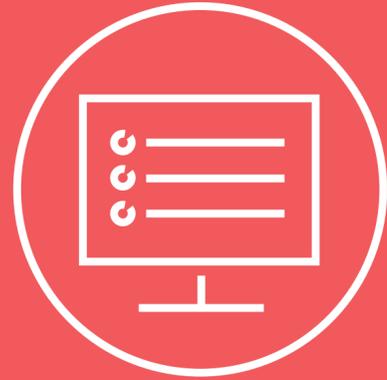
## Naming and organising files

**Choosing a logical and consistent way to name and organise your files allows you and others to easily locate and use them.**

Agreeing on a naming convention will help to provide consistency, which will make it easier to find and correctly identify your files, prevent version control problems when working on files collaboratively.

Organising your files carefully will save you time and frustration by helping you and your colleagues find what you need when you need it.

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## Naming and organising files

### How should I organise my files?

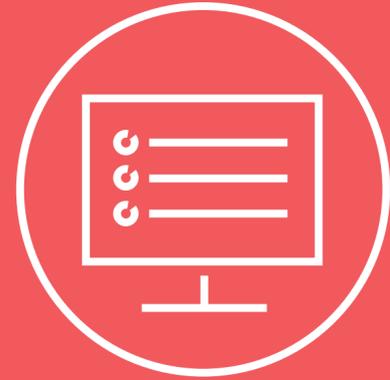
Whether you are working on a stand-alone computer, or on a networked drive, the need to establish a system that allows you to access your files, avoid duplication, and ensure that your data can be backed up, takes a little planning:

- **Use folders and name them appropriately** - group files within folders so information on a particular topic is located in one place, name folders after the areas of work to which they relate and not after individual researchers or students.
- **Be consistent** – when developing a naming scheme for your folders it is important that once you have decided on a method, you stick to it.
- **Structure folders hierarchically** - start with a limited number of folders for the broader topics, and then create more specific folders within these.
- **Separate ongoing and completed work.**
- **Backup** – ensure that your files, whether they are on your local drive, or on a network drive, are backed up.

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## What do I need to consider when creating a file name?

Decide on a file naming convention at the start of your project.



## Naming and organising files

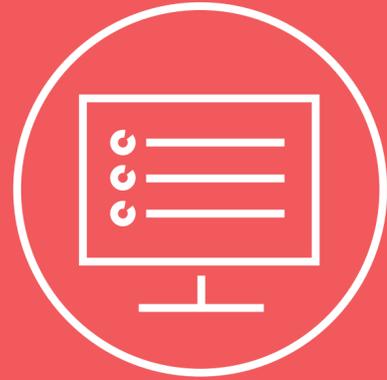
Useful file names are:

- **consistent;**
- **meaningful to you and your colleagues;**
- **allow you to find the file easily.**

It is useful if your department/project agrees on the following elements of a file name:

- **Vocabulary** – choose a standard vocabulary for file names, so that everyone uses a common language.
- **Punctuation** – decide on conventions for if and when to use punctuation symbols, capitals, hyphens and spaces.
- **Dates** – agree on a logical use of dates so that they display chronologically i.e. YYYY-MM-DD.
- **Order** - confirm which element should go first, so that files on the same theme are listed together and can therefore be found easily.
- **Numbers** – specify the amount of digits that will be used in numbering so that files are listed numerically e.g. 01, 002, etc.

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## Naming and organising files

### How should I name my files, so that I know which document is the most recent version?

Very few documents are drafted by one person in one sitting. More often there will be several people involved in the process and it will occur over an extended period of time. Without proper controls, this can quickly lead to confusion as to which version is the most recent. Here is a suggestion of one way to avoid this:

- **Use a 'revision' numbering system.** Any major changes to a file can be indicated by whole numbers, for example, v01 would be the first version, v02 the second version. Minor changes can be indicated by increasing the decimal figure for example, v01\_01 indicates a minor change has been made to the first version, and v03\_01 a minor change has been made to the third version.
- When draft documents are sent out for amendments, upon return they should carry additional **information to identify the individual who has made the amendments.** Example: a file with the name datav01\_20130816\_SJ indicates that a colleague (SJ) has made amendments to the first version on the 16th August 2013.
- Agree who will finish **finals** and mark them as 'final.'

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## Documentation & meta data

To ensure that you understand your own data and that others may find, use and properly cite your data, it helps to add documentation and metadata (data about data) to the documents and datasets you create.

### What are 'documentation' and 'metadata'?

The term 'documentation' encompasses all the information necessary to interpret, understand and use a given dataset or set of documents. We use 'documentation' and 'metadata' (data about data - usually embedded in the data files/documents themselves) interchangeably.

### When and how do I include documentation/metadata?

It is a good practice to begin to document your data at the very beginning of your research project and continue to add information as the project progresses. Include procedures for documentation in your data planning.

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## Documentation & meta data

There are a number of ways you can add documentation to your data:

### Embedded documentation

Information about a file or dataset can be included within the data or document itself. For digital datasets, this means that the documentation can sit in separate files (for example text files) or be integrated into the data file(s), as a header or at specified locations in the file.

Examples of embedded documentation include:

- code, field and label descriptions;
- descriptive headers or summaries recording information in the Document Properties function of a file (Microsoft).

### Supporting documentation

This is information in **separate files that accompanies data** in order to provide context, explanation, or instructions on confidentiality and data use or reuse.

Examples of supporting documentation include:

- Working papers or laboratory books.
- Questionnaires or interview guides.
- Final project reports and publications.
- Catalogue metadata.

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## Documentation & meta data

**Supporting documentation** should be structured, so that it can be used to identify and locate the data via a web browser or web-based catalogue. Catalogue metadata is usually structured according to an international standard and associated with the data by repositories or data centres when materials are deposited. Examples of **catalogue data** are:

- Title
- Description
- Creator
- Funder
- Keywords
- Affiliation



## Managing References

### Managing References

Projects can last for months or years, and it is easy to lose track of which piece of information came from which source. It can be a challenge to have to reconstruct half of your citations in the scramble at the end of the project! Your future self may not remember everything that seems obvious in the present, so it is important to take clear notes about your sources.

#### What is 'reference management software'?

Reference management software helps you keep track of your citations as you work, and partially automates the process of constructing bibliographies when it is time to publish.

**You can access Esade's Mendeley Institutional Edition (MIE)** which offers you up to 5GB of storage, and allows you to share documents in groups up to 20GB, as well as creating up to 1,000 private groups: [here](#)



## Organising e-mail

### Organising e-mail

Most people now routinely send and receive lots of messages every day and as a result, their inboxes can get very quickly overloaded with hundreds of personal and work-related emails. Setting aside some time to organise your emails will ensure information can be found quickly and easily, and is stored securely.

#### Why should I organise my email?

Apart from the obvious frustration and time wasted looking for that email you remember sending to someone last month, email is increasingly used to store important documents and data, often with information related to the attachments within the email itself. Without the proper controls in place they can often be deleted by mistake.

It is also important to remember that your work email comes under [Esade's IT Policy](#), so your emails are potentially open to scrutiny.

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## Organising e-mail

### What are the first steps to organising my email?

If your emails have got out of control there are a number of immediate steps you can take to control the problem:

**Archive your old emails.** If you have hundreds of emails hanging around from more than a month ago, move them into a new folder called something like “Archive”. You can always come back to these at a later date.

**Now go through your remaining inbox email by email.** If an email is useless, delete it. If not, ask yourself: is it “active” - is there a specific action you, or someone else, need to take, or do you just vaguely think it is worth keeping? If the latter, move it to the archive.

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## Organising e-mail

### How can I ensure my emails remain organised?

Here are some general tips to ensure your email remains organised in the long term:

- **Delete emails you do not need.** Remove any trivial or old messages from your inbox and sent items on a regular (ideally daily) basis.
- **Use folders to store messages.** Establish a structured file directory by subject, activity or project.
- **Separate personal emails.** Set up a separate folder for these. Ideally, you should not receive any personal emails to your work email account.
- **Limit the use of attachments.** Use alternative and more secure methods to exchange data where possible (see 'data sharing' for options). If attachments are used, exercise version control and save important attachments to other places, such as a network drive.

# 03

## Accessing your data

Few researchers always work in the same location, so you will need remote access to your data. You will probably also be sharing files with others, either as part of a project or through routine information-sharing with colleagues. In addition to accessing your own data, you may want to access existing sources of data. Once you finish your project, you should also preserve and share your own data with your research community through a digital repository or data centre (which may gather data citations)



Remote access

Sharing your data with Collaborators

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## Remote accessing

### How can I access my data remotely?

If you are like most people, you probably use a variety of methods to access files remotely (e.g. USB memory stick, laptop, e-mailing files to yourself, etc). This mixed-method of data transfer and access is convenient in the short term, but can be chaotic (or even dangerous) in the longer term, because it:

- Can make it difficult to tell which version of the file/database/etc is which.
- Makes it easier to lose or overwrite your files.
- Makes it easier to accidentally share your confidential files.

You can avoid these pitfalls by (a) using a single technology/method of remote access, or (b) deciding on clear rules up front for managing your remote access technologies.

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## Remote accessing

### Esade's Virtual Private Network (VPN)

If you store files Esade's S or R units, you may log in remotely using Esade's VPN.

Using our VPN you will be able to use your own Esade tools from anywhere.

Discover the main features and user guidelines [here](#).

**A VPN will usually allow you to:**

- **Access files securely;**
- **save new files/versions;**
- **remotely access any folder you can access on-site.**

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## Sharing your data with collaborators

### Tips on sharing your data with collaborators

- **When your collaborators work on-site** with you and you have access to a network, your best option is usually to use a shared file space for your project's data, analyses, and papers. You can prevent the irritating problems of puzzling file names and convoluted folder trees by agreeing on common ways for naming files, organising directories, documenting files, and sharing files between project members.
- **If your collaborators are at different institutions**, sharing files and maintaining coherent versions can be a major headache (or even cause serious errors in your analysis or results). Agreeing on how to handle file sharing (next) and tracking versions can save you time and frustration.

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## Sharing your data with collaborators

### Why should I make a formal plan for sharing files with collaborators?

Sharing raw data, derived materials, drafts, and other files between collaborators in different locations can quickly become a mess - clogging your inbox with enormous files, creating confusing problems with versions of files, or compromising the security of your information.

A clear plan for file sharing will help you simplify the process, and limit your frustration and data risks. Some solutions have the added benefit of providing remote access or automatic backup.

### What are my best options for sharing files with external partners?

Esade's Secure online file transfer:

E-mail should not be used to transmit any research data. Instead, you should use the [secure transfer file services provided by Esade](#).

# 04

## Looking after & sharing your data

You've invested a lot of time and effort in creating your data, so keep it safe. Learn how to select, what to keep and how to store it carefully. Discover why and how to back it up to make sure it is not lost. Find out how to preserve your data and back-ups, and consider how you can get the most from your data, perhaps through re-use and sharing



Storage



Backup



Long-term storage & preservation



Sharing



Digital repositories

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## Storage

Choosing the right way to store your data can help you work more flexibly, easily and quickly. Thoughtful storage solutions can also simplify version control and collaboration with others. You may be required by your PI or funder to store your data in a particular place, or you may have more choices available.

No matter which solution you use, the two golden rules of storage apply:

- Where possible, only store what you need to keep.
- Store crucial data in more than one secure location.

The recommended location for all research data, including electronic and digital files, is the **secure Esade file server R unit storage**.

For more information + guidelines visit:

[Access R →](#)

Alternatively, you could use cloud services as:

- **OneDrive** – for more info and user guidelines, click [here](#)

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## Storage

- **Physical copies of research data** (e.g. paper files, audiotapes, videotapes, etc.) should be stored in a locked file cabinet in a locked office. It is expected that for digital media, data will be securely erased by overwriting the information.
- Use of **external hard drives** – Portable or handheld devices can only be used to store research data if they are configured and managed appropriately (i.e. password protected, up-to-date operating system, antivirus protection, active firewall, etc.).

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## Backup

### Backup

Nearly everyone who has experienced serious data loss did not think it would happen to them - but it does happen periodically. The results can be catastrophic for your research project, or for you personally. However, you can prevent data loss by following good backup practices.

**I usually store my data on a department or college network drive.  
Does that mean it is backed up?**

The researchers are responsible for backing up any research data, experiment files, etc. Esade does not back up data, and usually a monthly clean-up of all of our computers is performed, thus data will be erased periodically. During summer, computers will go through maintenance.



## Backup

### Can I back up my data onto the cloud?

Cloud storage provides a convenient way to store, back and up and retrieve data. There are many provides of cloud storage out there and you should check their terms of use before using them for your research data.

**To ensure compliance and safety the data can only be stored using the ones provided by Esade:**

→ **OneDrive** – for more info and user guidelines, click [here](#).

### What is the best practice for backing up data?

IT professionals strongly recommend that:

- you make two, or even three, back-ups of all important documents and data not stored on a networked file server (failure rates for storage media are probably higher than you think!);
- you store one back-up in a different location from the others (to keep your files safe in case of a fire, flood, burglary, etc.);
- you use multiple different types of storage media or storage media from different manufacturers (to protect against multiple media failures, e.g. a bad batch of discs).



## Long term storage & preservation

### Data Preservation

The term 'preservation' means ensuring something can still be seen or used over time. In the context of digital data, long-term preservation is the process of maintaining data over time so that they can still be found, understood, accessed, and used in the future.

### Why does preservation matter to me?

You may think that by saving your data in one or more places you have made sure it is effectively preserved, but with digital technology developing so quickly, your digital data are at risk from one or more of the following problems:

- file formats might not be compatible with future software, and therefore unreadable;
- even if a document can still be opened with new software, it may be altered to a degree as to no longer be understandable or reliable for continued research;
- storage media may have been degraded, scratched or broken, especially if they are portable, such as USB sticks, so information might be lost;
- the files or data will not be understood because there is no supporting documentation or metadata, or this has not been preserved correctly either.

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## Long term storage & preservation

What can I do to ensure my data are usable in the future?

When creating, organising and storing your data you can take a few initial steps to try and ensure your data remain useable and understandable for the future:

- effectively document your data so that it can be understood in the future;
- periodically move data to new storage media (drives degrade over time);
- keep more than one copy of data, and on a variety of storage media;
- migrate data to new software versions, or use a format that can easily be imported to various software programs.

Ideally, this should be covered in a data management plan at the start of a project, so that you can factor any associated time and resources into your budget.

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## Long term storage & preservation

### Selection: choosing what to keep

It is tempting to keep everything, just in case you need it in the future, but keeping all your files for the foreseeable future costs money, and makes it more difficult to find the truly important things.

### What does selection involve?

Choosing what to keep and what can be disposed of or deleted is always going to involve a subjective judgement, as nobody knows exactly what information is going to be wanted in the future.

All we can do is think the matter through carefully, abide by the policies we need to (e.g. from funders) and document decisions made and the reasons for them. It will not be a perfect process, but should at least be a sensible one.

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## Long term storage & preservation

### Can't I just keep everything?

There are some good reasons why selection is worth doing:

- Because storage costs money; storage requires effort/staff hours; storing massive amounts of data complicate finding and access of truly useful stuff.
- Because **Freedom of Information** laws mean that what you keep on file may have to be disclosed, if requested.

### How do I know what to keep and what to delete?

The following questions can help you decide what you should keep and what can be deleted:

- Does my funder or the university need me to keep this data and/or make it available for a certain amount of time?
- Does this data constitute the 'vital records' of a project, organisation or consortium and therefore need to be retained indefinitely?
- Do I have the legal and intellectual property rights to keep and re-use this data? If not, can these be negotiated?
- Does sufficient documentation and descriptive information ('metadata') exist to explain the data, and allow the data or record to be found wherever it ends up being stored?
- If I need to pay to keep the data, can I afford it?

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## Long term storage & preservation

Once you have sorted through your files and asked these questions you then need to:

### Check your data protection responsibilities.

- Prepare documentation for each file;
- find out how to deposit in a **data repository**.

Some funders require that all data is kept even if it is not publicly shared. In these cases, you will need to find a suitable solution for archiving your data.

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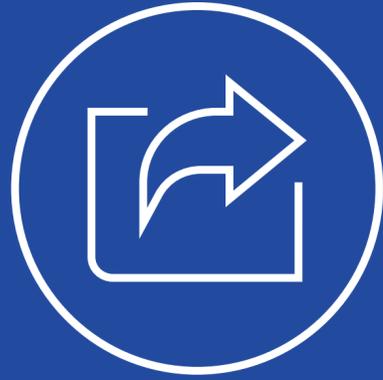
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How can I make it easier for others to re-use the materials that I produce?

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## Sharing

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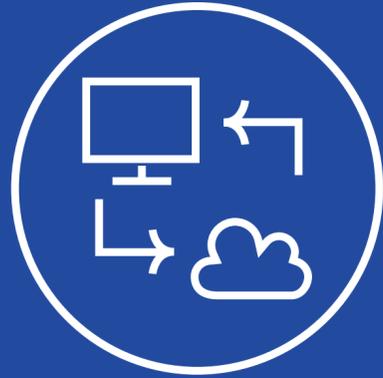
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## Digital repositories

For recommendations on selecting digital repositories for research data please read the Consorci de Serveis Universitaris de Catalunya document:

[Recomanacions Seleccionar Repositori Dades →](#)

[Repository Recommendations →](#)

To know more about the URL's Open Science policies, please visit their [website](#).

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# Thank you!

If you have any enquiries please contact us at [research@esade.edu](mailto:research@esade.edu)