



5_1. Settings











Our objective:

Using own data, to help companies to impact society and business

The group project is an opportunity for students to demonstrate not just their **technical skills** but also their ability in **presenting results** and **propose business recommendations**.

Ethical Considerations in Data Analytics



| Posició | Filiació i Perfils | |
|---|--|---|
| President | Jordi Cortadella Fortuny Delegat del Rector Adjunt al Vr. de Recerca. Professor del Departament de Ciències de la Computació de la UPC. Expert en algoritmes, models formals de computació i circuits nanoelectrònics. | Homepage   |
| Secretari Tècnic PTGAS-UPC | Alejandro León Arias Servei de Gestió del Coneixement, Recerca i Innovació de la UPC |  |
| Vocal PDI-UPC | Cecilio Angulo Bahón Professor del Departament d'Enginyeria de Sistemes, Automàtica i Informàtica Industrial, expert en intel·ligència artificial i robòtica cognitiva social - ESAII | CV   |
| Vocal | Montserrat Bosch González |  |

GDPR – General **Data Protection** Regulation (May 2018)

<https://gdpr-info.eu/>

Data Governance Act – Regulation on the **reuse** of publicly/held, protected data (May 2022)

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R0868>

Data Act – Regulation on **fair** access to and use of data (Dec 2023)

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R2854&qid=1707819078398>

AI Act – **Approved** Regulation on Artificial Intelligence (Jul 2024)

<https://artificialintelligenceact.eu/the-act/>

DPIA – Data Protection Impact Assessment

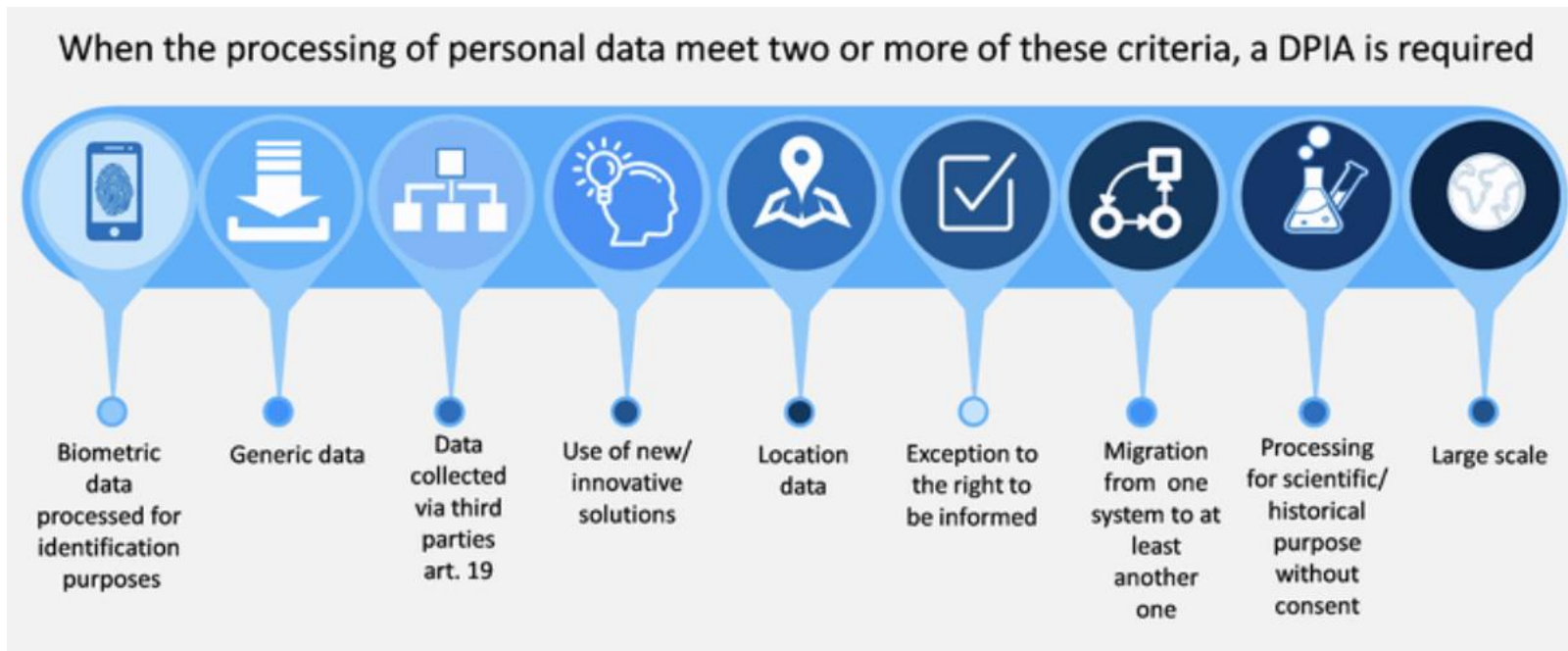
<https://gdpr.eu/data-protection-impact-assessment-template/>



A Data Protection Impact Assessment (DPIA) is **required** under the GDPR **any time** you begin a new project that is likely to involve “a high **risk**” to other people’s personal information.

DPIA – Data Protection Impact Assessment

<https://www.aepd.es/en/rights-and-duties/fulfill-your-duties/measures-compliance/data-protection-impact-assessments>



DPIA – Data Protection Impact Assessment

(Exercise 1) Is DPIA required in your project?

When the processing of personal data meet two or more of these criteria, a DPIA is required



Legal Considerations in Data Analytics

Data Act – FAIR Principles

<https://www.go-fair.org/fair-principles/>

F A I R



Findable



Accessible



Interoperable



Reusable

Legal Considerations in Data Analytics

What is FAIR DATA?



Data and supplementary materials have sufficiently rich metadata and a unique and persistent identifier.

FINDABLE



Metadata and data are understandable to humans and machines. Data is deposited in a trusted repository.

ACCESSIBLE



Metadata use a formal, accessible, shared, and broadly applicable language for knowledge representation.

INTEROPERABLE



Data and collections have a clear usage licenses and provide accurate information on provenance.

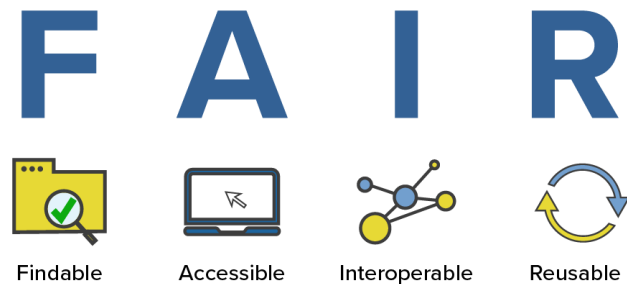
REUSABLE

Legal Considerations in Data Analytics

Data Act – FAIR Principles

<https://www.go-fair.org/fair-principles/>

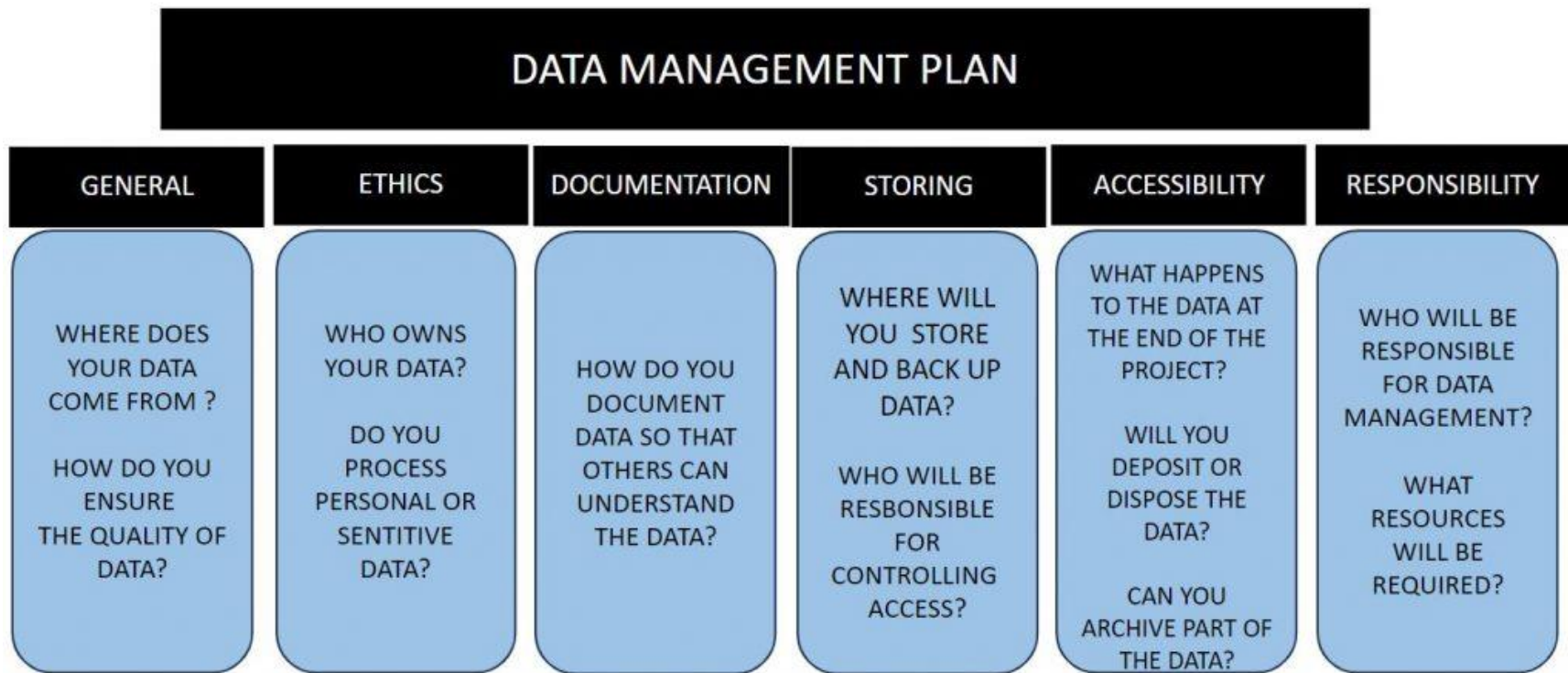
(Exercise 2) How FAIR Principles are ensured in your project?



Legal Considerations in Data Analytics

DMP – Data Management Plan

<https://sites.uef.fi/rdm/data-management-plan-dmp/>



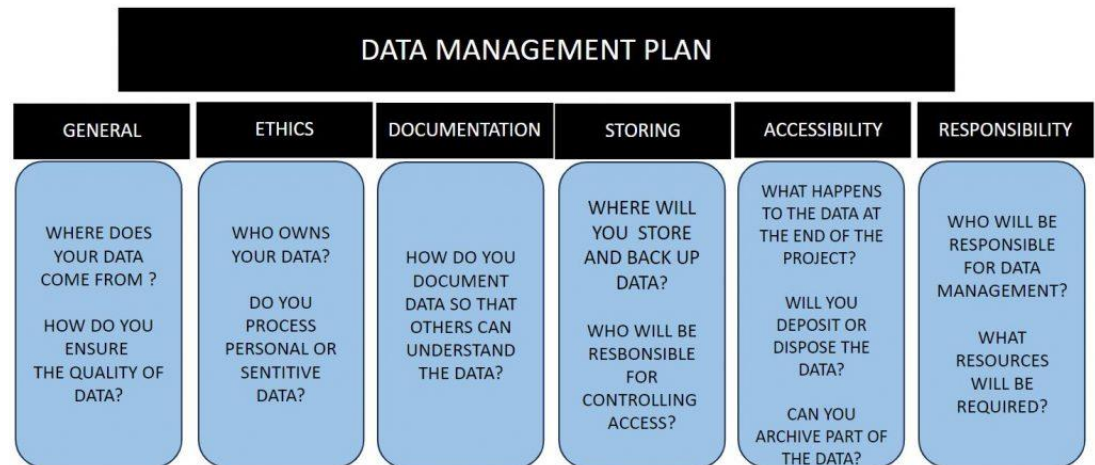
<https://anr.fr/en/latest-news/read/news/the-anr-introduces-a-data-management-plan-for-projects-funded-in-2019-onwards/> 11

Legal Considerations in Data Analytics

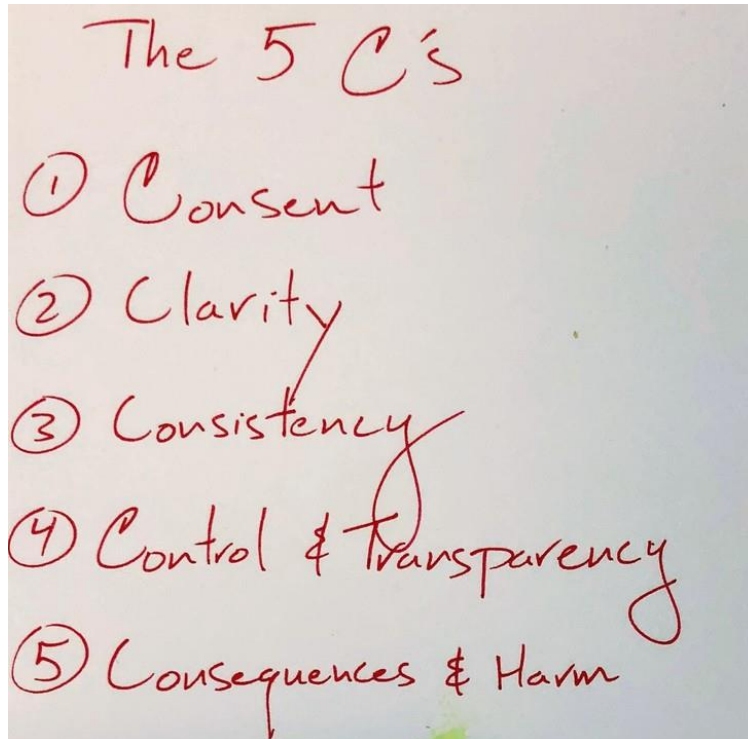
DMP – Data Management Plan

<https://sites.uef.fi/rdm/data-management-plan-dmp/>

(Exercise 3) Sketch a DMP for your project



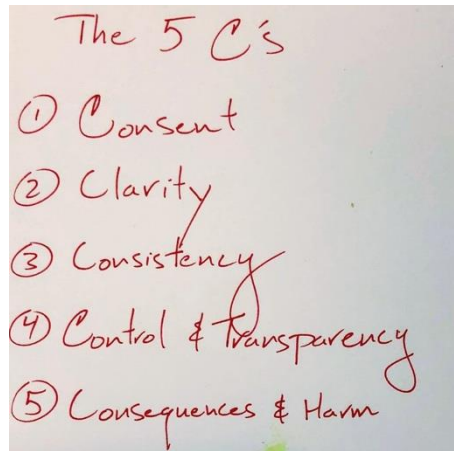
Ethical Considerations in Data Analytics



Ethical considerations in data analytics are a set of principles that guide your designs and practices. These principles include:

- **voluntary** participation,
- informed **consent**,
- **anonymity**,
- **confidentiality**,
- potential for **harm**, and
- results **communication**.

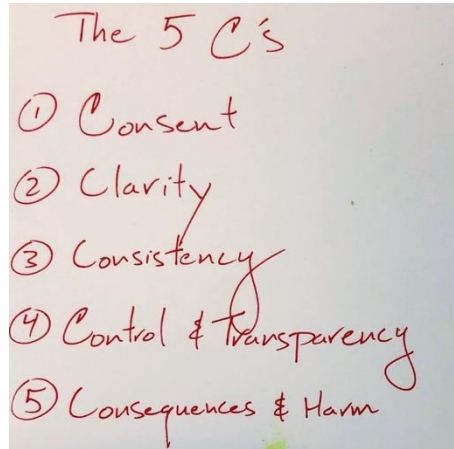
Ethical Considerations in Data Analytics



- **voluntary** participation,
- informed **consent**

(Exercise 4) Provide an informed consent document

Ethical Considerations in Data Analytics



- **anonymity**,
- **confidentiality**,
- potential for **harm**, and
- results **communication**

(Exercise 5) Anonymize your dataset using Randomization

<https://mostly.ai/blog/data-anonymization-in-python>

Deliver your .ipynb code

Ethical Considerations in Data Analytics

(Exercise 6) Discuss this example in your work team

STUDY ON "MENTAL HEALTH IN STUDENTS AT SPANISH UNIVERSITIES"

The Ministry of Universities together with the Ministry of Health launched a work team last March 2022 to diagnose the mental health of university students and stimulate university policies that benefit the well-being of university students.

In March 2022, an internal working group is established with the aim of carrying out a clinical diagnosis of the mental health situation of university students in Spain. A study that was born in order to have a comprehensive photo of this group, in collaboration with the Center for Biomedical Health in Mental Health Network (CIBERSAM).

This entire consultative and analysis process seeks to offer all actors involved in the university system a guide to design policies that benefit the mental health of students, also encouraging the performance of other analyses that expand information about the situation and generate recommendations useful for the university community.

More than half of university students say they have severe depression or anxiety.

One in five students who took part in the study had had thoughts of suicide or self-harm in the past two weeks

**Més de la meitat dels universitaris
asseguren que tenen depressió o ansietat
greu**

Un de cada cinc estudiants que han participat en l'estudi havia tingut pensaments
suïcides o d'autolesió en les últimes dues setmanes

Ethical Considerations in Business Analytics

Sustainable Development Goals (SDG) - impact on business

SUSTAINABLE DEVELOPMENT GOALS





INSPIRING **EDUCATION** INSPIRING **LIFE**

TOULOUSE • PARIS • BARCELONA • CASABLANCA • LONDON

