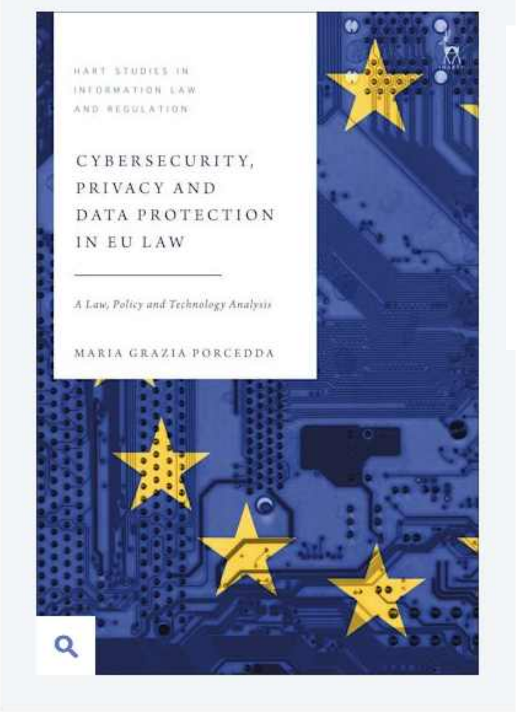
Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

The GDPR and how it works

Dr Maria Grazia Porcedda
Assistant Professor in IT Law

March 25th, 2024

A few words about myself and the sources of this class



HART STUDIES IN INFORMATION LAW AND REGULATION

CYBERSECURITY, PRIVACY AND DATA PROTECTION IN EU LAW

A Law, Policy and Technology Analysis

MARIA GRAZIA PORCEDDA

The Effacement of Information Technology from EU Law: The Need for Collaborative Approaches to Redesign the EU's Regulatory Architecture

Maria Grazia Porcedda[1]

[This is a draft article drawing from a keynote speech delivered at the 18th IFIP Summer School on Privacy and Identity Management, University of Oslo, and forthcoming in F. Bieker, S. De Conca, I. Schiering, N. Gruschka. M. Jensen, Proceedings of the 18th IFIP Summer School 2023, Advances in Information and Communication Technology. Please only cite the version of record (published version)]

Barbara Millicent "Barbie" Roberts[1] and Julius Robert "Oppie" Oppenheimer[2]

EUROPEAN LAW BLOG

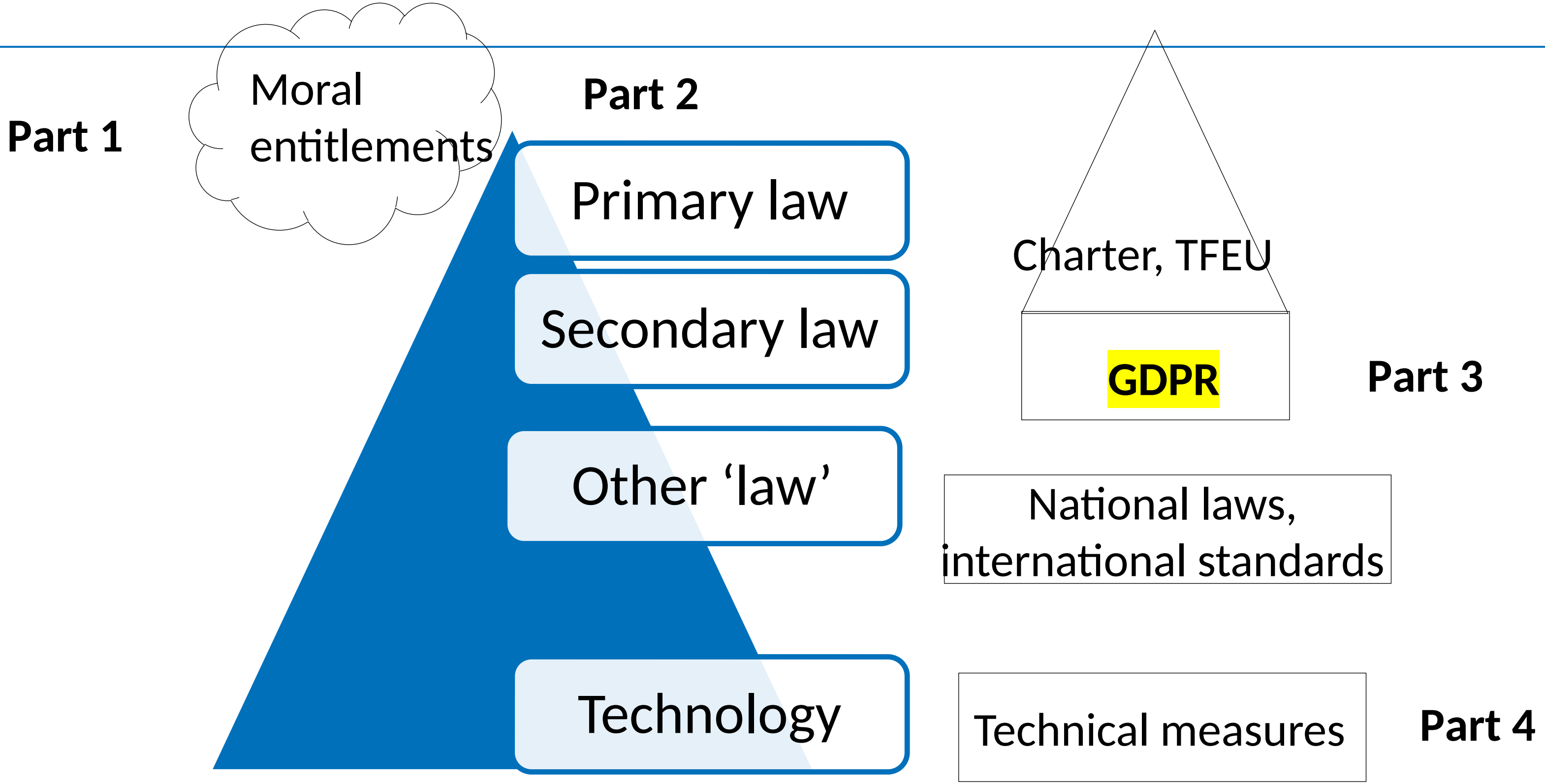
NEWS AND COMMENTS ON EU LAW

The GDPR as a cyber risk management system: the ECJ cautiously tackles data breaches in the NAP case

23 JANUARY 2024 / BY MARIA GRAZIA PORCEDDA

Blogpost 4/2024

The GDPR and how it works : contents



Part 1

Moral entitlements

Part 2

Primary law

Secondary law

Other 'law'

Technology

Charter, TFEU

GDPR

Part 3

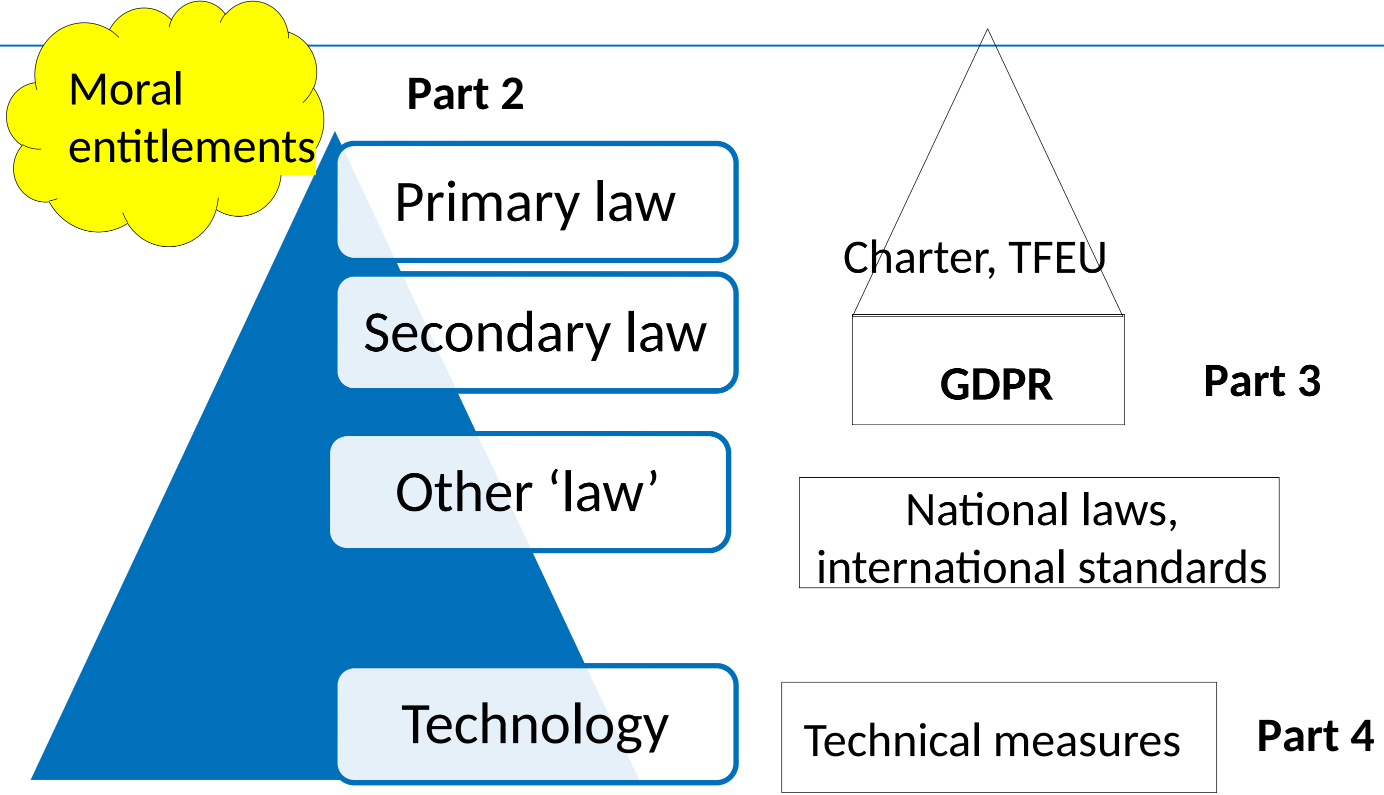
National laws, international standards

Technical measures

Part 4

Adapted from Porcedda (forthcoming 2024)

Part 1: to understand GDPR you need to understand data protection (and privacy before it)



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Privacy as intimacy: nature or nurture?

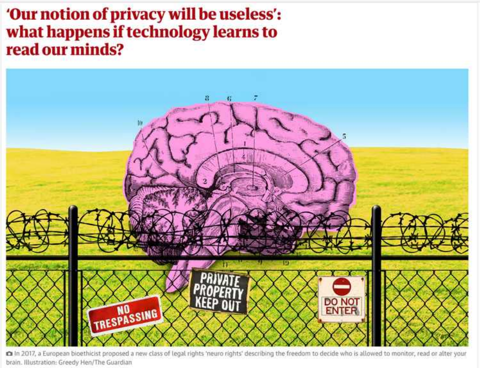
Nature?

psychology

https://dictionary.apa.org/privacy

David Attenborough on animal privacy

https://cdn.theguardian.tv/mainwebsite/2016/10/18/161018AttenboroughGorillaHighRes_desk.mp4

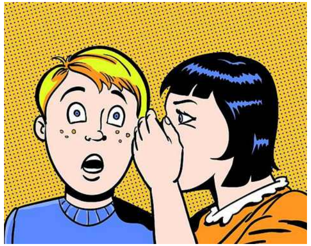


'Our notion of privacy will be useless': what happens if technology learns to read our minds?

PRIVATE PROPERTY KEEP OUT
NO TRESPASSING
DO NOT ENTER

In 2017, a European bioethicist proposed a new class of legal rights 'neuro rights' describing the freedom to decide who is allowed to monitor, read or alter your brain. Illustration: Greedy Hen/The Guardian

Nurture?



POLLY SPRENGER SECURITY JAN 26, 1999 12:00 PM

Sun on Privacy: 'Get Over It'

Intimacy: Needed to build one's identity, supports autonomy & dignity

Personal, emotional, physical and mental **boundaries**

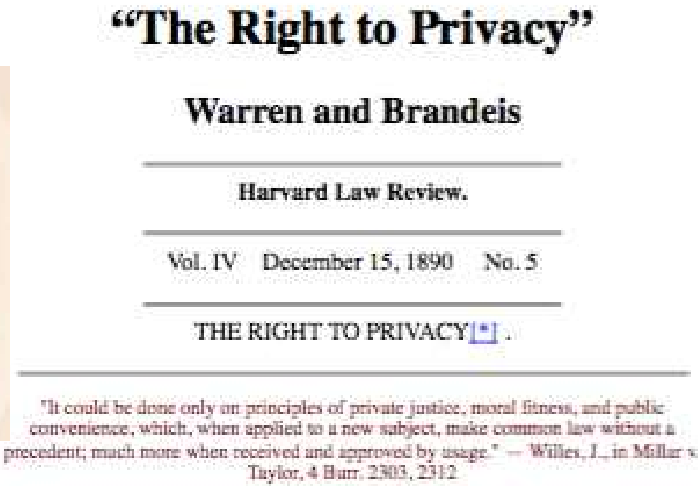
Varies across **time** and **space**

Sources: https://www.wired.com/1999/01/sun-on-privacy-get-over-it/; https://www.theguardian.com/technology/2021/nov/07/our-notion-of-privacy-will-be-useless-what-happens-if-technology-learns-to-read-our-minds; https://www.theguardian.com/world/2016/oct/18/david-attenborough-zoos-respect-gorillas-privacy-peepholes

Technology and the birth of "Privacy"

1800 Constitutions: sanctity of homes and confidentiality of communications (but no common law right/tort)

Source: https://en.wikipedia.org/wiki/File:Samuel_Dennis_Warren_by_William_Notman,_c1875.jpg



"The Right to Privacy"

Warren and Brandeis

Harvard Law Review.

Vol. IV December 15, 1890 No. 5

THE RIGHT TO PRIVACY[*] .

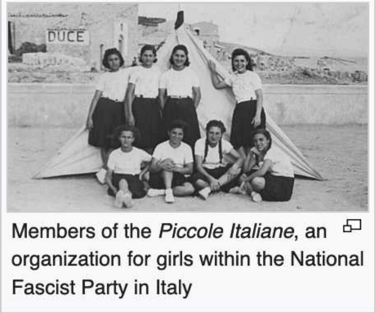
"It could be done only on principles of private justice, moral fitness, and public convenience, which, when applied to a new subject, make common law without a precedent; much more when received and approved by usage." — Willes, J., in Millar v. Taylor, 4 Burr. 2303, 2312

Author: Håkan Svensson
Source: https://upload.wikimedia.org/wikipedia/commons/d/d7/Brownie2_overview3.jpg

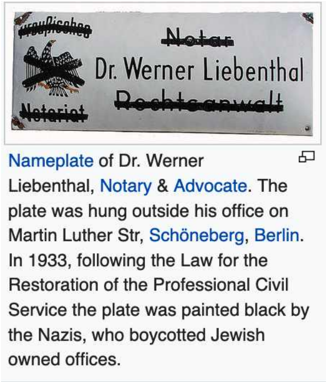
Privacy & WWII, fascism and totalitarianism

Challenges to identity, autonomy and dignity, e.g.:

- Regimentation of children (personal development)
- Prohibition to exercise one's profession (identity, social relations)
- Restrictions on freedom to marry (family)
- Lists of 'enemies of state' (based on ethnicity/religion/political views)
  - Forced labour
  - Expulsion
  - Physical elimination



Members of the *Piccole Italiane*, an organization for girls within the National Fascist Party in Italy



Nameplate of Dr. Werner Liebenthal, Notary & Advocate. The plate was hung outside his office on Martin Luther Str, Schöneberg, Berlin. In 1933, following the Law for the Restoration of the Professional Civil Service the plate was painted black by the Nazis, who boycotted Jewish owned offices.

Images: https://en.wikipedia.org/wiki/Fascism; https://en.wikipedia.org/wiki/Law_for_the_Restoration_of_the_Professional_Civil_Service

«NEVER AGAIN»: Post-WWII legal order and the right to respect for private life (privacy)

Art. 12 UDHR (1948)

No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.

1950. European Convention on Human Rights (ECHR)

COUNCIL OF EUROPE

CONSEIL DE L'EUROPE

1966. International Covenant on Civil and Political Rights (ICCPR)

Data protection / information privacy not yet conceptualised: computing was in its infancy in the 1950s!

1800s

Databases for admin (e.g. census)

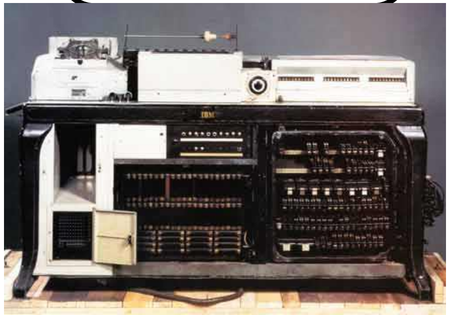
1800s – 1930s

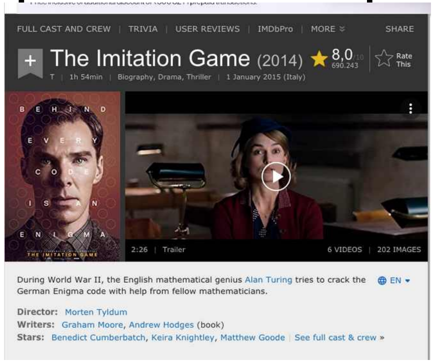
Automation by punched cards and card sorting systems

1940s

Automation by early programmable computers

1940- 1950s Stored-programme computers





FULL CAST AND CREW | TRIVIA | USER REVIEWS | IMDbPro | MORE | SHARE

The Imitation Game (2014) ★ 8,0/10 690.243 ☆ Rate This

T | 1h 54min | Biography, Drama, Thriller | 1 January 2015 (Italy)

2:26 | Trailer | 6 VIDEOS | 202 IMAGES

During World War II, the English mathematical genius Alan Turing tries to crack the German Enigma code with help from fellow mathematicians. EN

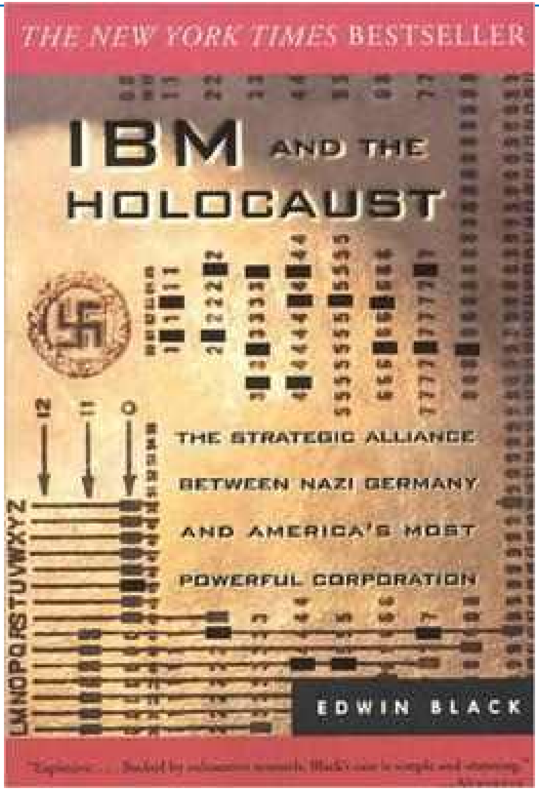
Director: Morten Tyldum
Writers: Graham Moore, Andrew Hodges (book)
Stars: Benedict Cumberbatch, Keira Knightley, Matthew Goode | See full cast & crew »

Trailer: https://www.youtube.com/watch?v=nuPZUUED5uk; Replica of B-A-B-Y, Author: Tom Jeffs. Source: https://en.wikipedia.org/wiki/Manchester_Small-Scale_Experimental_Machine;

Even without computers, data collection could harm

https://ibmandtheholocaust.com/

Überſicht
mit
Hollerith
Lochkarten

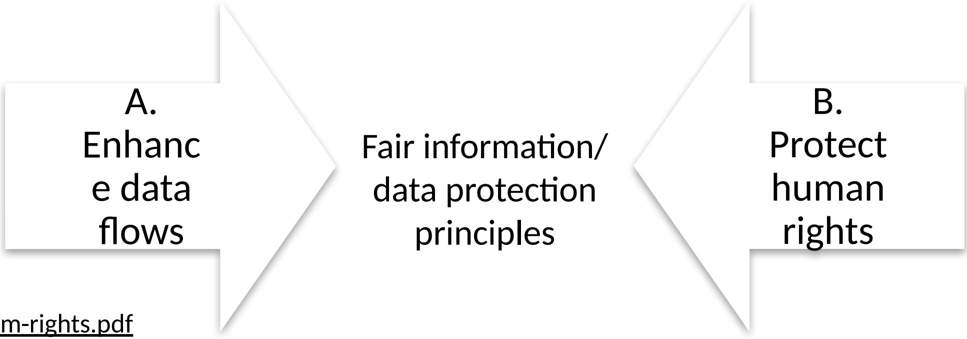

THE NEW YORK TIMES BESTSELLER
IBM AND THE HOLOCAUST
THE STRATEGIC ALLIANCE BETWEEN NAZI GERMANY AND AMERICA'S MOST POWERFUL CORPORATION
EDWIN BLACK

Tabulator / card sorting system

Uptake of data processing by private and public sectors

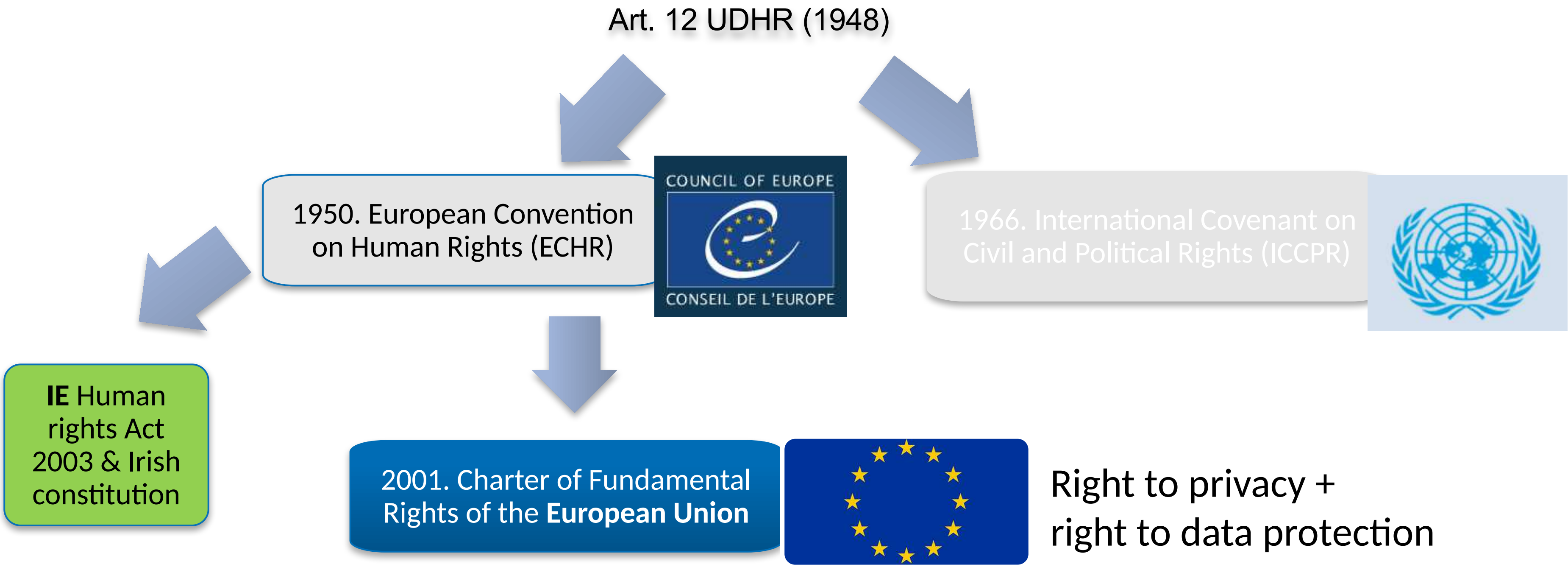
- Databanks in Land of Hessen: processing health and income-related data ✉Data Protection Act 1970
- Parallel conversations elsewhere: Sweden (1973); United States (1973 report*)

“While recent scientific discoveries and technological advances have opened vast prospects for economic, social and cultural progress, such developments may nevertheless endanger the rights and freedoms of individuals and will require continuing attention.” (1973 UN Proclamation of Teheran, § 18)



* https://www.justice.gov/opcl/docs/rec-com-rights.pdf

Data protection becomes information privacy and, in the EU, a self-standing right



Art. 12 UDHR (1948)

1950. European Convention on Human Rights (ECHR)

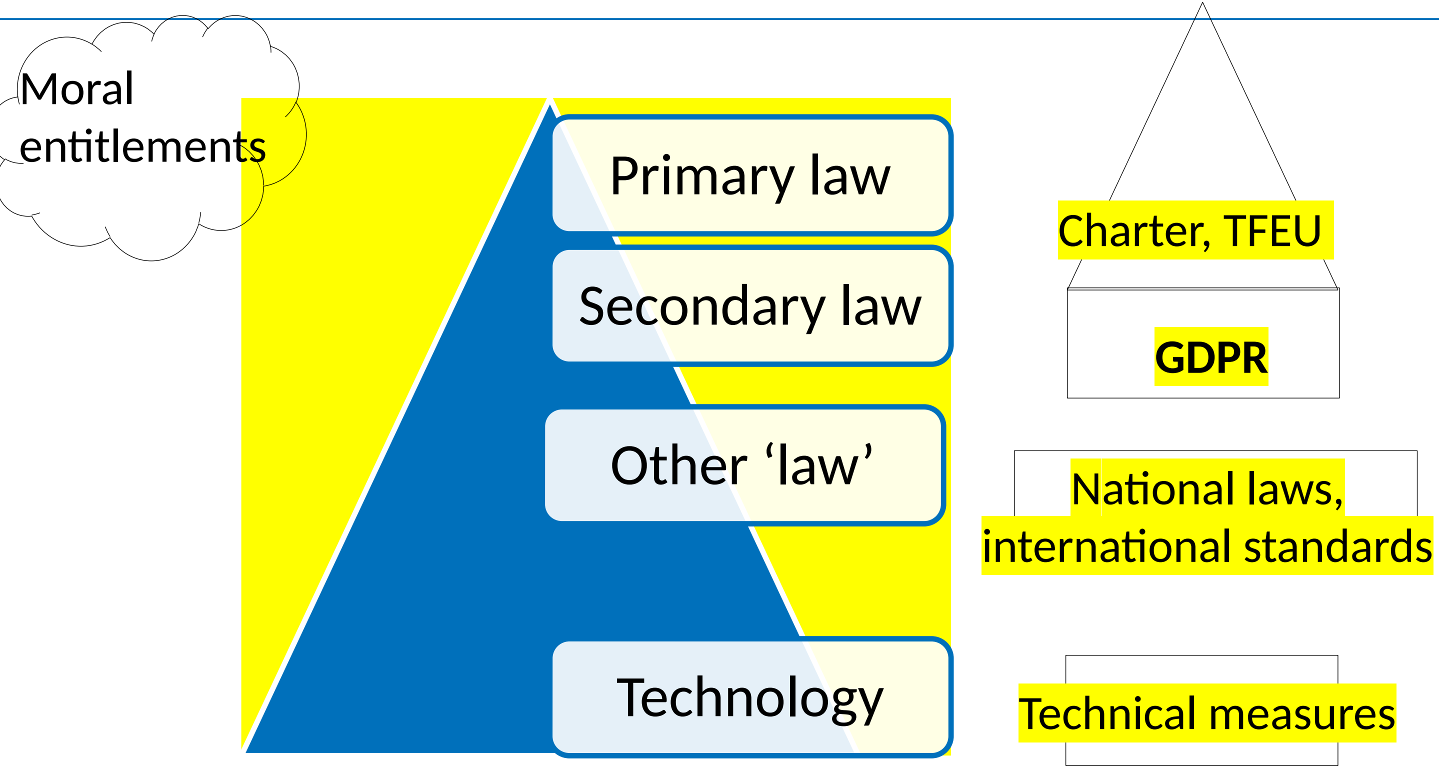
1966. International Covenant on Civil and Political Rights (ICCPR)

IE Human rights Act 2003 & Irish constitution

2001. Charter of Fundamental Rights of the **European Union**

Right to privacy +
right to data protection

Part 2: explaining this funny diagram



Moral entitlements

Primary law

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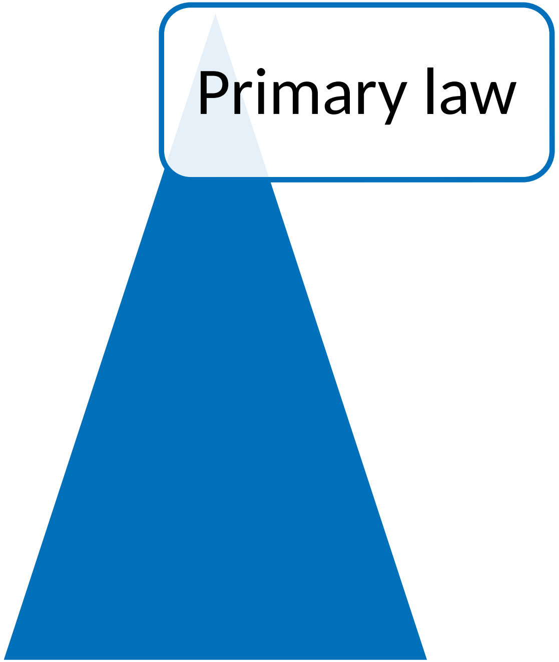
National laws, international standards

Technical measures

Adapted from Porcedda (forthcoming 2024)

Moral entitlements are empty without legal grounding

They need a hook in primary or constitutional law



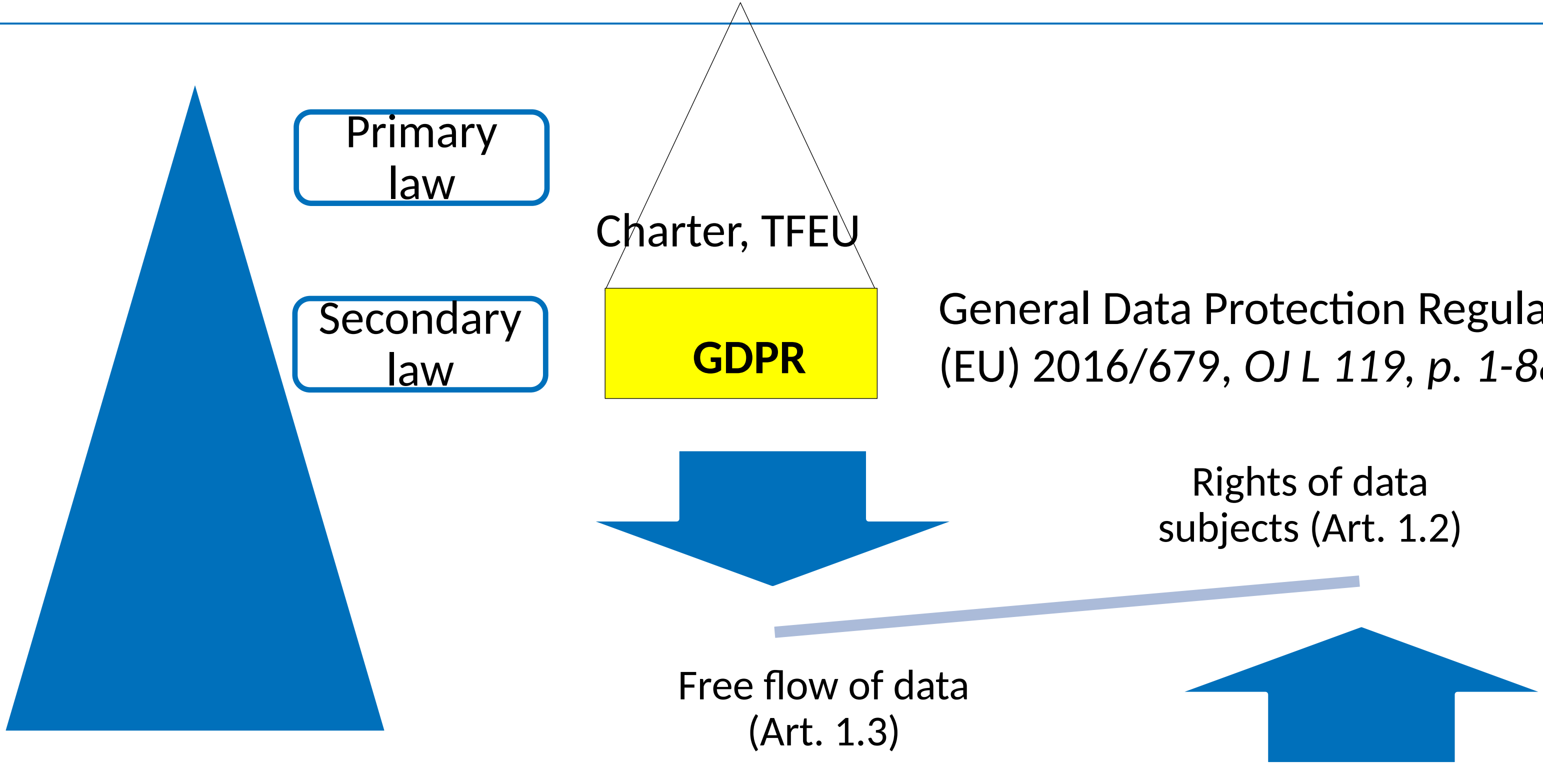
Article 8 of the Charter

Everyone has the right to the protection of personal data concerning him or her

Article 16 of the Treaty on the Functioning of the EU

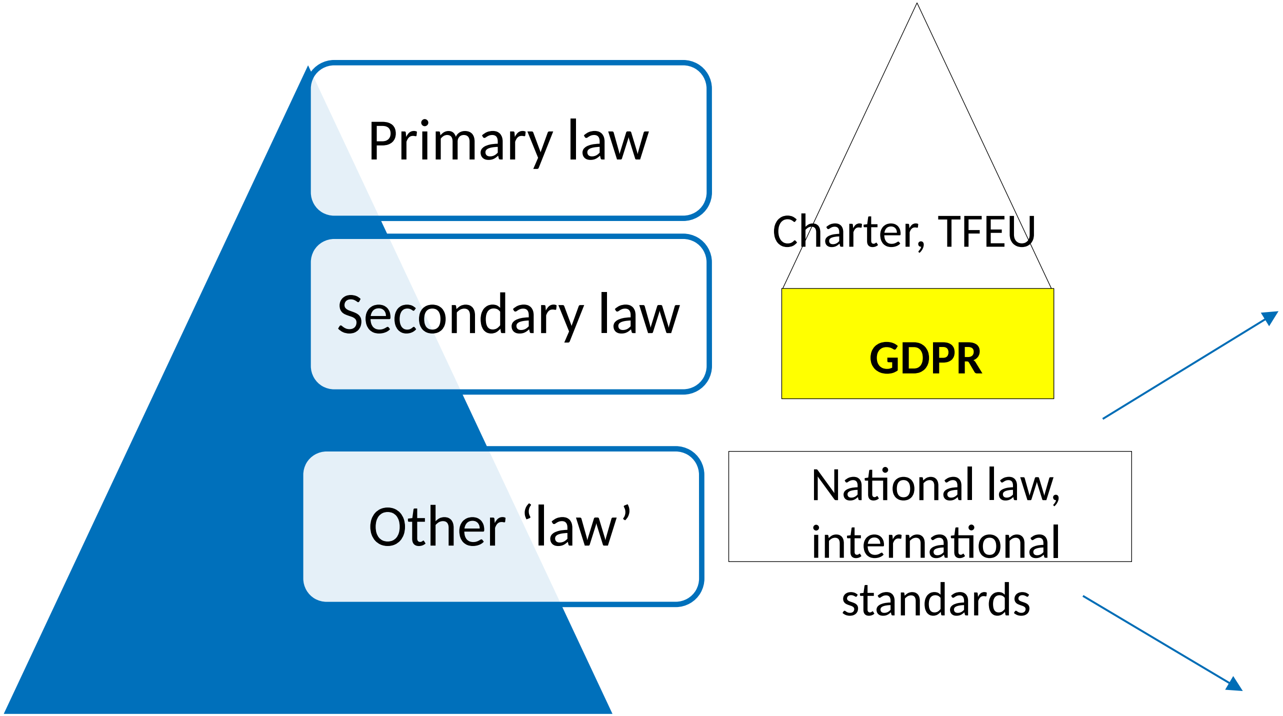
1. Everyone has the right to the protection of personal data concerning them.
2. The European Parliament and the Council, acting in accordance with the ordinary legislative procedure, **shall lay down the rules** relating to the protection of individuals with regard to the processing of personal data by Union institutions…and by the Member States when carrying out activities which fall within the scope of Union law….

Article 16 TFEU gives power to adopt GDPR, which reconciles rights with free flow of data


Primary law
Secondary law
Charter, TFEU
GDPR
Rights of data subjects (Art. 1.2)
Free flow of data (Art. 1.3)

General Data Protection Regulation (EU) 2016/679, *OJ L 119*, *p. 1-88*

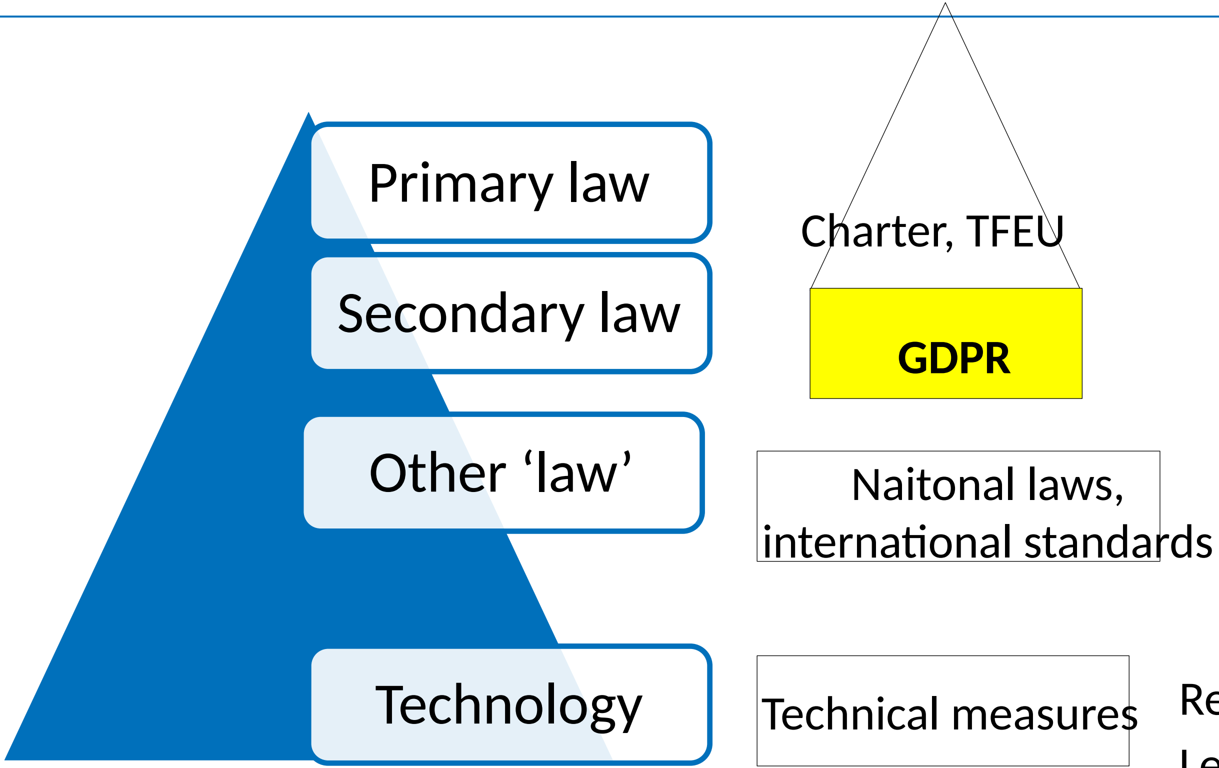
Even if it’s 88 pages long, GDPR does not resolve everything!



The GDPR is enforced by EU member states (eg Ireland).
Enforcement requires national laws

The GDPR says we must adopt technical and organisational measures to protect data, but not which measures

Technical measures = technology, which has regulatory power



Watch at:
https://www.youtube.com/watch?v=3WS9DhSIWR0
(until 3’30’’)

Reidenberg (1998) Lex Informatica

Lessig (1999) Code is Law

Reidenberg (1998) Lex Informatica

technological architectures impose effective external regulation

“technological defaults and system configurations [form] two types of substantive rules: immutable policies embedded in the technology standards that cannot be altered and flexible policies embedded in the technical architecture that allow variations on default settings. (p. 555)”

✉ Changes by designers or legislators

Design-based legislation: Internet design choices affect regulatory options

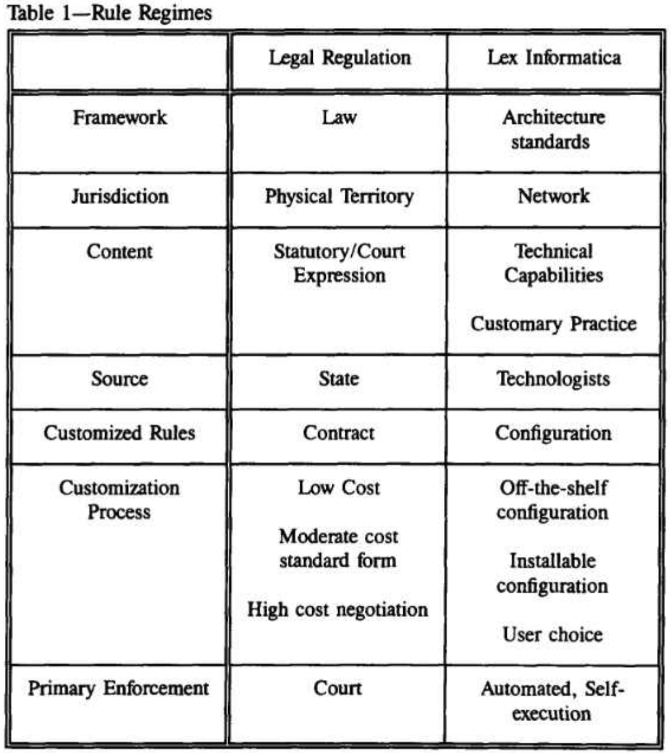


Table 1—Rule Regimes

	Legal Regulation	Lex Informatica
Framework	Law	Architecture standards
Jurisdiction	Physical Territory	Network
Content	Statutory/Court Expression	Technical Capabilities Customary Practice
Source	State	Technologists
Customized Rules	Contract	Configuration
Customization Process	Low Cost Moderate cost standard form High cost negotiation	Off-the-shelf configuration Installable configuration User choice
Primary Enforcement	Court	Automated, Self-execution

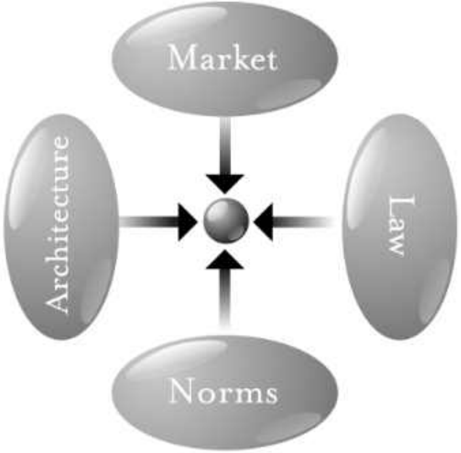
Lawrence Lessig’s modalities of regulation over the pathetic dot

The Law of the Horse: What Cyberlaw Might Teach (1999) 4 modalities of regulation:

- Norms: constrain behaviour through community
- Law: directs behaviour by threatening ex post sanctions
- Market: regulate through price
- Architecture: the world as we find it restricts or enables behaviour

Four modalities (direct/indirect) affect the pathetic dot

“Pathetic dot”



Lessig (2006) p. 123

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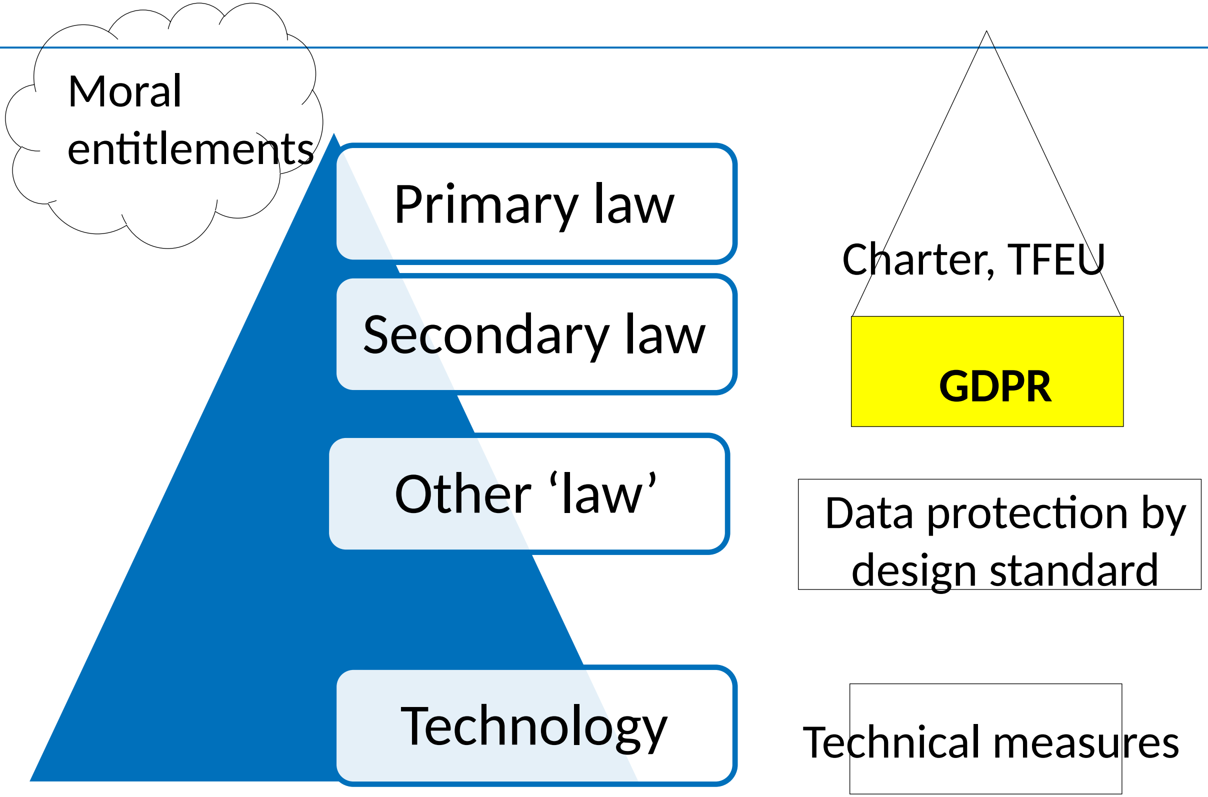
BREAK

Part 3: the GDPR and its main features

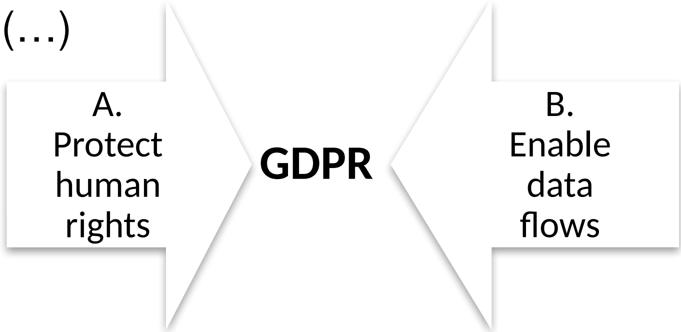


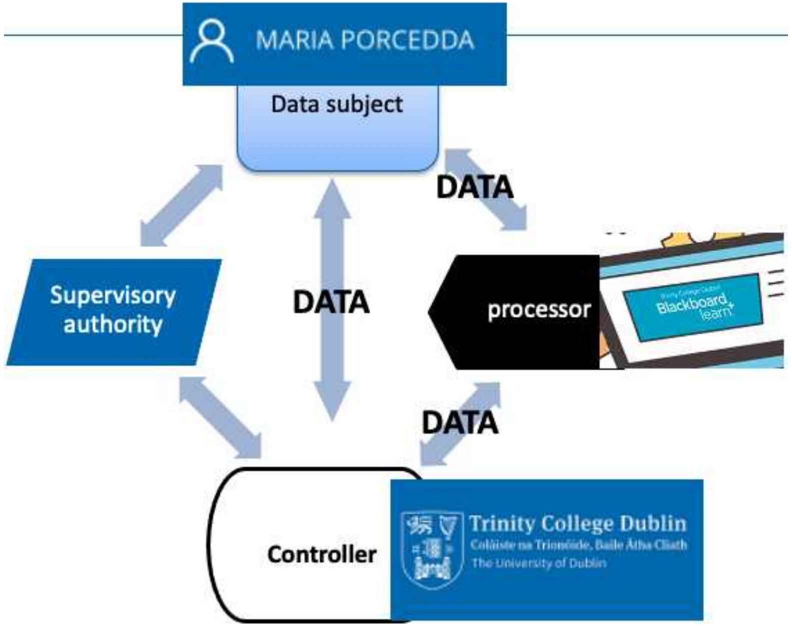
Adapted from Porcedda (forthcoming 2024)

The rationale and architecture of the GDPR

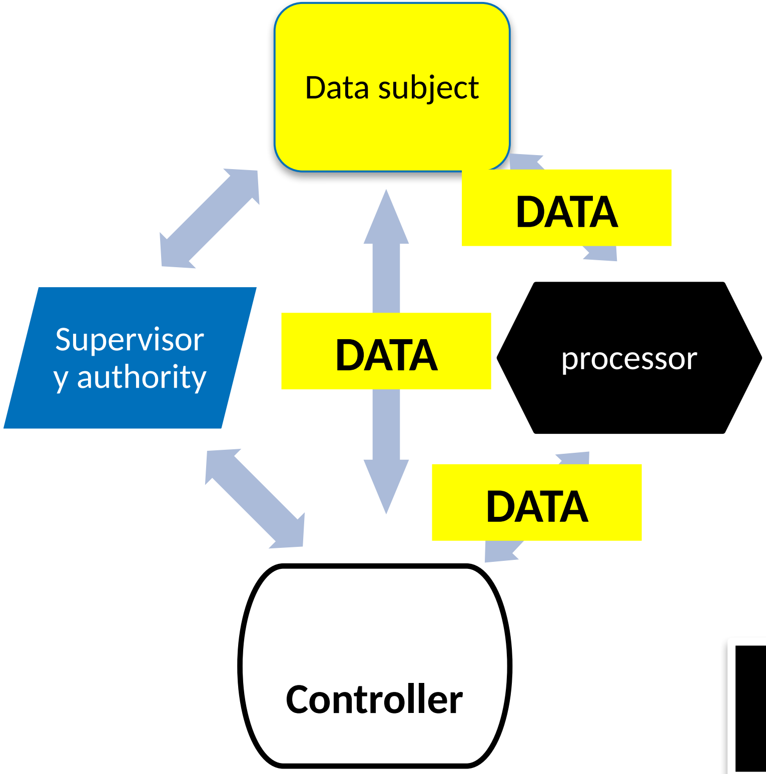
Recital 1 The protection of natural persons in relation to the processing of personal data is a fundamental right. (…)

Recital 2 This Regulation is intended to contribute to the accomplishment of an area of freedom, security and justice and of an economic union, to economic and social progress (…)





The data protection architecture: 1. (processing of) personal data (Art 4(1))



✉ **Any information**

→ relating to an **identified** or **identifiable**

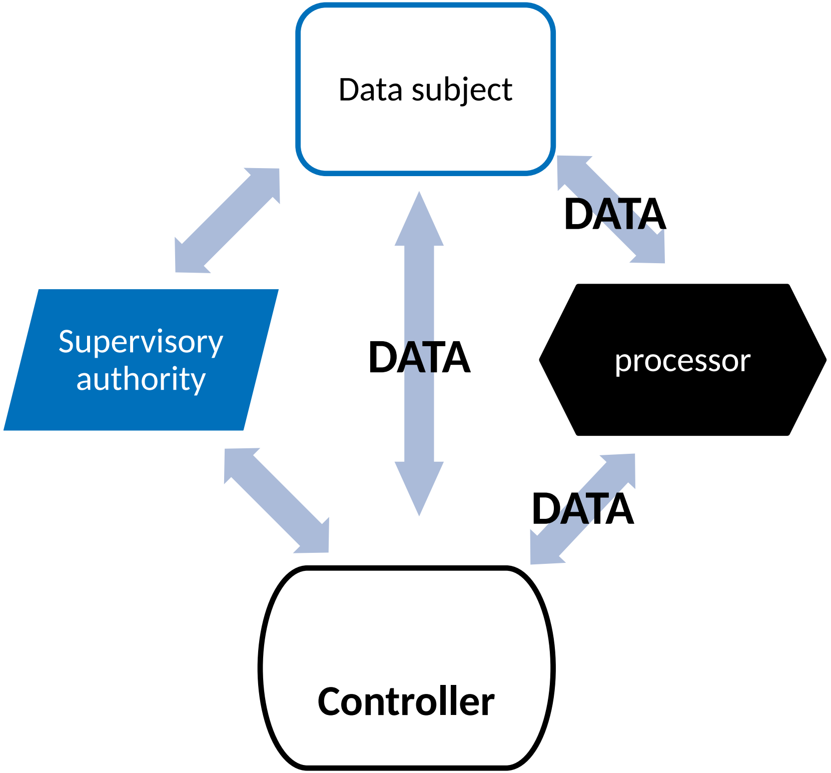
→ **natural person ('data subject');**

✉ Rec 27 no deceased person | Rec 14 whatever the persons' nationality or residence,

Identifiable = can be identified, **directly or indirectly,** in particular **by reference to an identifier** such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity

Art. 9 Special categories of personal data
Art. 10 data relating to criminal convictions and offences

The data protection architecture: 2. processing



4.2) ‘processing’ =

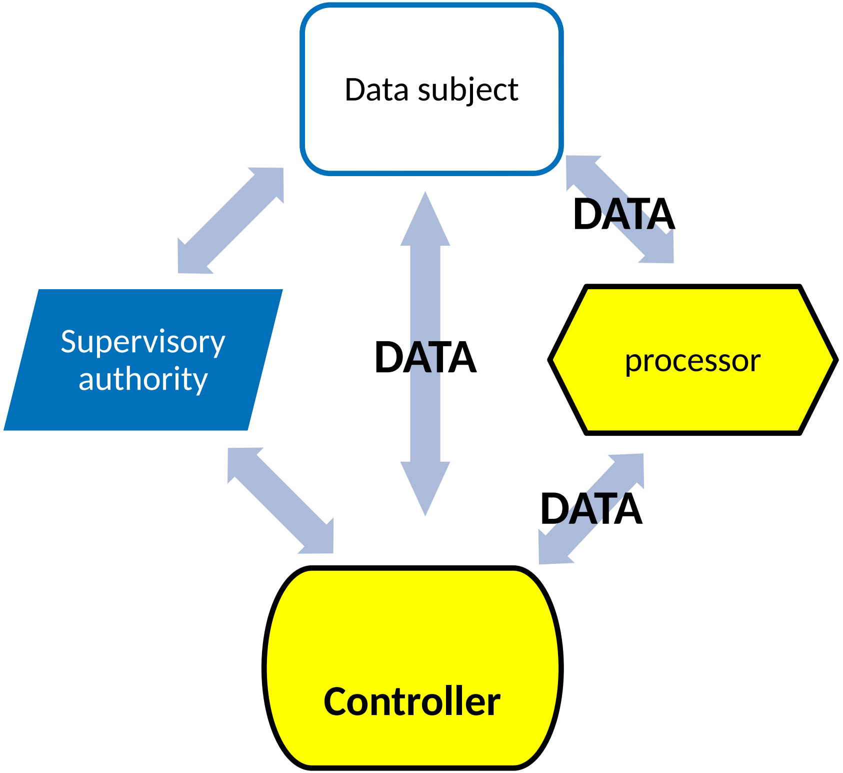
✉ any (set of) operations performed on personal data

→ by any means, e.g.

- collection
- recording
- organisation, structuring
- storage
- adaptation or alteration
- retrieval
- consultation
- use
- disclosure by transmission
- dissemination or otherwise making available
- alignment or combination
- restriction
- erasure or destruction

= open-ended list

The data protection architecture: 3. the controller (and processor)



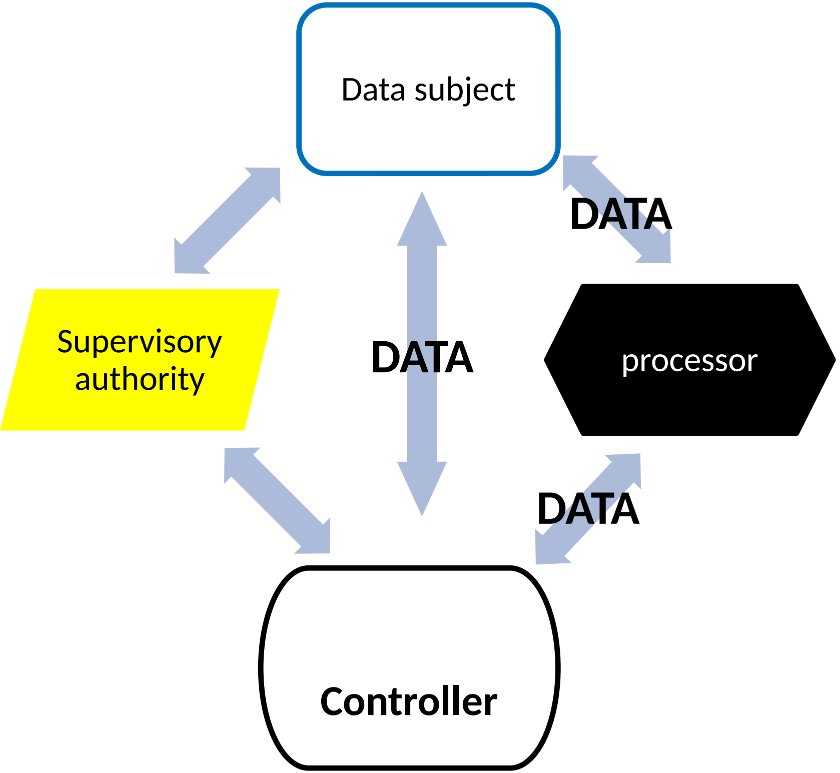
Art. 4 (7) **natural/legal** person/entity alone or jointly with others **determines**:

- **purposes** and **means** of processing
- (other criteria by EU/MS law)
- Interpreted by the CJEU
  - Eg Case C-272/19
  - Interpreted by Data Protection Board

Sometimes controller delegates to processor

Art 4 (8) processes personal data on behalf of the controller;

The data protection architecture: 3. the supervisory authority (and EDPB)



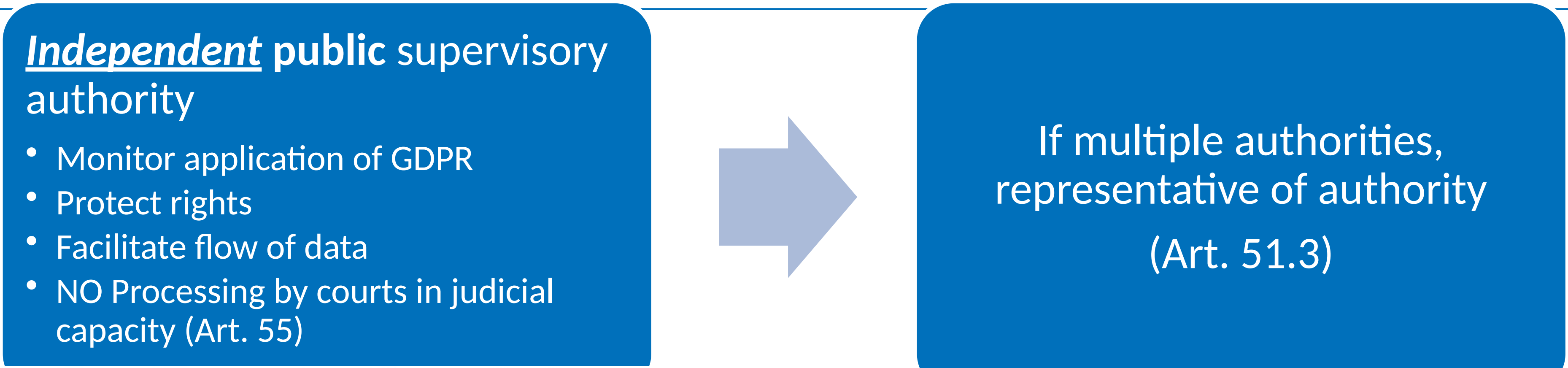
Art. 4(21) *independent* **public** authority established by a Member State pursuant to Article 51
(aka DPAs = data protection authorities)

+ the European Data Protection Board(Art 68)

- body of EU with legal personality
- Head of DPAs + EDPS
- Replaces the Working Party 29)
- must ensure consistent application of GDPR

https://edpb.europa.eu/

Supervisory authorities

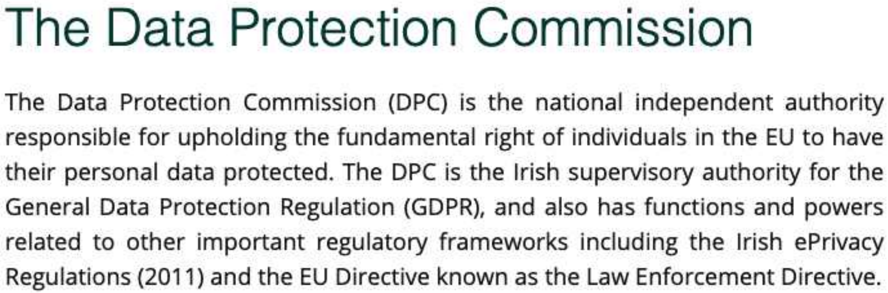


Independent **public** supervisory authority

- Monitor application of GDPR
- Protect rights
- Facilitate flow of data
- NO Processing by courts in judicial capacity (Art. 55)

If multiple authorities, representative of authority

(Art. 51.3)

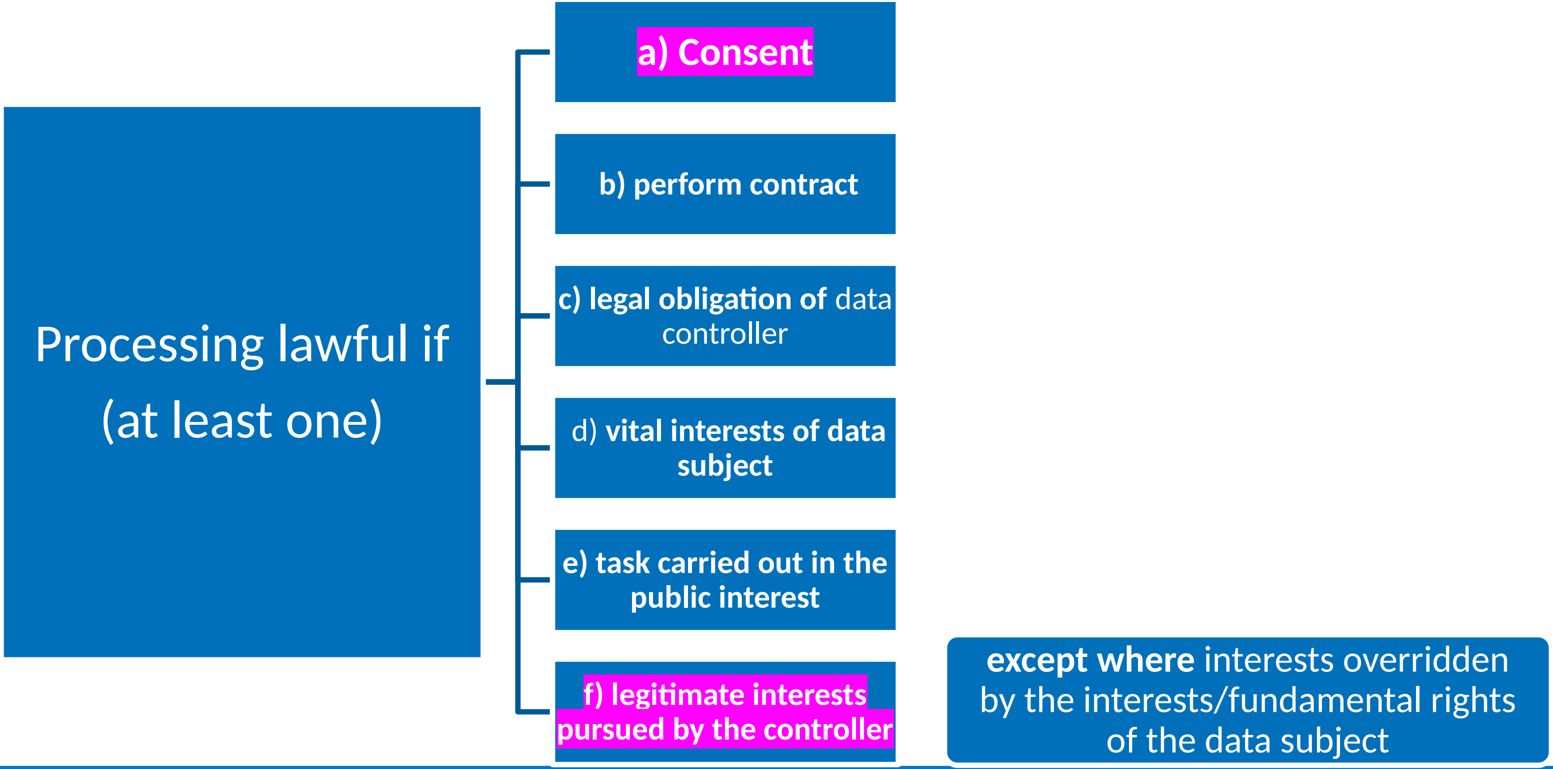


The Data Protection Commission

The Data Protection Commission (DPC) is the national independent authority responsible for upholding the fundamental right of individuals in the EU to have their personal data protected. The DPC is the Irish supervisory authority for the General Data Protection Regulation (GDPR), and also has functions and powers related to other important regulatory frameworks including the Irish ePrivacy Regulations (2011) and the EU Directive known as the Law Enforcement Directive.

https://www.dataprotection.ie/

Article 6: processing lawful processing only in these six cases



Processing lawful if (at least one)

- **a) Consent**
- **b) perform contract**
- **c) legal obligation of** data controller
- d) **vital interests of data subject**
- **e) task carried out in the public interest**
- **f) legitimate interests pursued by the controller**

except where interests overridden by the interests/fundamental rights of the data subject

Article 5: Principles relating to processing of personal data

1. Personal data shall be…

[lawfulness, fairness and transparency]	[purpose limitation]	[data minimisation]	[accuracy]	[storage limitation]	[integrity and confidentiality]	[accountability]
1.a processed lawfully, fairly and in a transparent manner in relation to the data subject	**1.b** collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes;	**1.c** adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed;	**1.d** accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that personal data that are inaccurate, having regard to the purposes for which they are processed, are erased or rectified without delay	**1.e** kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed;	**1.f** processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organisational measures	2. The controller shall be responsible for, and be able to demonstrate compliance with

Accountability (responsibility) of controller(s): Article 24

What:

- ensures + able to demonstrate that processing complies with GDPR

How:

- implement **appropriate** technical & organizational measures (updated as needed)

Measures are **appropriate** in relation to:

- nature, scope, context and purposes of processing
- risks (likelihood/severity) for rights and freedoms of **natural persons**
- **In line with data protection by design and by default (Art. 25) (EDPB 4/2019)**

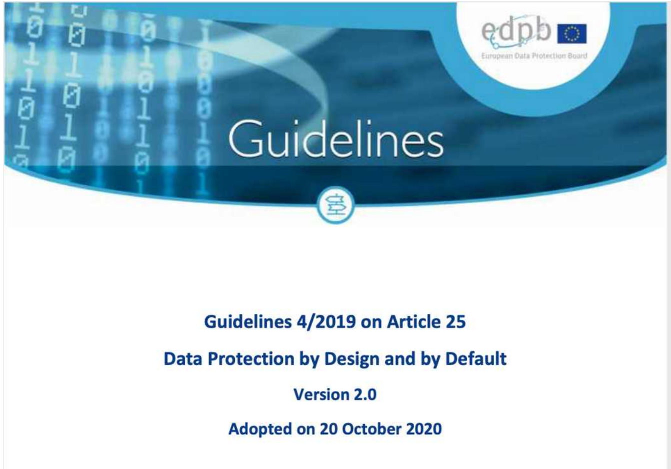
Article 24 (obligations of controller) & 25 (Data protection by design)

BONUS SLIDE

Art 25 (1) **Data protection by design**: implement **appropriate technical and organisational measures**…designed

- to implement data protection principles…in an effective manner and
- to integrate the necessary safeguards into the processing
- in order to meet GDPR requirements + protect the rights of data subjects

Art 25 (2) **Data protection by default**: only personal data which are necessary for each specific purpose of the processing are processed ✉ data minimization + purpose specification + storage limitation



Guidelines

Guidelines 4/2019 on Article 25

Data Protection by Design and by Default

Version 2.0

Adopted on 20 October 2020

Binding on controller: tech developer?

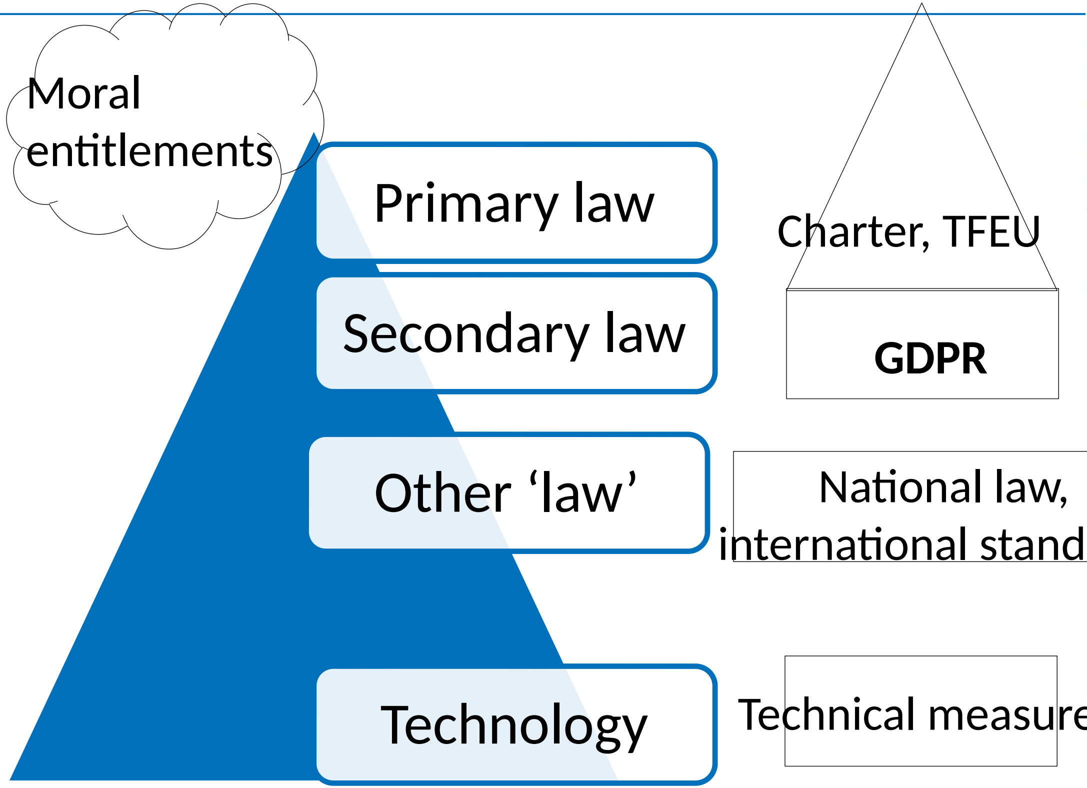
Article 32: controller must ensure security of processing

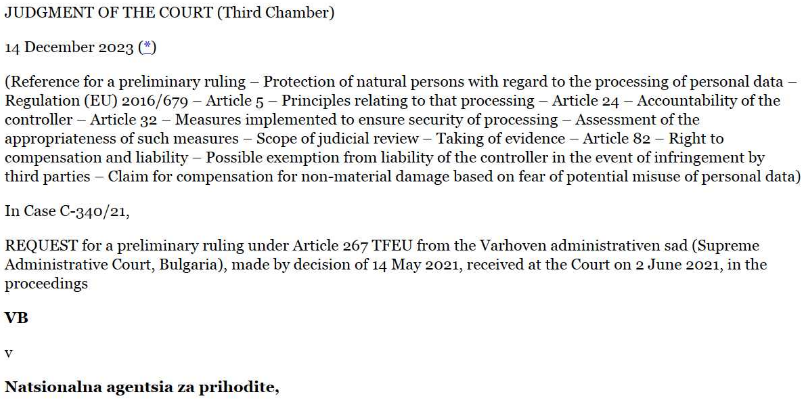
Applies to controller / processor- not tech developer!

1. **Taking into account the state of the art**, the **costs** of implementation and the nature, scope, context and purposes of processing as well as the **risk of varying likelihood and severity** for the rights and freedoms of natural persons, the controller and the processor **shall implement appropriate technical and organisational measures** to ensure a level of security appropriate to the risk, including inter alia as appropriate:

- (a) the **pseudonymisation** and **encryption** of personal data;
- (b) the ability to ensure the **ongoing confidentiality, integrity, availability** and **resilience** of processing systems and services;
- (c) the ability to **restore** the availability and access to personal data in a timely manner ….
- (d) a process for regularly **testing**, **assessing** and **evaluating** the effectiveness of technical and organisational measures for ensuring the security of the processing.

Part 4: how does the GDPR interact with tech? The NAP court case




JUDGMENT OF THE COURT (Third Chamber)

14 December 2023 (*)

(Reference for a preliminary ruling – Protection of natural persons with regard to the processing of personal data – Regulation (EU) 2016/679 – Article 5 – Principles relating to that processing – Article 24 – Accountability of the controller – Article 32 – Measures implemented to ensure security of processing – Assessment of the appropriateness of such measures – Scope of judicial review – Taking of evidence – Article 82 – Right to compensation and liability – Possible exemption from liability of the controller in the event of infringement by third parties – Claim for compensation for non-material damage based on fear of potential misuse of personal data)

In Case C-340/21,

REQUEST for a preliminary ruling under Article 267 TFEU from the Varhoven administrativen sad (Supreme Administrative Court, Bulgaria), made by decision of 14 May 2021, received at the Court on 2 June 2021, in the proceedings

VB

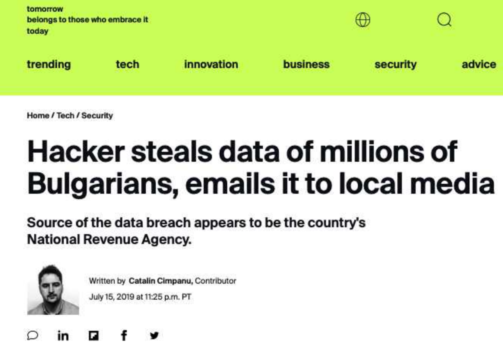
v

Natsionalna agentsia za prihodite,

Adapted from Porcedda (forthcoming 2024)

The *Natsionalna agentsia za prihodite* (NAP) case (first on data breaches)

- VB took Bulgarian National Revenue Agency (NAP) to court to ask for compensation for non-material damage following hack
- Compensation based on the GDPR, NAP as data controller
- If EU rules are unclear, national courts cannot interpret them, must ask the Court of Justice of the European Union (CJEU)
- CJEU has exclusive power to interpret EU law

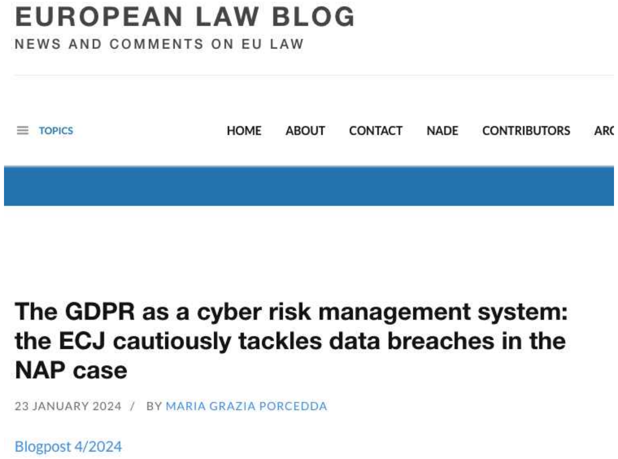


Home / Tech / Security

Hacker steals data of millions of Bulgarians, emails it to local media

Source of the data breach appears to be the country's National Revenue Agency.

Written by Catalin Cimpanu, Contributor
July 15, 2019 at 11:25 p.m. PT



The GDPR as a cyber risk management system: the ECJ cautiously tackles data breaches in the NAP case

23 JANUARY 2024 / BY MARIA GRAZIA PORCEDDA

Blogpost 4/2024

Sources: https://www.zdnet.com/article/hacker-steals-data-of-millions-of-bulgarians-emails-it-to-local-media/ ; https://europeanlawblog.eu/2024/01/23/the-gdpr-as-a-cyber-risk-management-system-the-ecj-cautiously-tackles-data-breaches-in-the-nap-case/

Questions 1 and 2

§ 22) if Articles 24 and 32 of the GDPR [mean] that unauthorised disclosure of personal data or unauthorised access to those data by a 'third party…are sufficient, in themselves, for it to be held that the technical and organisational measures implemented by the controller in question were not 'appropriate', within the meaning of Articles 24 and 32.

§40) if Article 32 of the GDPR [means] that the appropriateness of the technical and organisational measures implemented by the controller, under that article, must be assessed by the national courts in a concrete manner, in particular by taking into account the risks associated with the processing concerned.

Question 3

BONUS SLIDE

§48) if the principle of accountability of the controller [Articles 5(2) + 24 GDPR] [means] that, in an action for damages under Article 82 [GDPR], the controller in question bears the burden of proving that the security measures implemented by it are appropriate under Article 32 [GDPR].

§ 58) if Article 32 of the GDPR [means] that, in order to assess the appropriateness of the security measures implemented by the controller under that article, an expert's report constitutes a necessary and sufficient means of proof.

Questions 4 and 5

BONUS SLIDE

§ 65) if Article 82(3) of the GDPR [means] that the controller is exempt from its obligation to pay compensation for the damage suffered by a data subject, under Article 82(1) and (2) [GDPR], solely because that damage is a result of unauthorised disclosure of, or access to, personal data by a 'third party', within the meaning of Article 4(10) [GDPR].

§75 if Article 82(1) of the GDPR [means] that the fear experienced by a data subject with regard to a possible misuse of his or her personal data by third parties as a result of an infringement of that regulation is capable, in itself, of constituting 'non-material damage' within the meaning of that provision.

How to read a case

HOW TO READ A CASE

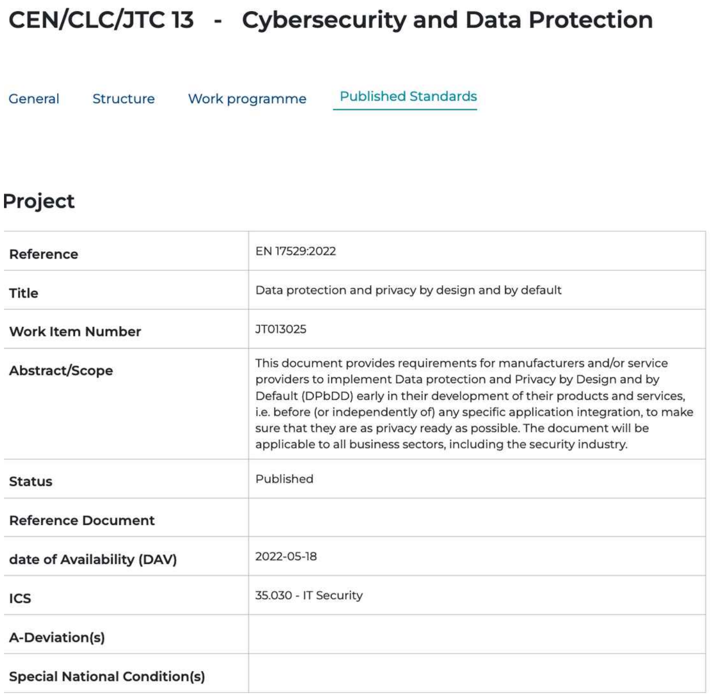
- **Understand what law the case is about**
- **Understand what the referring court is asking**
- **Understand how the CJEU answers the question asked**
- **Understand the implications of the answer**

EXERCISE

In groups of three, read excerpts from Q1 or Q2, then write on the BB forum

- What articles of the GDPR does the CJEU interpret?
- What is the answer in lay person's terms?
- What is the implication?

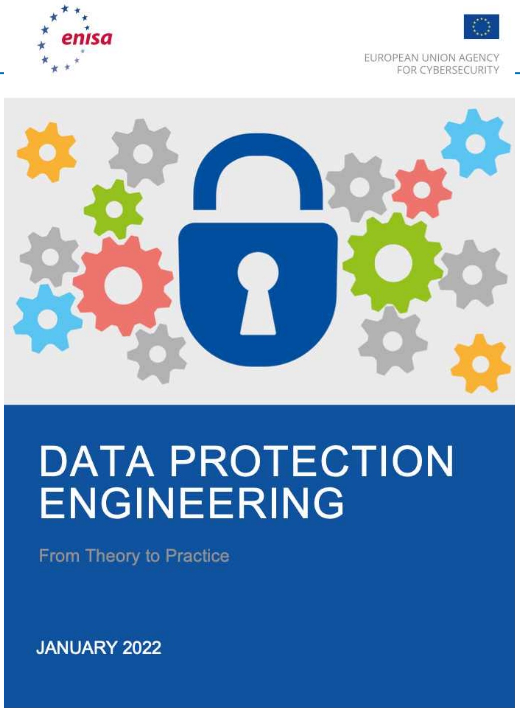
Appropriate measure tied to standards and state of the art



CEN/CLC/JTC 13 - Cybersecurity and Data Protection

Project

Reference	EN 17529:2022
Title	Data protection and privacy by design and by default
Work Item Number	JT013025
Abstract/Scope	This document provides requirements for manufacturers and/or service providers to implement Data protection and Privacy by Design and by Default (DPbDD) early in their development of their products and services, i.e. before (or independently of) any specific application integration, to make sure that they are as privacy ready as possible. The document will be applicable to all business sectors, including the security industry.
Status	Published
Reference Document	
date of Availability (DAV)	2022-05-18
ICS	35.030 - IT Security
A-Deviation(s)	
Special National Condition(s)	



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EUROPEAN UNION AGENCY FOR CYBERSECURITY

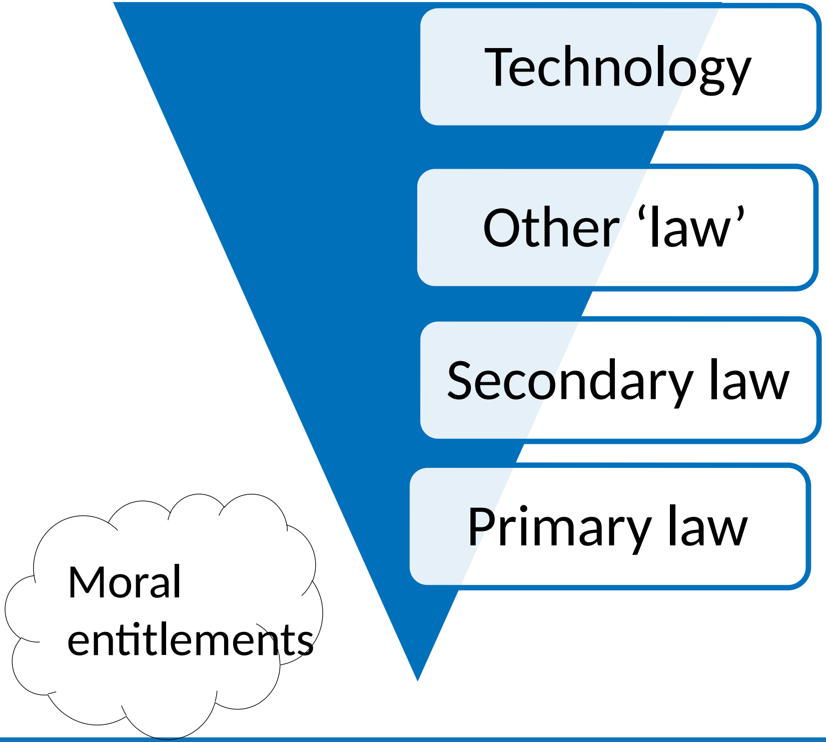
DATA PROTECTION ENGINEERING

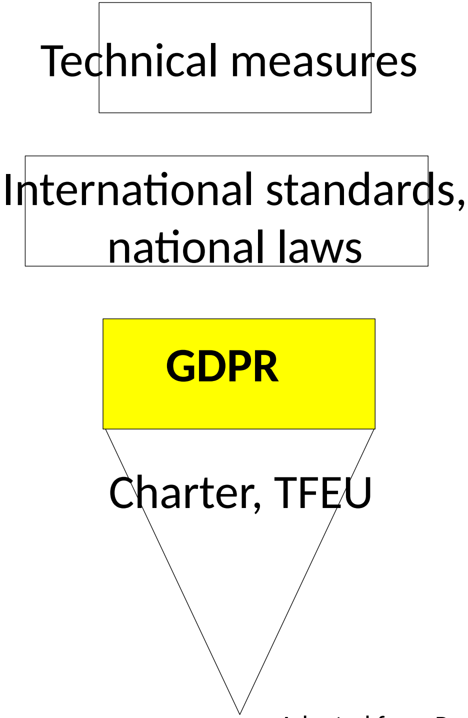
From Theory to Practice

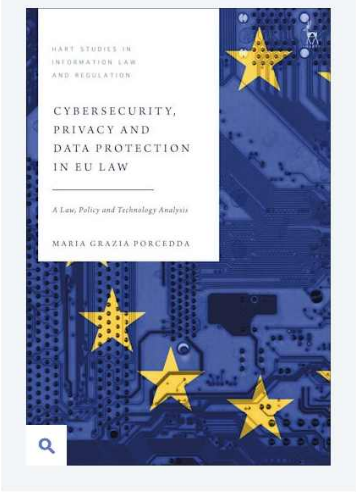
JANUARY 2022

Sources: https://standards.cencenelec.eu/dyn/www/f?p=CEN:110:0::::FSP_PROJECT,FSP_ORG_ID:63633,2307986&cs=11F702120AA40D5CC2DD42848140B1806; https://www.enisa.europa.eu/publications/data-protection-engineering ; https://www.rfc-editor.org/rfc/rfc6973.txt

Conclusions: the reality of the GDPR






HART STUDIES IN INFORMATION LAW AND REGULATION

CYBERSECURITY, PRIVACY AND DATA PROTECTION IN EU LAW

A Law, Policy and Technology Analysis

MARIA GRAZIA PORCEDDA

Adapted from Porcedda (forthcoming 2024)

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Many thanks for your attention

maria-grazia.porcedda At tcd.ie

References (plus links in slides)

Julie Cohen, ‘What privacy is for’, Harvard Law Review (2013) 126

Lawrence Lessig, The Law of the Horse: What Cyberlaw might teach (1999) 113 Harvard Law Review 113, ideally read it all, but at a minimum focus on pp. 501-514.

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Maria Grazia Porcedda, Cybersecurity, Privacy and Data Protection in EU law (Hart Publishing 2023)

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Maria Grazia Porcedda, The Effacement of Information Technology from EU Law: The Need for Collabora0ve Approaches to Redesign the EU’s Regulatory Architecture, in F. Bieker, S. De Conca, I. Schiering, N. Gruschka. M. Jensen, Proceedings of the 18th IFIP Summer School 2023, Advances in Information and Communication Technology (due 27 May 2024) https://link.springer.com/book/9783031579776

Warren and Brandeis, ‘The Right to Privacy’, Harvard Law Review (1890) 4 (5)

Should you wish to read more of my work…

- TCD profile:

https://www.tcd.ie/research/profiles/?profile=mariagrp

- SSRN page:

https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=1923160

- EUI Cadmus page:

https://cadmus.eui.eu/browse?type=author&value=PORCEDDA,%20Maria%20Grazia