

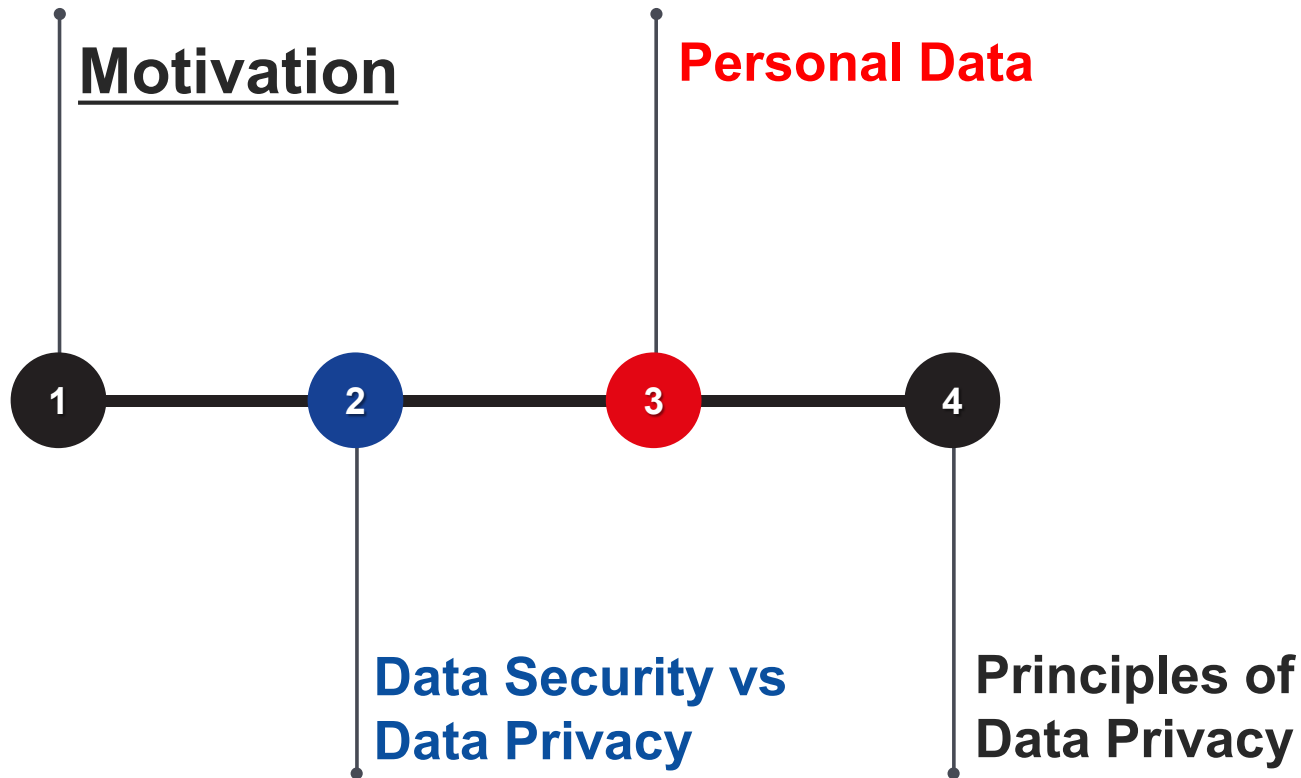
Data Privacy and Protection

Topic 1

The Need for Data Privacy



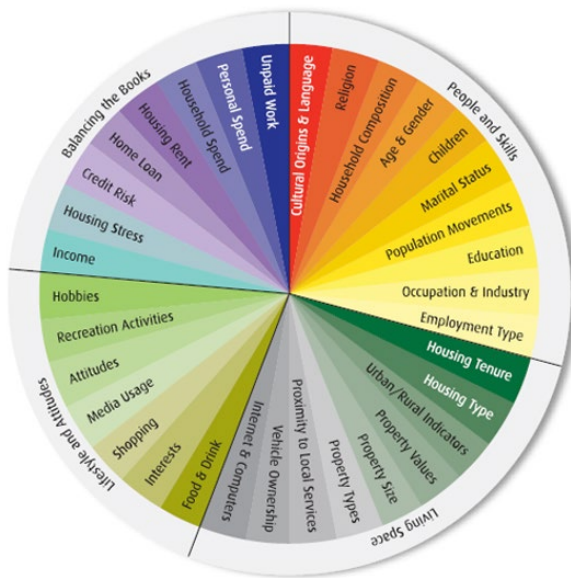
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Personal Data

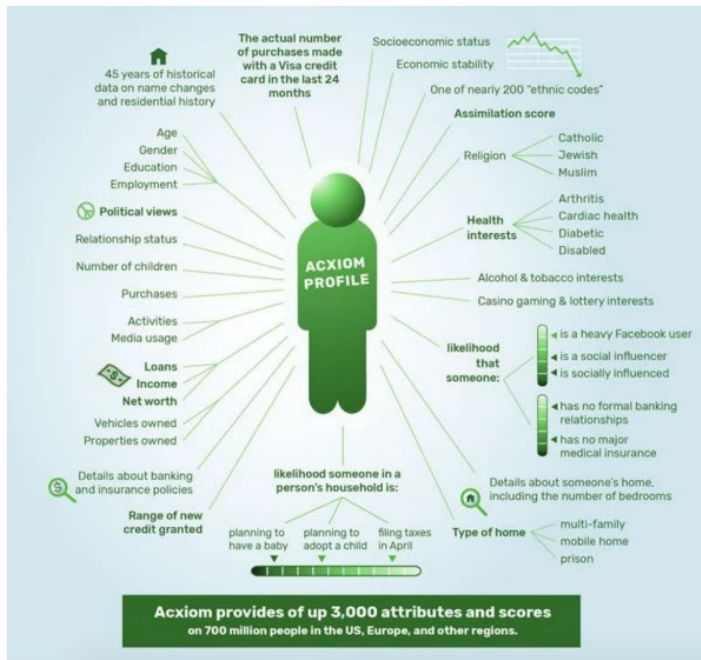


Trends



Experian & Eyeota partnership brings customer data profiles to Advertisers

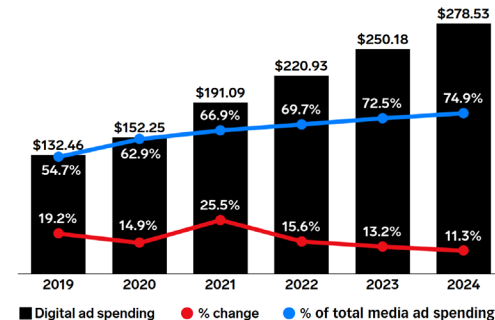
Database of different demographic types and lifestyles, and based on people's postal codes



Acxiom global data leader

In 2017, data giant Acxiom provided up to 3,000 attributes on 700 million people. In 2018, the number was 10,000, on 2.5 billion consumers

Digital Ad Spending in the US, 2019-2024
billions, % change, and % of total media ad spending



Note: includes advertising that appears on desktop and laptop computers as well as mobile phones, tablets, and other internet-connected devices, and includes all the various formats of advertising on those platforms; includes ads such as Facebook's News Feed Ads and Twitter's Promoted Tweets
Source: eMarketer, March 2021

T11359

eMarketer | InsiderIntelligence.com

eMarketer prediction of online advertising industry

Information being collected and traded commercially

Data Privacy

... what happens when personal data is not processed and shared responsibly

Power II line 8.13%	A00	Platinum Prosperity	1.43%
	A01	Picks and Cabernet	0.90%
	A02	Picture Perfect Families	1.43%
	A03	Couples with Clout	0.48%
	A04	Jet Set Urbanites	0.30%
Go with the Flow 8.42%	B01	Generational Soup	0.48%
	B02	Babies and Blues	1.80%
	B03	Family Fun-tastic	1.22%
	B04	Cosmopolitan Achievers	0.50%
Great in Good Measure 8.14%	C01	Aging of Aquarius	0.34%
	C02	Golf Carts and Gourmets	0.41%
	C03	Silver Sophisticates	0.97%
	C04	Boomers and Boomtangs	1.82%
America's Best 8.00%	D01	Sports Utility Families	1.77%
	D02	Settled in Suburbia	0.77%

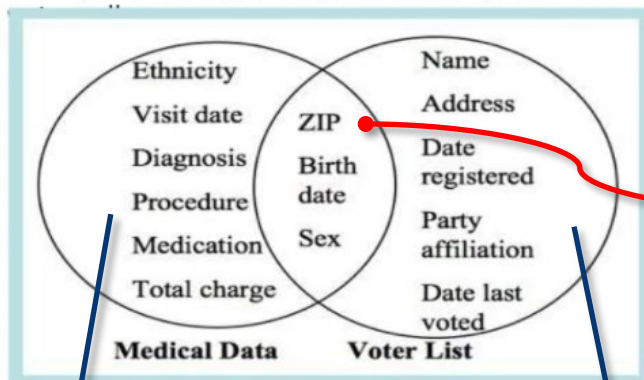
<https://youtu.be/CEJO-AVBsq8>

Data Privacy

William Weld vs Latanya Sweeney

Massachusetts Group Insurance Commission (1997):
Anonymized medical history of state employees (all hospital visits, diagnosis, prescriptions)

Latanya Sweeney (MIT grad student): \$20 – Cambridge



born July 31, 1945
resident of 02138

Published
medical
database

Searchable **public** voter
information in the US

<https://www.slideshare.net/KrishnaramKenthapadi/fairness-transparency-and-privacy-in-ai-linked-in>

Up to 87 million Facebook users



Had their data exposed by



270,000 Facebook users
who took the quiz

Who used a quiz app

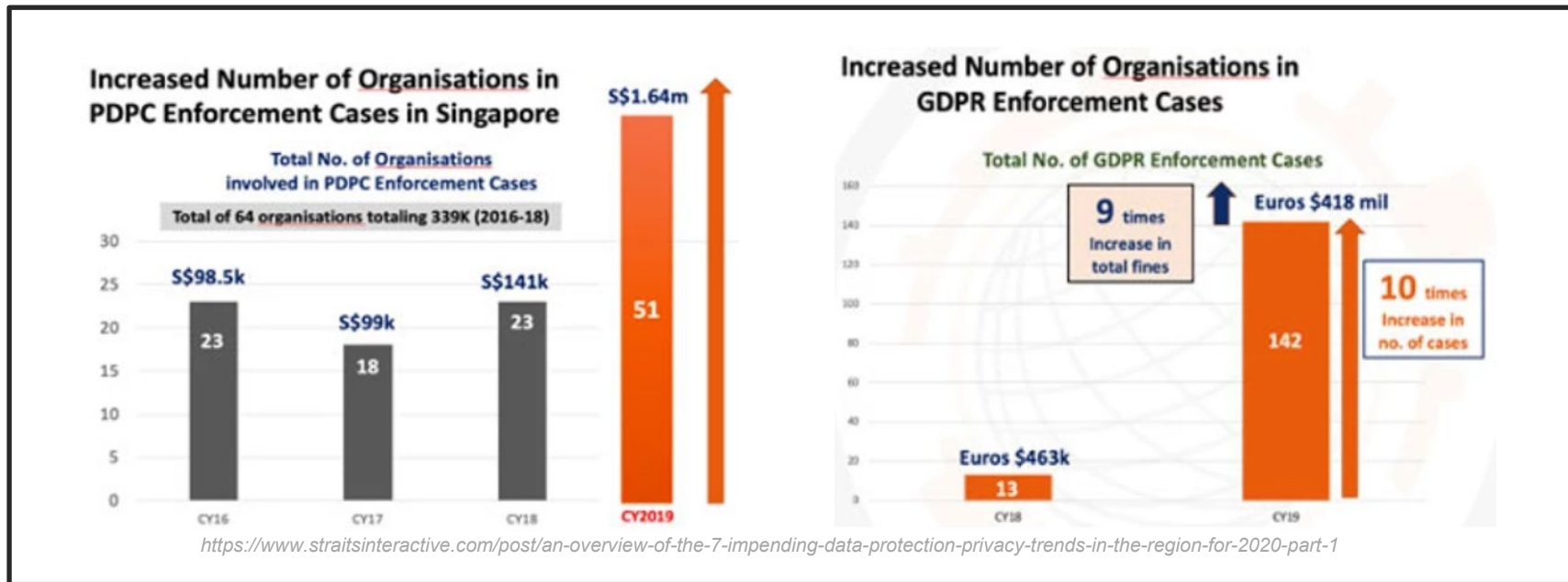


thisismydigitallife
A quiz app Kogan built
on Facebook

Collected 5,000
pieces of data on
each person, for
targeted campaign

<https://www.vox.com/policy-and-politics/2018/3/23/17151916/facebook-cambridge-analytica-trump-diagram>

Enforcements – organizations fined



Reduced numbers

2021: 24 breaches

<https://www.pdpc.gov.sg/Commissions-Decisions>



Maturing data economy

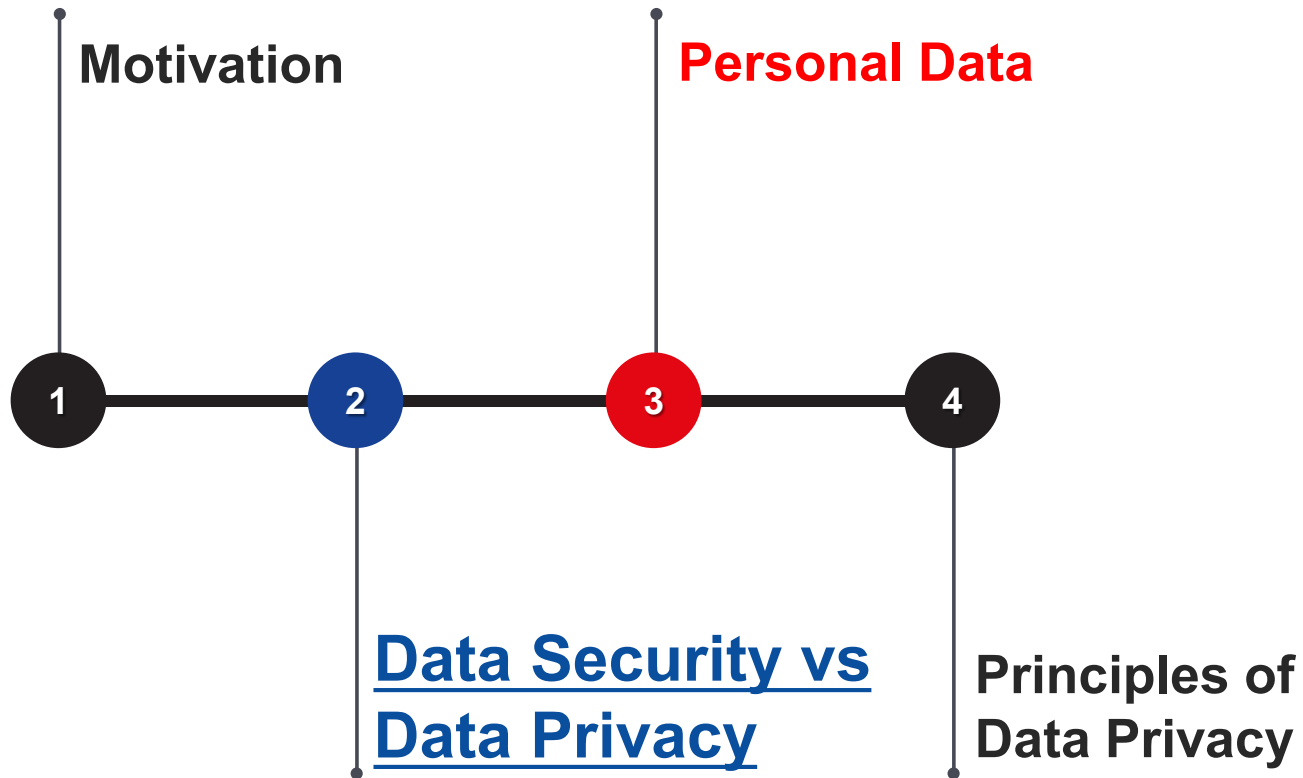
2021: 277 breaches

<https://www.csis.org/blogs/strategic-technologies-blog/3-years-later-analysis-gdpr-enforcement>

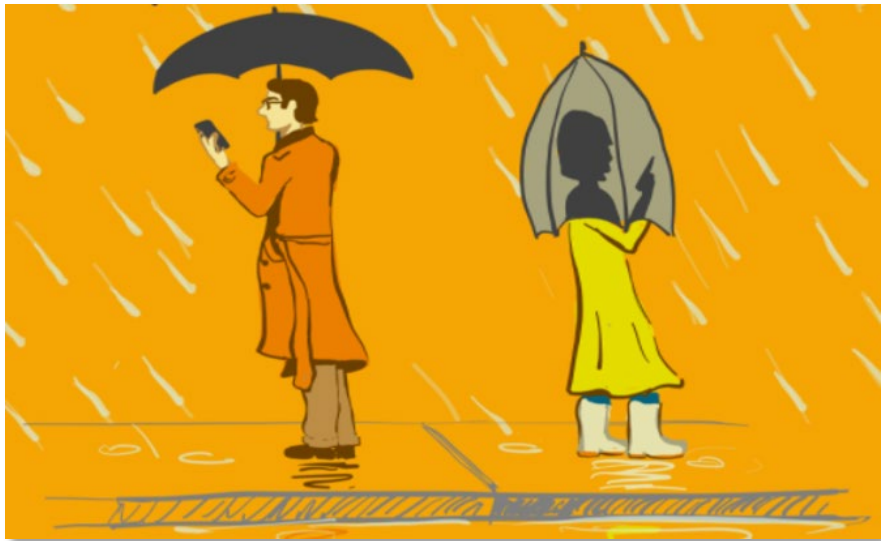


Reduced rate of increase

Contents



Data Security vs Data Privacy



Data Security

Set of practices and processes deployed to protect data and data resources, including confidentiality, integrity, availability, etc.

Data Privacy

Data privacy is a branch of data security concerned with the proper handling of personal or private information, including consent, notice, regulatory obligations, etc.



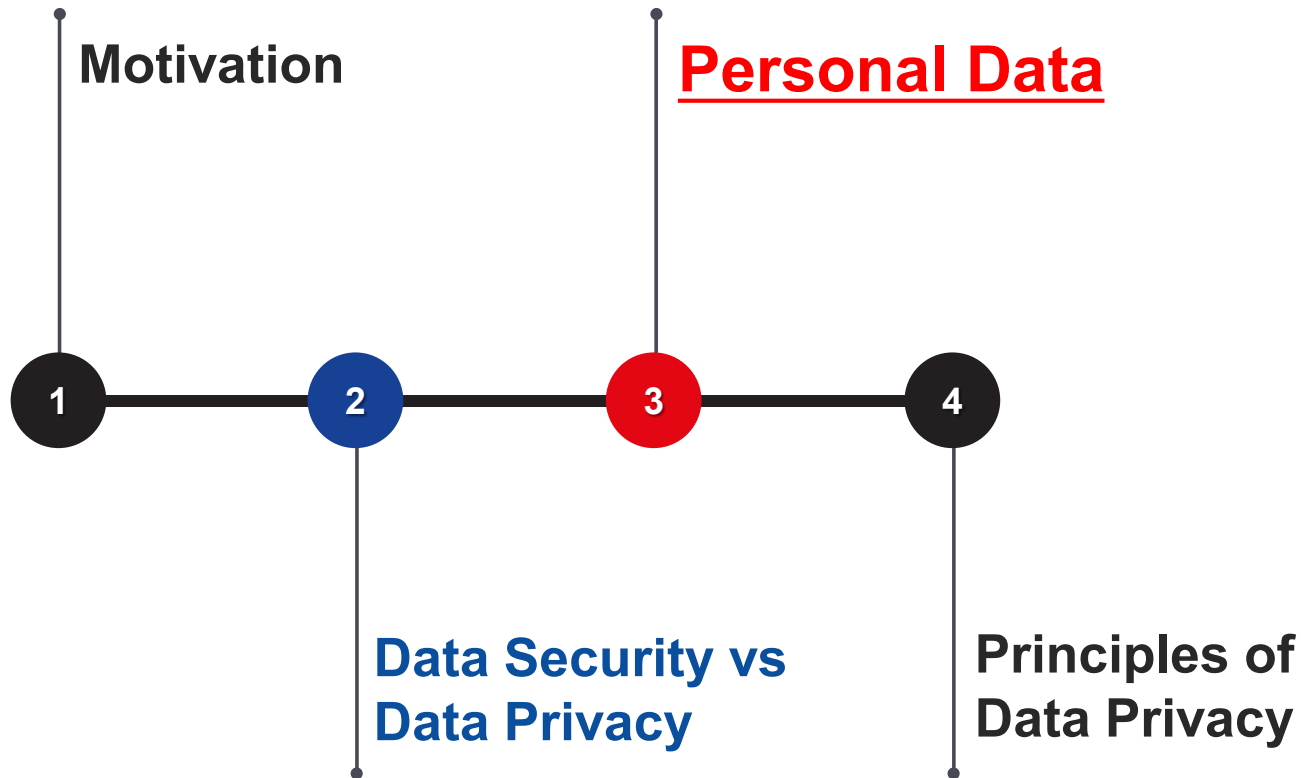
Data Security



Data Privacy

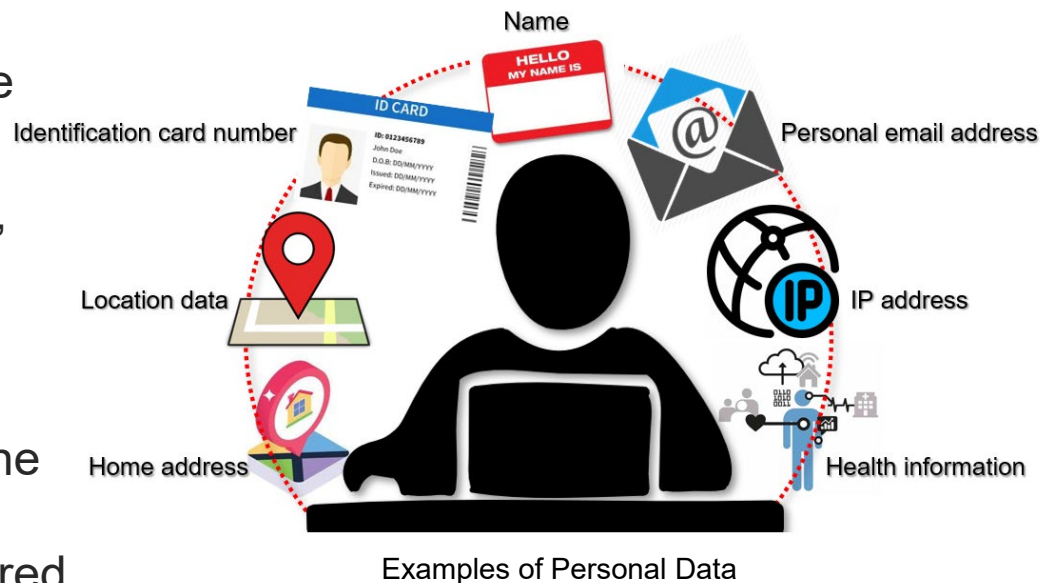
Data Privacy and **Data Protection** are NOT interchangeable

Contents



Personal Data/PII (Personally Identifiable Information)

- Any information related to an individual that can be used to **directly** or **indirectly** identify the person
- Data that has been de-identified, but can be used to re-identify a person remains personal data
- Data that has been rendered anonymous in such a way that the individual is not or no longer identifiable, is no longer considered personal data

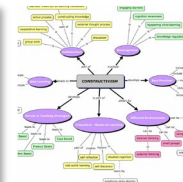


Personal Data – Building Blocks



“Any
information”

“Relating to”



“Identified or
identifiable”

“Natural
person”



Personal Data – Building Blocks



“Any information”

Any type of information about the person, includes objective information, subjective information, sensitive information, information in any medium.

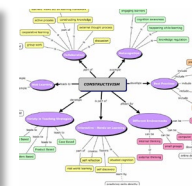
Personal Data – Building Blocks



**“Any
information”**

Any type of information about the person, includes objective information, subjective information, sensitive information, information in any medium.

“Relating to”



Information that is about the individual. Data that is related to the individual because of it's content, it's purpose, or the result of processing the data.

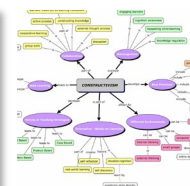
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**“Identified or
identifiable”**

Information that can distinguish an individual from other people within the group. Information that makes it possible to identify the individual.

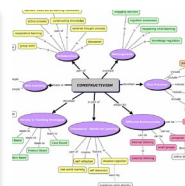
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**“Identified or
identifiable”**

Information that can distinguish an individual from other people within the group. Information that makes it possible to identify the individual.

**“Natural
person”**



A real physical human being, in contrast to an artificial or fictitious person.

Personal Data examples

Personal Data
name
email address (name.surname@domain.com)
phone number
IP address
home address
identification number
cookie-ID

** Even if additional information is needed before the individual can be identified that person may still be identifiable, therefore the information may be personal data.

Personal Data examples

Personal Data	Special Categories (to protect the interest of the data subject)
name	criminal records
email address (name.surname@domain.com)	racial or ethnic origin
phone number	health and genetic data
IP address	religious or philosophical beliefs
home address	biometric data
identification number	trade union membership
cookie-ID	political opinion

** Even if additional information is needed before the individual can be identified that person may still be identifiable, therefore the information may be personal data.

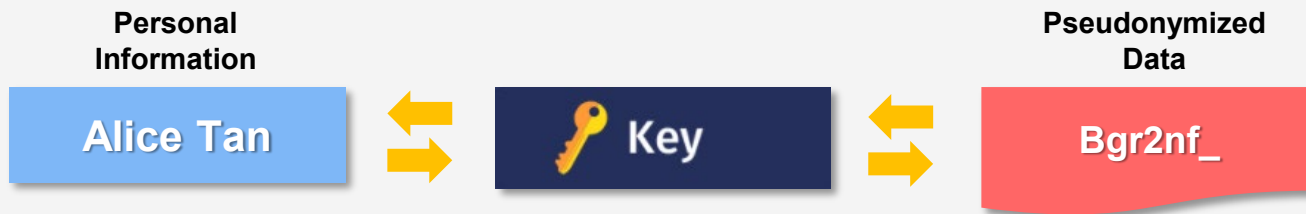
Personal Data examples

Personal Data	Special Categories (to protect the interest of the data subject)	Not Personal Data
name	criminal records	company registration number
email address (name.surname@domain.com)	racial or ethnic origin	general email address (info@company.com)
phone number	health and genetic data	anonymised data
IP address	religious or philosophical beliefs	information about legal entities
home address	biometric data	
identification number	trade union membership	
cookie-ID	political opinion	

** Even if additional information is needed before the individual can be identified that person may still be identifiable, therefore the information may be personal data.

Personal Data – Pseudonymization vs Anonymization

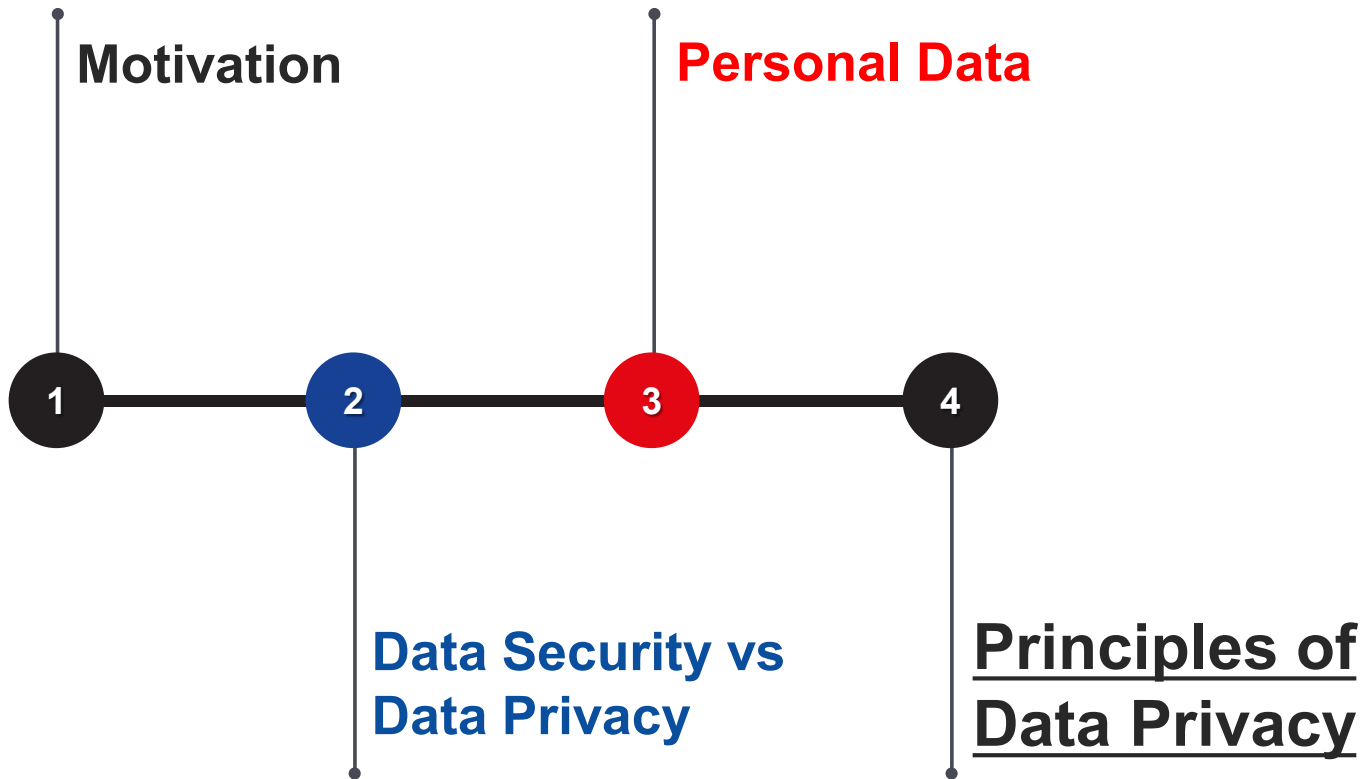
PSEUDONIMIZATION



ANONYMIZATION

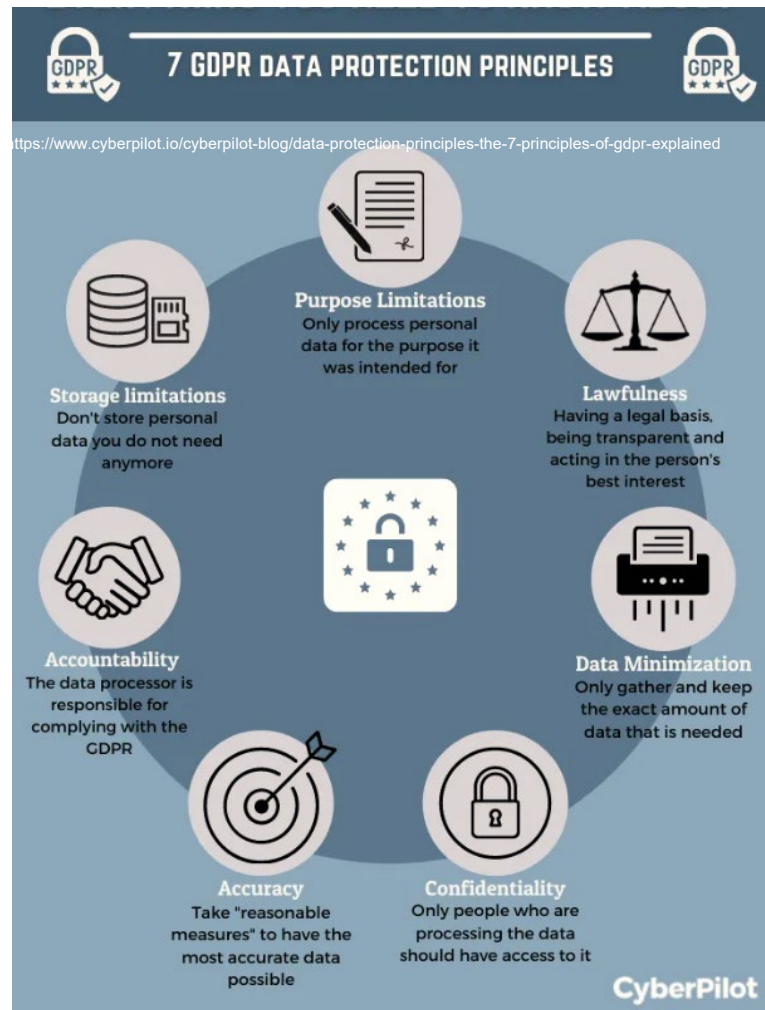


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Principles of Data Privacy

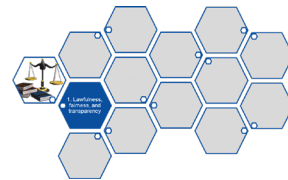
- The various requirements of **Data Privacy and Protection** are directly related to the basic principles of the **General Data Protection Regulation (GDPR)**.
- *We shall discuss GDPR in more detail in subsequent sessions.*
- **Personal data is everywhere, and every organisation processes it** in one way or another.
- Proper processing and handling of personal data is an ethical responsibility and a legal requirement.
- If not complied with, it may lead to huge data privacy regulatory fines, financial consequences, and loss of reputation.



Principles of Data Privacy



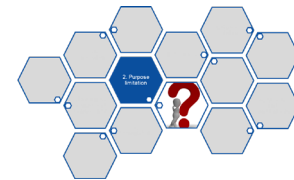
Data Privacy – Principle 1



Lawfulness, fairness, and transparency

- Process personal data lawfully, fairly, and transparently
- Collection methods must be legal, with clear privacy policies and purposes
- Articulate why they want your personal data and how they intend to use it

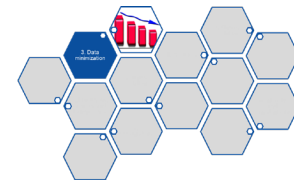
Data Privacy – Principle 2



Purpose limitation

- Collect personal data for a clear and specific purpose
- Companies have to use personal data in the way that they promised to apply it
- Purpose of any data collection must be specific, clear, and limited to a relevant scope

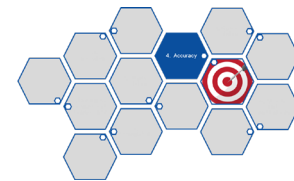
Data Privacy – Principle 3



Data minimization

- Make sure that the processing of personal data is adequate, limited to what is necessary, and relevant
- Helps contain exposure and personal damage in the event the company's data is compromised

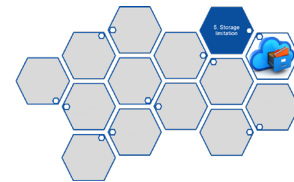
Data Privacy – Principle 4



Accuracy

- Keep collected personal data accurate and up to date
- Maintain the personal data and take reasonable action to erase or rectify inaccurate or incomplete information

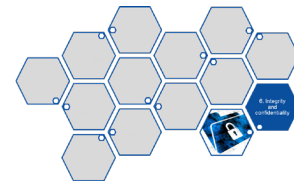
Data Privacy – Principle 5



Storage limitation

- Personal data should only be stored as long as needed and then either deleted or anonymized
- Personal data should not be retained or be reuse beyond its original stated purpose

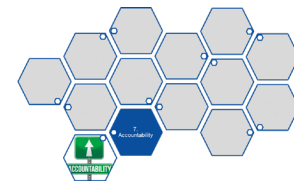
Data Privacy – Principle 6



Integrity and confidentiality

- Implement appropriate technical and organizational security measures to protect the collection and processing of personal data
- Companies need systems in place to protect against unauthorised access and to ensure redundancy

Data Privacy – Principle 7



Accountability

- Data collectors are responsible for, and be able to demonstrate compliance with all of the principles
- Data collectors must show that they are taking reasonable action to meet the six previous principles

Contents

