Privacy & Usability

The perspective of a Data Protection Commissioner

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Data Protection Commissioner
Schleswig-Holstein, Germany

Privacy & Us
Kiel, 1 July 2019

forum
<privatheit>
selbstbestimmtes_leben_
in_der_digitalen_welt

ULD
Unabhängiges Landeszentrum für
Datenschutz Schleswig-Holstein

Overview

Source: stux via Pixabay

- Privacy & Usability going together
- Requirements from the GDPR
  - Principles
  - Information
  - Data Protection by Design and by Default
- Adverse effects
- Conclusion

General remarks

- Usability is a requirement for all interaction with human beings
- In the field of privacy and data protection:
  - Support*) of data subjects
  - Support*) of users on behalf of data controllers and data processors
  - *): Support means:
    - facilitate data-protection friendly actions,
    - prevent undesired actions,
    - proper defaults

- "Non-usability" as a suitable measure for data protection?
  - *"Our system is so complex that an attacker could not understand it …"*
  - Security… by obscurity ↯ NO!

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Data protection principles

Personal data:
any information relating to an identified or identifiable natural person ('data subject')

Whenever personal data are processed,

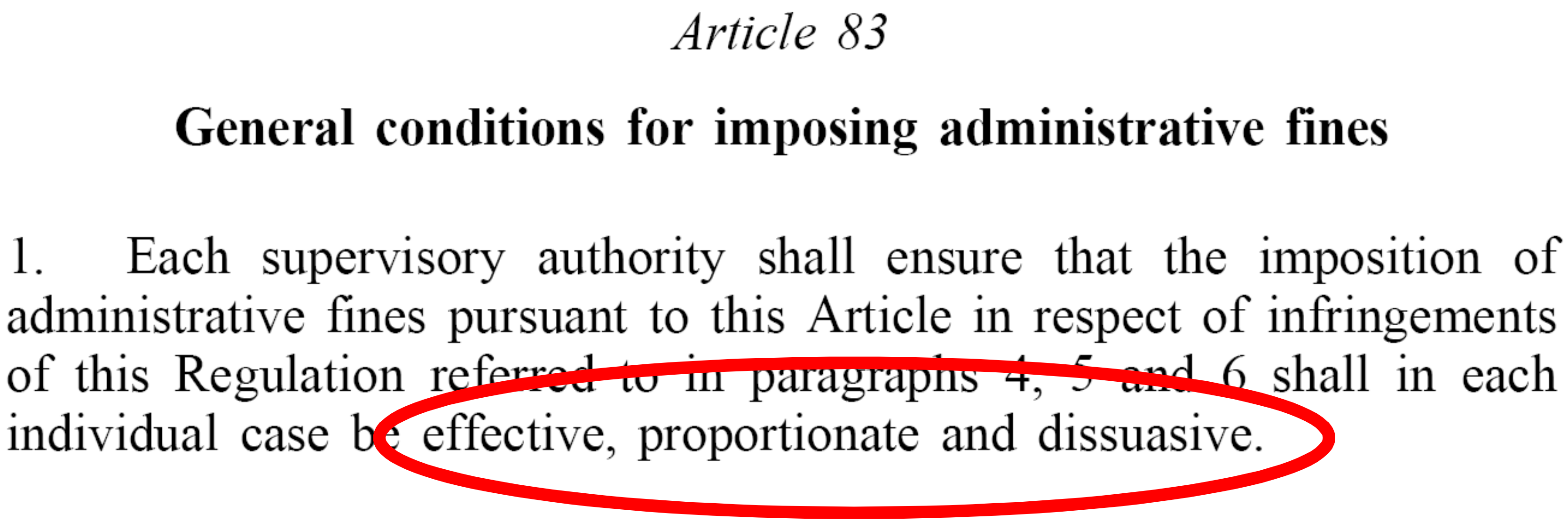
Art. 5 (1) GDPR:

a) 'lawfulness, fairness and transparency'
b) 'purpose limitation'
c) 'data minimisation'
d) 'accuracy'
e) 'storage limitation'
f) 'integrity and confidentiality'

Art. 5 (2) GDPR:

'accountability'

GDPR: leverage on business? High fines. Theory or reality?

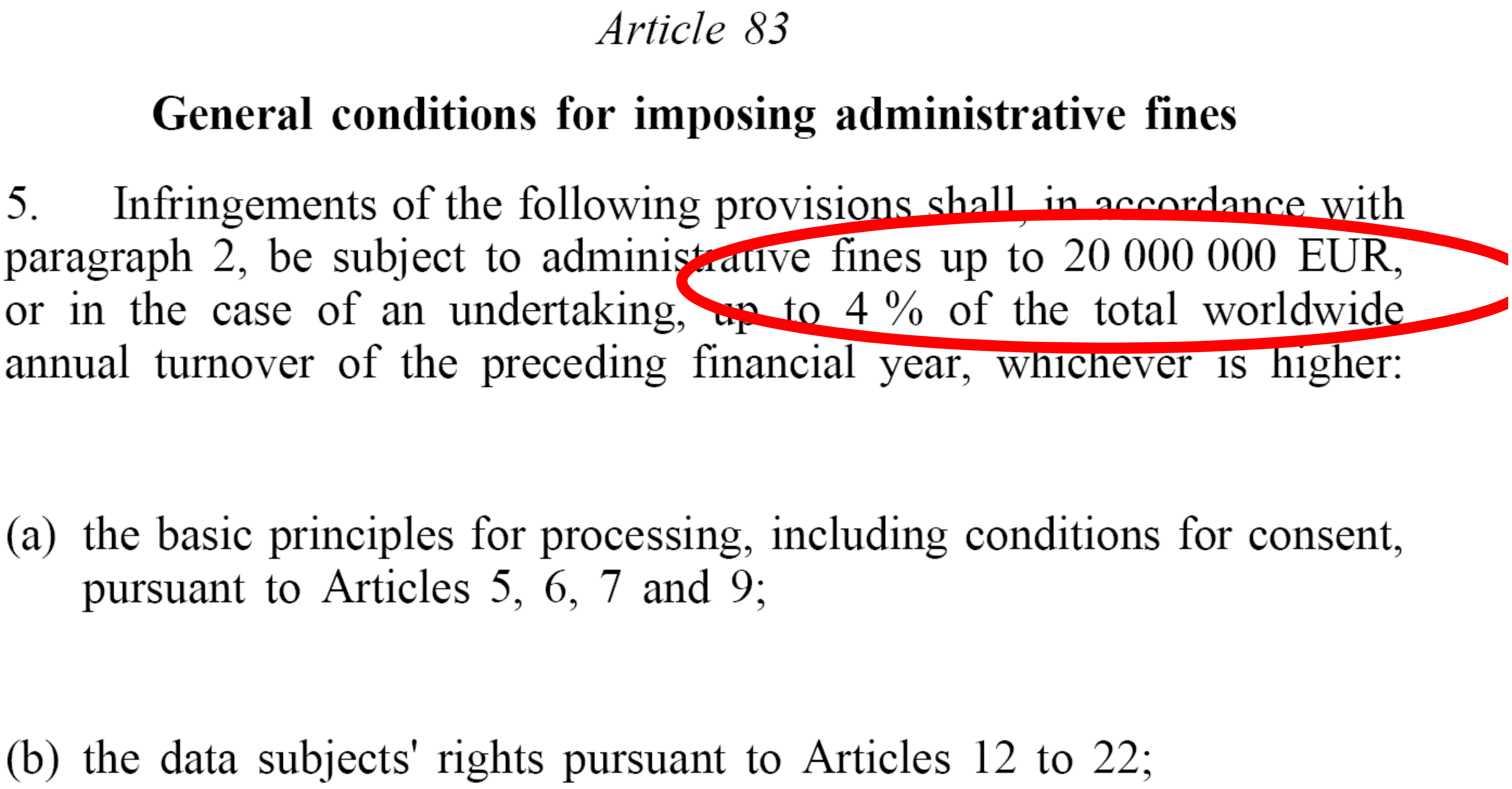


Article 83

General conditions for imposing administrative fines

1. Each supervisory authority shall ensure that the imposition of administrative fines pursuant to this Article in respect of infringements of this Regulation referred to in paragraphs 4, 5 and 6 shall in each individual case be effective, proportionate and dissuasive.

GDPR: leverage on business? High fines. Theory or reality?



Article 83

General conditions for imposing administrative fines

5. Infringements of the following provisions shall, in accordance with paragraph 2, be subject to administrative fines up to 20 000 000 EUR, or in the case of an undertaking, up to 4 % of the total worldwide annual turnover of the preceding financial year, whichever is higher:

(a) the basic principles for processing, including conditions for consent, pursuant to Articles 5, 6, 7 and 9;

(b) the data subjects' rights pursuant to Articles 12 to 22;

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Consent

- "'consent' of the data subject means any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or her;" – Art. 4 No. 11 GDPR

Design of information and communication

- "If the data subject's consent is given in the context of a written declaration which also concerns other matters, the request for consent shall be presented in a manner which is clearly distinguishable from the other matters, in an intelligible and easily accessible form, using clear and plain language." – Art. 7 (2) s. 1 GDPR
- "It shall be as easy to withdraw as to give consent." – Art. 7 (3) s. 4 GDPR

Design of functionality

Data subjects' rights: information

- "The controller shall take appropriate measures to provide any information referred to in Articles 13 and 14 and any communication under Articles 15 to 22 and 34 relating to processing to the data subject in a concise, transparent, intelligible and easily accessible form, using clear and plain language, in particular for any information addressed specifically to a child." – Art. 12 (1) s. 1 GDPR

- "The information to be provided to data subjects pursuant to Articles 13 and 14 may be provided in combination with standardised icons in order to give in an easily visible, intelligible and clearly legible manner a meaningful overview of the intended processing. Where the icons are presented electronically they shall be machine-readable."
  – Art. 12 (7) GDPR

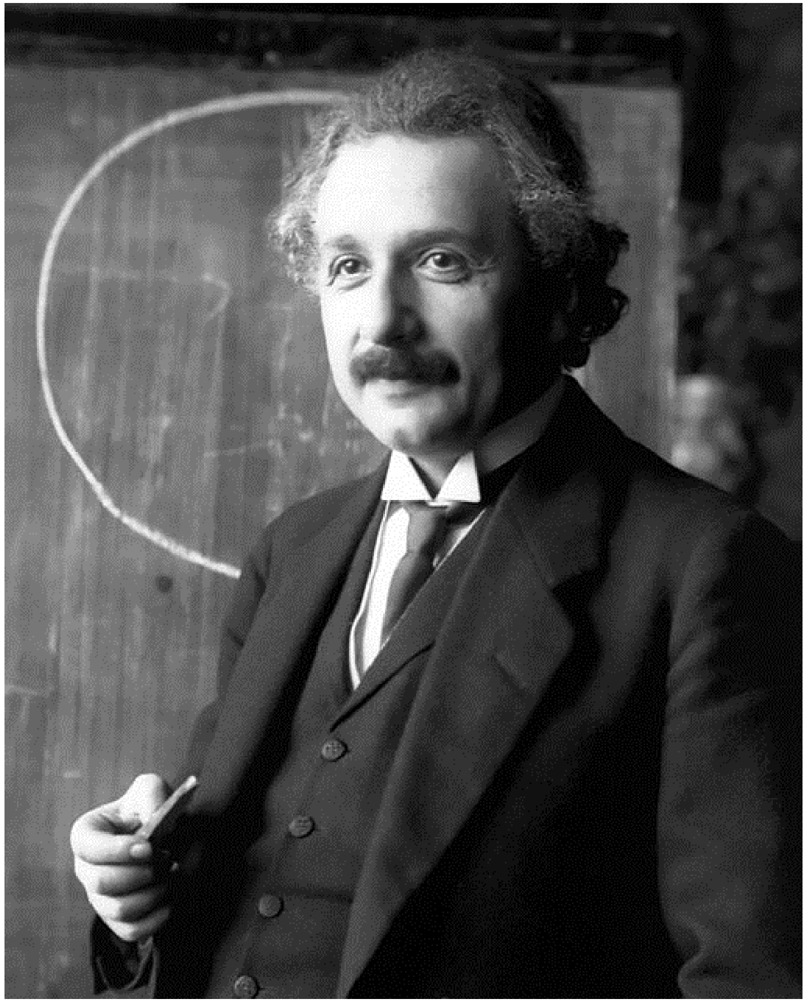
Design of information and communication

Simplify your information

*Everything should be as
simple as possible,
but not simpler.*

- Albert Einstein

Source: Karolina Grabowska via Pixabay



Formulas for clear text: readibility

https://saskia-vola.com/simple-metrics-for-textmining

- Readability according to Carl-Hugo Björnsson, 1971: higher for simple texts that consist of short sentences and short words
- LIX(text) = TotalWords/Sentences +
  (LongWords x 100)/TotalWords
- Typical LIX values between 20 (newspaper) and 70 (research paper)

How often used by DP authorities per year?
How many fines?

Formulas for clear text: informativity

https://saskia-vola.com/simple-metrics-for-textmining

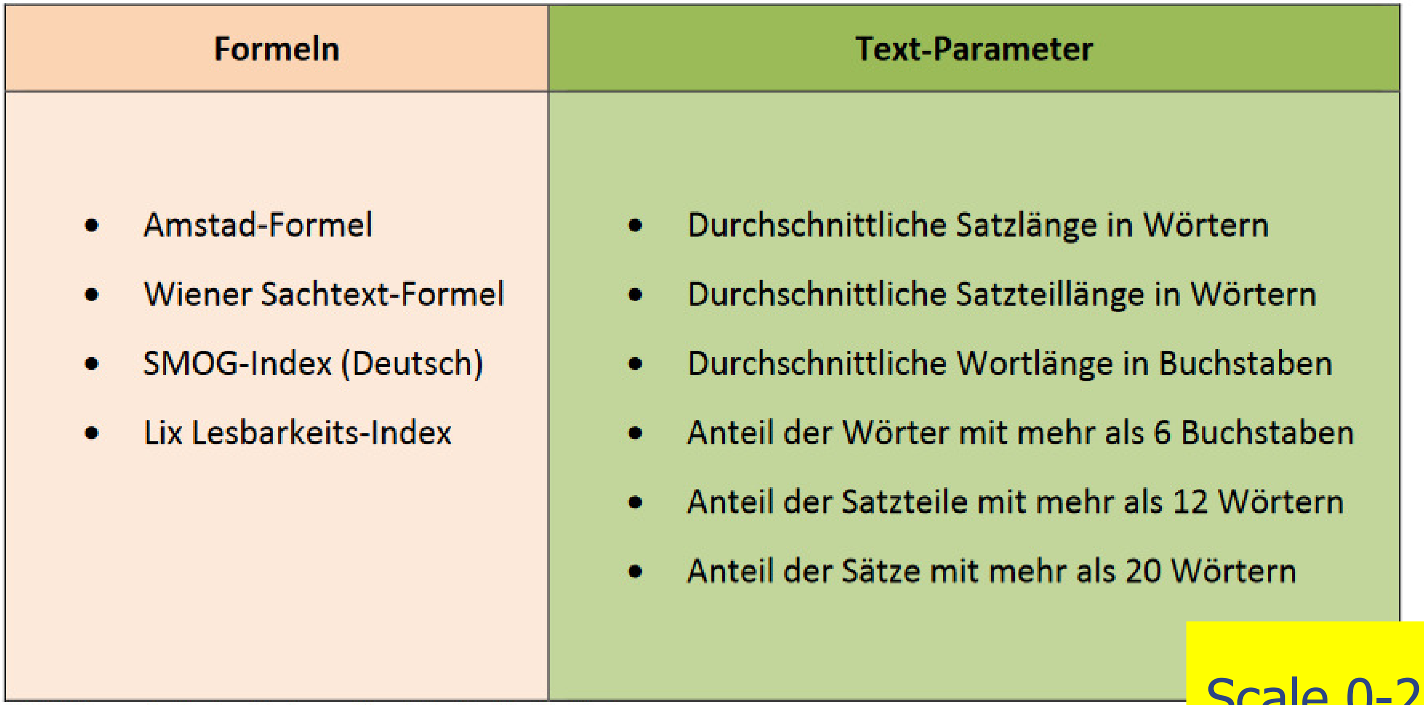
- Informativity: higher when there are a lot of pieces of information one could capture without knowing the context or the author
- Relative amount of content words to non-content words
- Content words: nouns, proper nouns, verbs, and adjectives

- The content function ratio (CFR):

  CFR(text)= AmountOfContentWordTags / AmountOfFunctionWordTags

How often used by DP authorities per year?
How many fines?

Comprehensibility index of the University of Hohenheim



Formeln	Text-Parameter
• Amstad-Formel • Wiener Sachtext-Formel • SMOG-Index (Deutsch) • Lix Lesbarkeits-Index	• Durchschnittliche Satzlänge in Wörtern • Durchschnittliche Satzteillänge in Wörtern • Durchschnittliche Wortlänge in Buchstaben • Anteil der Wörter mit mehr als 6 Buchstaben • Anteil der Satzteile mit mehr als 12 Wörtern • Anteil der Sätze mit mehr als 20 Wörtern

Abbildung 4: Hohenheimer Verständlichkeits-Index

https://www.service-tested.de/wp-content/uploads/2016/04/Erklärung-Verfahren-TÜV-geprüfte-Verständlichkeit.pdf

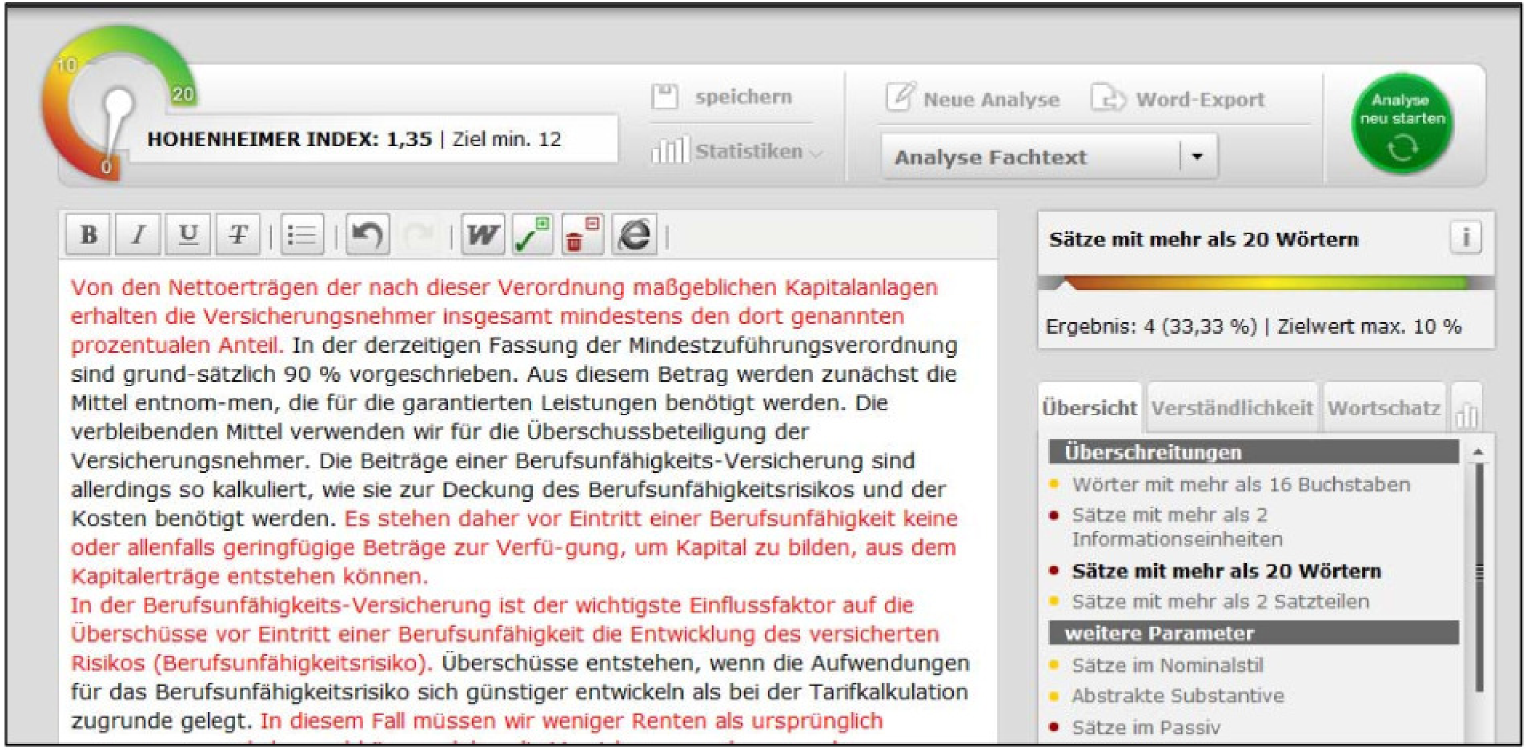
https://klartext.uni-hohenheim.de/hix

Scale 0-20, e.g.

- doctoral thesis political science: 0-4
- BILD 16-20

Hohenheimer Index by TÜV

TÜV SAARLAND



HOHENHEIMER INDEX: 1,35 | Ziel min. 12

Von den Nettoerträgen der nach dieser Verordnung maßgeblichen Kapitalanlagen erhalten die Versicherungsnehmer insgesamt mindestens den dort genannten prozentualen Anteil. In der derzeitigen Fassung der Mindestzuführungsverordnung sind grund-sätzlich 90 % vorgeschrieben. Aus diesem Betrag werden zunächst die Mittel entnom-men, die für die garantierten Leistungen benötigt werden. Die verbleibenden Mittel verwenden wir für die Überschussbeteiligung der Versicherungsnehmer. Die Beiträge einer Berufsunfähigkeits-Versicherung sind allerdings so kalkuliert, wie sie zur Deckung des Berufsunfähigkeitsrisikos und der Kosten benötigt werden. Es stehen daher vor Eintritt einer Berufsunfähigkeit keine oder allenfalls geringfügige Beträge zur Verfü-gung, um Kapital zu bilden, aus dem Kapitalerträge entstehen können.

In der Berufsunfähigkeits-Versicherung ist der wichtigste Einflussfaktor auf die Überschüsse vor Eintritt einer Berufsunfähigkeit die Entwicklung des versicherten Risikos (Berufsunfähigkeitsrisiko). Überschüsse entstehen, wenn die Aufwendungen für das Berufsunfähigkeitsrisiko sich günstiger entwickeln als bei der Tarifkalkulation zugrunde gelegt. In diesem Fall müssen wir weniger Renten als ursprünglich

Sätze mit mehr als 20 Wörtern

Ergebnis: 4 (33,33 %) | Zielwert max. 10 %

Überschreitungen

- Wörter mit mehr als 16 Buchstaben
- Sätze mit mehr als 2 Informationseinheiten
- **Sätze mit mehr als 20 Wörtern**
- Sätze mit mehr als 2 Satzteilen

weitere Parameter

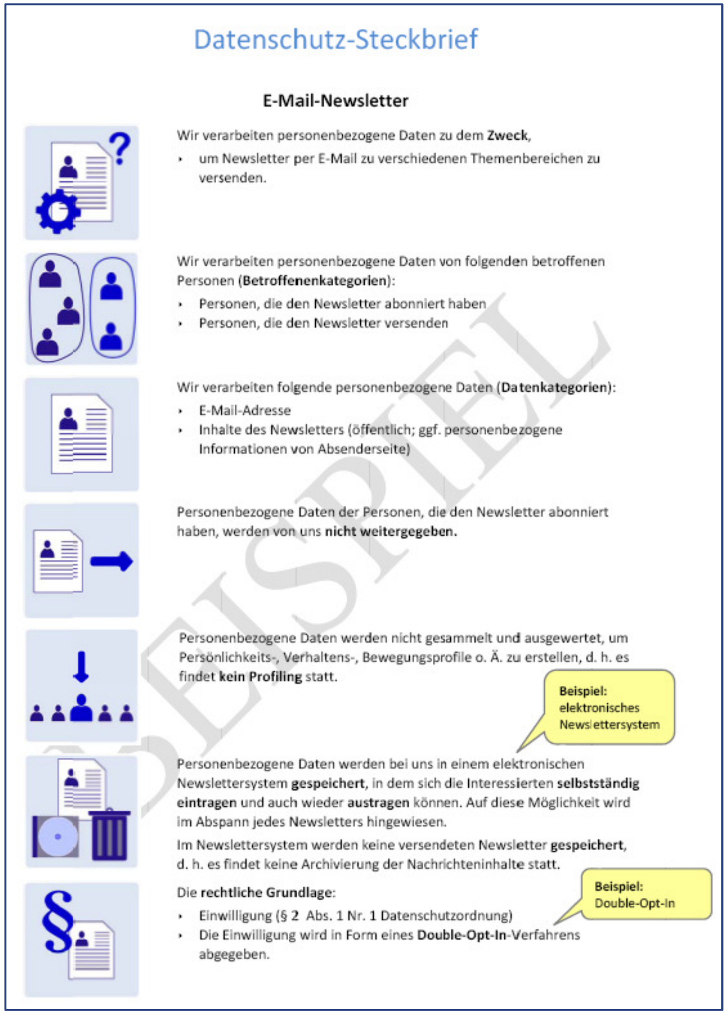
- Sätze im Nominalstil
- Abstrakte Substantive
- Sätze im Passiv

Abbildung 1: Maschinelle Textanalyse

https://www.service-tested.de/wp-content/uploads/2016/04/Erklärung-Verfahren-TÜV-geprüfte-Verständlichkeit.pdf

Multi-language?

Example: "Datenschutz-Steckbrief"



Datenschutz-Steckbrief

E-Mail-Newsletter

Wir verarbeiten personenbezogene Daten zu dem **Zweck**,

- um Newsletter per E-Mail zu verschiedenen Themenbereichen zu versenden.

Wir verarbeiten personenbezogene Daten von folgenden betroffenen Personen (**Betroffenenkategorien**):

- Personen, die den Newsletter abonniert haben
- Personen, die den Newsletter versenden

Wir verarbeiten folgende personenbezogene Daten (**Datenkategorien**):

- E-Mail-Adresse
- Inhalte des Newsletters (öffentlich; ggf. personenbezogene Informationen von Absenderseite)

Personenbezogene Daten der Personen, die den Newsletter abonniert haben, werden von uns **nicht weitergegeben.**

Personenbezogene Daten werden nicht gesammelt und ausgewertet, um Persönlichkeits-, Verhaltens-, Bewegungsprofile o. Ä. zu erstellen, d. h. es findet **kein Profiling** statt.

Beispiel: elektronisches Newslettersystem

Personenbezogene Daten werden bei uns in einem elektronischen Newslettersystem **gespeichert**, in dem sich die Interessierten **selbstständig eintragen** und auch wieder **austragen** können. Auf diese Möglichkeit wird im Abspann jedes Newsletters hingewiesen.

Im Newslettersystem werden keine versendeten Newsletter **gespeichert**, d. h. es findet keine Archivierung der Nachrichteninhalte statt.

Die **rechtliche Grundlage**:

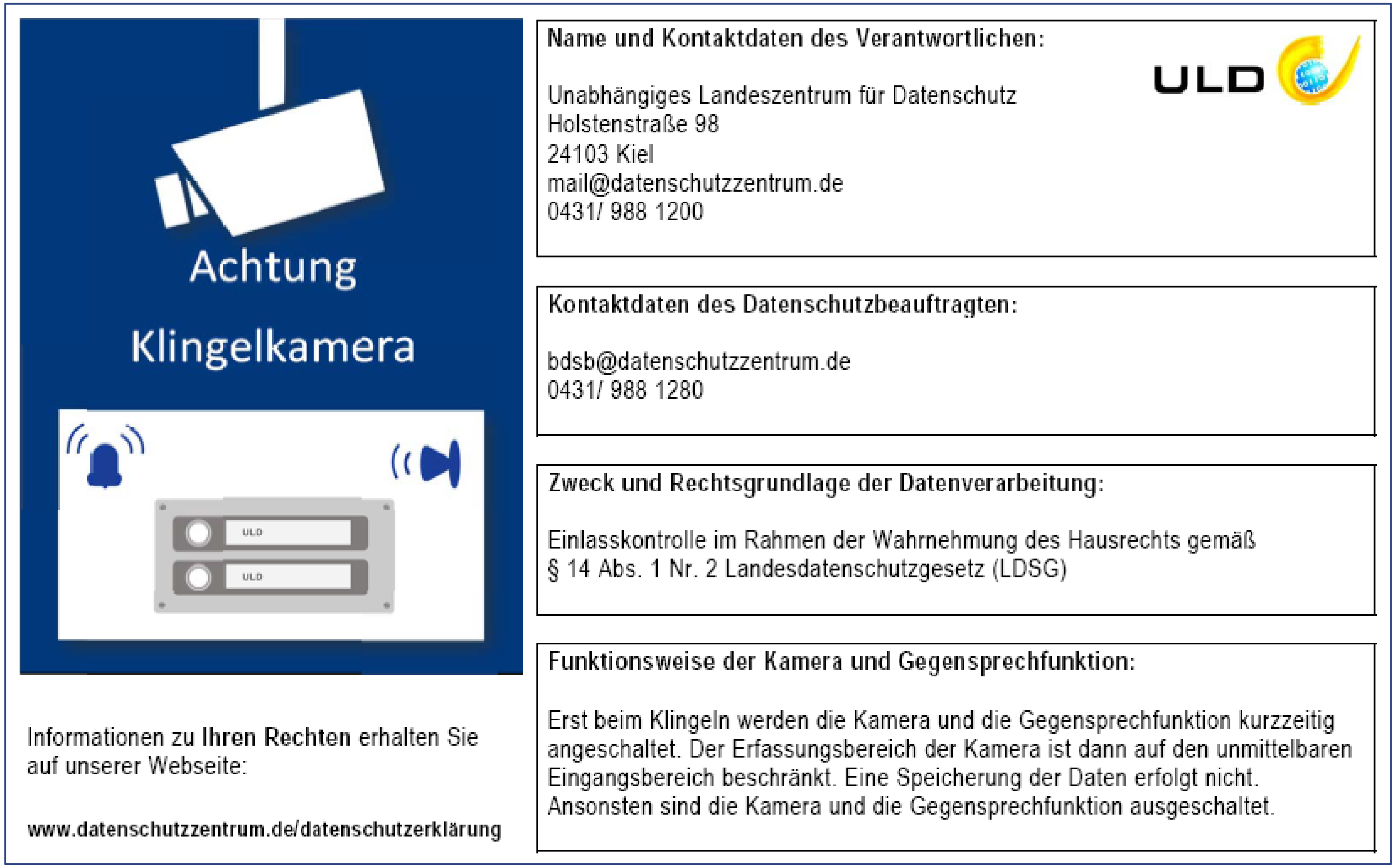
- Einwilligung (§ 2 Abs. 1 Nr. 1 Datenschutzordnung)
- Die Einwilligung wird in Form eines **Double-Opt-In**-Verfahrens abgegeben.

Beispiel: Double-Opt-In

- "data protection briefing"
- 2-page mini policy for giving information according to Art. 13 GDPR

Tätigkeitsbericht 2019 des ULD S-H, Tz. 6.1.4: https://uldsh.de/tb37

Example:
Transparency for "Bell Camera"



Achtung

Klingelkamera

Informationen zu **Ihren Rechten** erhalten Sie auf unserer Webseite:

www.datenschutzzentrum.de/datenschutzerklärung

Name und Kontaktdaten des Verantwortlichen:

Unabhängiges Landeszentrum für Datenschutz
Holstenstraße 98
24103 Kiel
mail@datenschutzzentrum.de
0431/ 988 1200

Kontaktdaten des Datenschutzbeauftragten:

bdsb@datenschutzzentrum.de
0431/ 988 1280

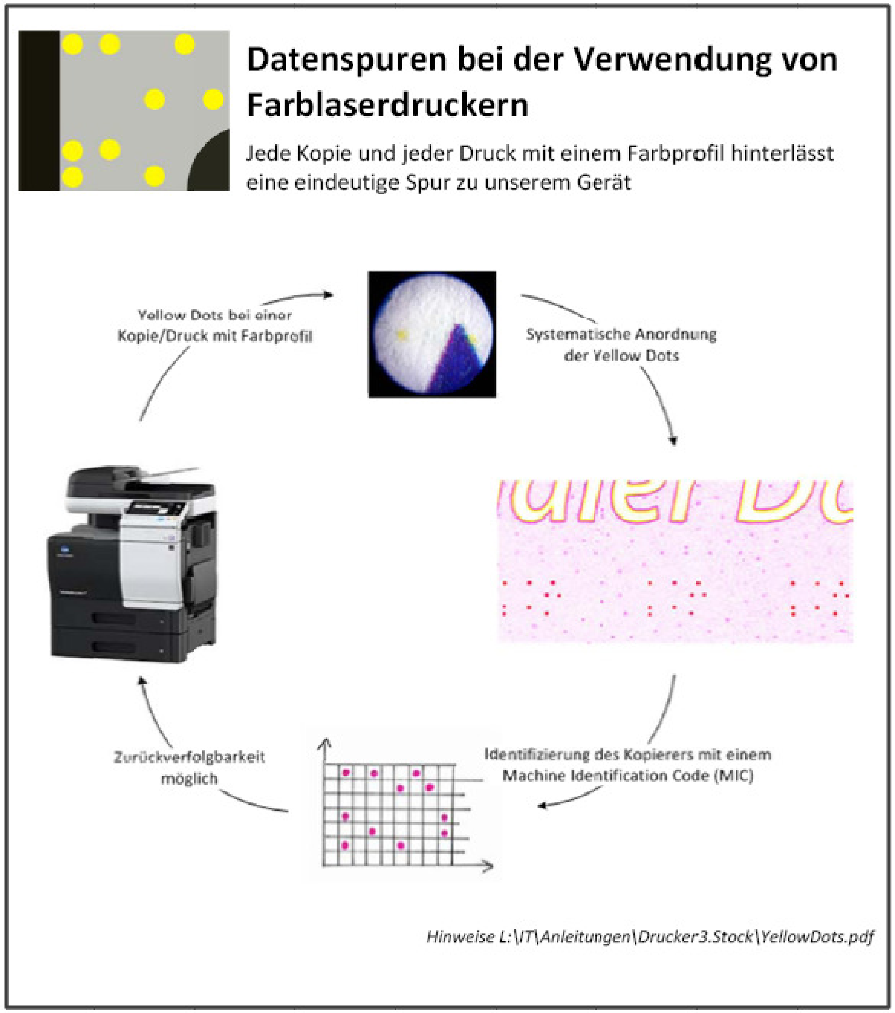
Zweck und Rechtsgrundlage der Datenverarbeitung:

Einlasskontrolle im Rahmen der Wahrnehmung des Hausrechts gemäß § 14 Abs. 1 Nr. 2 Landesdatenschutzgesetz (LDSG)

Funktionsweise der Kamera und Gegensprechfunktion:

Erst beim Klingeln werden die Kamera und die Gegensprechfunktion kurzzeitig angeschaltet. Der Erfassungsbereich der Kamera ist dann auf den unmittelbaren Eingangsbereich beschränkt. Eine Speicherung der Daten erfolgt nicht. Ansonsten sind die Kamera und die Gegensprechfunktion ausgeschaltet.

Example: Transparency of a more complex scenario



Datenspuren bei der Verwendung von Farblaserdruckern

Jede Kopie und jeder Druck mit einem Farbprofil hinterlässt eine eindeutige Spur zu unserem Gerät

Yellow Dots bei einer Kopie/Druck mit Farbprofil

Systematische Anordnung der Yellow Dots

Identifizierung des Kopierers mit einem Machine Identification Code (MIC)

Zurückverfolgbarkeit möglich

Hinweise L:\IT\Anleitungen\Drucker3.Stock\YellowDots.pdf

Information about embedded “Yellow dots” in colour copies

Tätigkeitsbericht 2019 des ULD S-H, Tz. 10.4: https://uldsh.de/tb37

ULD (2019): Report „Vorsicht: Yellow Dots! Versteckte Informationen in Farbkopien“, https://www.datenschutzzentrum.de/artikel/1274-Yellow-Dots.html

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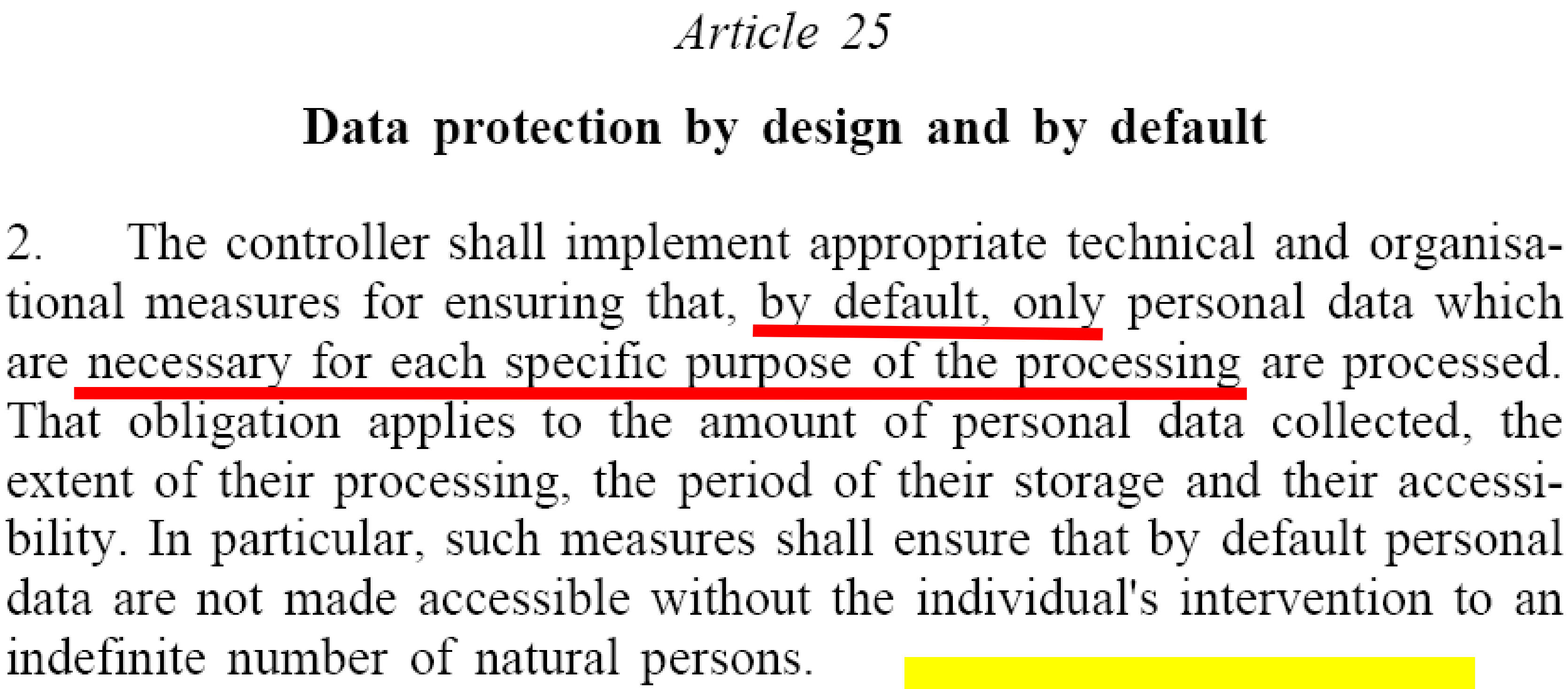
Data Protection by Default



Article 25

Data protection by design and by default

2. The controller shall implement appropriate technical and organisational measures for ensuring that, by default, only personal data which are necessary for each specific purpose of the processing are processed. That obligation applies to the amount of personal data collected, the extent of their processing, the period of their storage and their accessibility. In particular, such measures shall ensure that by default personal data are not made accessible without the individual's intervention to an indefinite number of natural persons.

"by default":
data protection-friendly pre-settings as a starting point for all data processing!

Data Protection by Default vs. Usability

- Default setting always relevant – depending on the purpose!
- Changes are possible, but require intervention from user
- Examples for (changeable) data protection defaults:
  - Less storage of personal data (necessity)
  - Less storage outside the user's control (e.g. no automatic phone number storage of an attempted call; secure device instead of cloud – limited accessibility)
  - Less personalisation (if no explicit purpose – limited extent of processing)
  - Earlier erasure of data (limited storage period)
- How strict?

Improved user experience?

Support of people with disabilities?

Temporary files?

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Presentation of information

from the perspective of the data controller

- Presentation of information is always …
  - … a challenge because of different target audiences
  - … incomplete
  - … coloured

- E.g. communication of a personal data breach to data subjects (Art. 34 GDPR):

  "… shall describe in clear and plain language the nature of the personal data breach and contain at least the information and measures …"

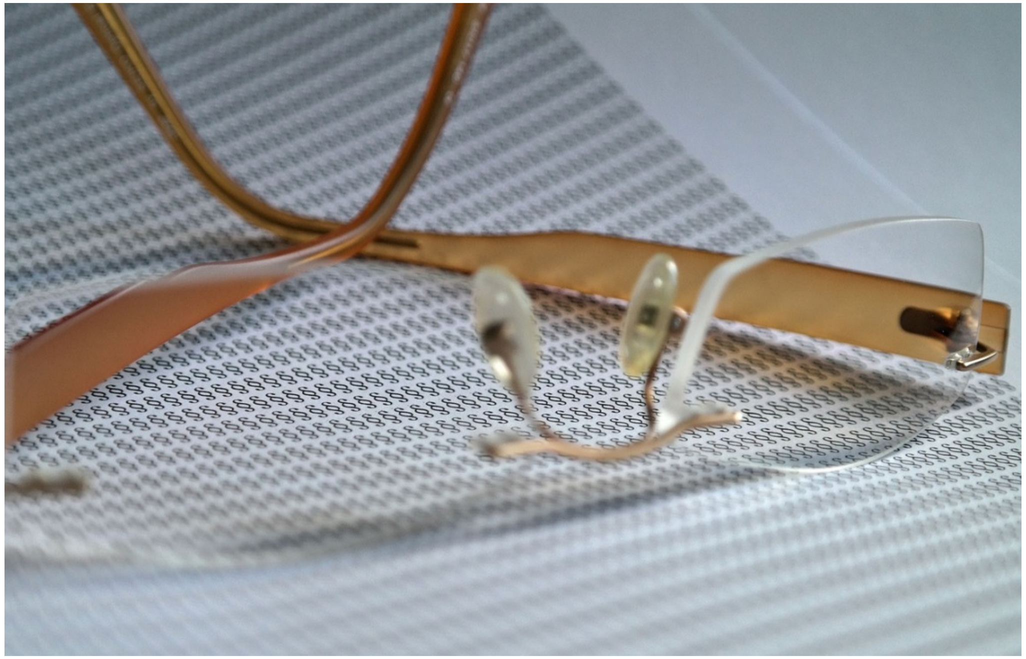
Source: Kerstin Riemer via Pixabay

How to inform about risks?

How to gain trust?

Better safe than sorry ...

from the perspective of the data controller



Source: l_u_p_a via Pixabay

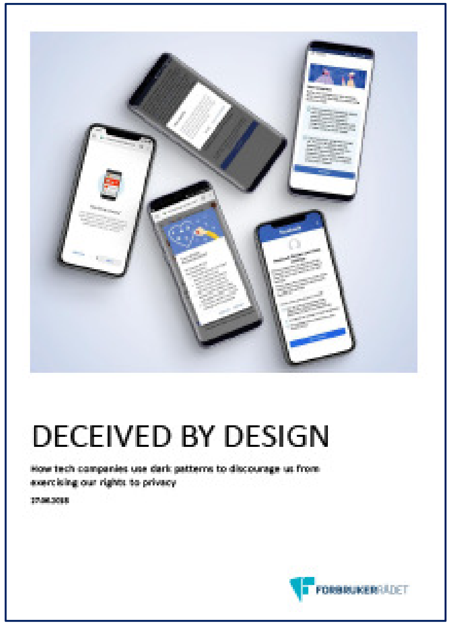
Data controllers want legal certainty, thereby relying on legal standards that for decades have been accepted before courts

Adverse design patterns

- Greedy apps and services
- Tricking users into disclosing more data (various psychological tricks):
  - “Profile completed” as status info
  - “We miss you” for contact reason
  - Loss Aversion
  - Illogical Reasoning
  - Perception of Scarcity, Fear of Missing Out (“you are missing …”)
  - …

“Dark Patterns”!

Forbrukerrådet (Norway 2018): Report „Deceived by Design“, https://www.forbrukerradet.no/dark-patterns/



DECEIVED BY DESIGN

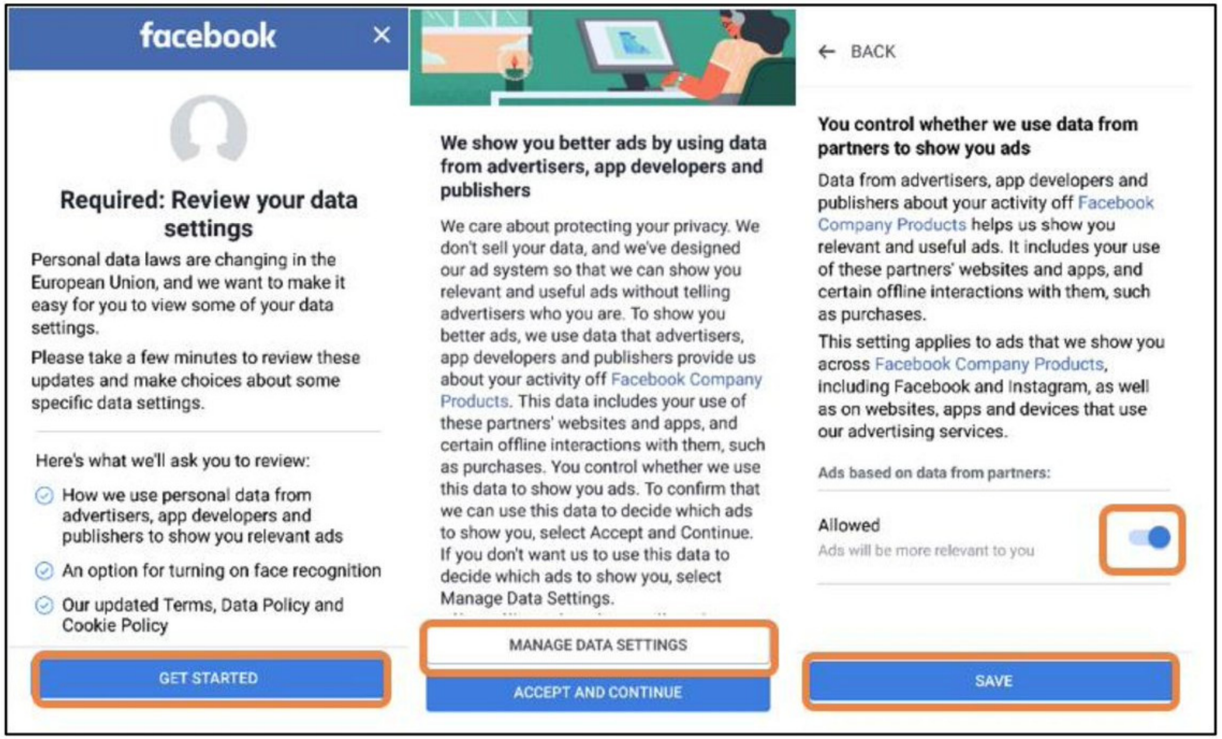
How tech companies use dark patterns to discourage us from exercising our rights to privacy

27.06.2018

FORBRUKERRÅDET

Deceived by Design

As the screenshots below illustrate, the Facebook GDPR popup requires users to go into “Manage data settings” to turn off ads based on data from third parties. If the user simply clicks “Accept and continue”, the setting is automatically turned on. This is not privacy by default.



facebook ×

Required: Review your data settings

Personal data laws are changing in the European Union, and we want to make it easy for you to view some of your data settings.

Please take a few minutes to review these updates and make choices about some specific data settings.

Here's what we'll ask you to review:

- How we use personal data from advertisers, app developers and publishers to show you relevant ads
- An option for turning on face recognition
- Our updated Terms, Data Policy and Cookie Policy

GET STARTED

We show you better ads by using data from advertisers, app developers and publishers

We care about protecting your privacy. We don't sell your data, and we've designed our ad system so that we can show you relevant and useful ads without telling advertisers who you are. To show you better ads, we use data that advertisers, app developers and publishers provide us about your activity off Facebook Company Products. This data includes your use of these partners' websites and apps, and certain offline interactions with them, such as purchases. You control whether we use this data to show you ads. To confirm that we can use this data to decide which ads to show you, select Accept and Continue. If you don't want us to use this data to decide which ads to show you, select Manage Data Settings.

MANAGE DATA SETTINGS

ACCEPT AND CONTINUE

← BACK

You control whether we use data from partners to show you ads

Data from advertisers, app developers and publishers about your activity off Facebook Company Products helps us show you relevant and useful ads. It includes your use of these partners' websites and apps, and certain offline interactions with them, such as purchases.

This setting applies to ads that we show you across Facebook Company Products, including Facebook and Instagram, as well as on websites, apps and devices that use our advertising services.

Ads based on data from partners:

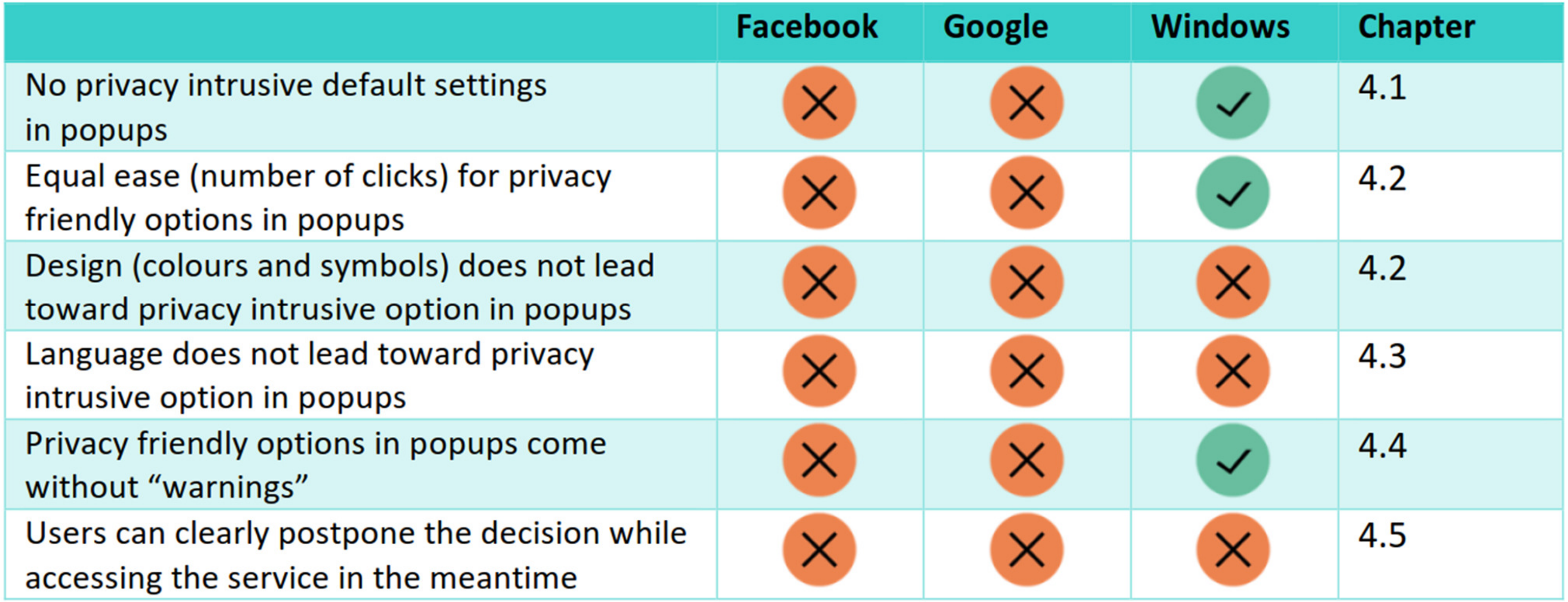
Allowed ●

Ads will be more relevant to you

SAVE

https://www.forbrukerradet.no/dark-patterns/ (2018)

Deceived by Design



	Facebook	Google	Windows	Chapter
No privacy intrusive default settings in popups	✗	✗	✓	4.1
Equal ease (number of clicks) for privacy friendly options in popups	✗	✗	✓	4.2
Design (colours and symbols) does not lead toward privacy intrusive option in popups	✗	✗	✗	4.2
Language does not lead toward privacy intrusive option in popups	✗	✗	✗	4.3
Privacy friendly options in popups come without “warnings”	✗	✗	✓	4.4
Users can clearly postpone the decision while accessing the service in the meantime	✗	✗	✗	4.5

https://www.forbrukerradet.no/dark-patterns/ (2018)

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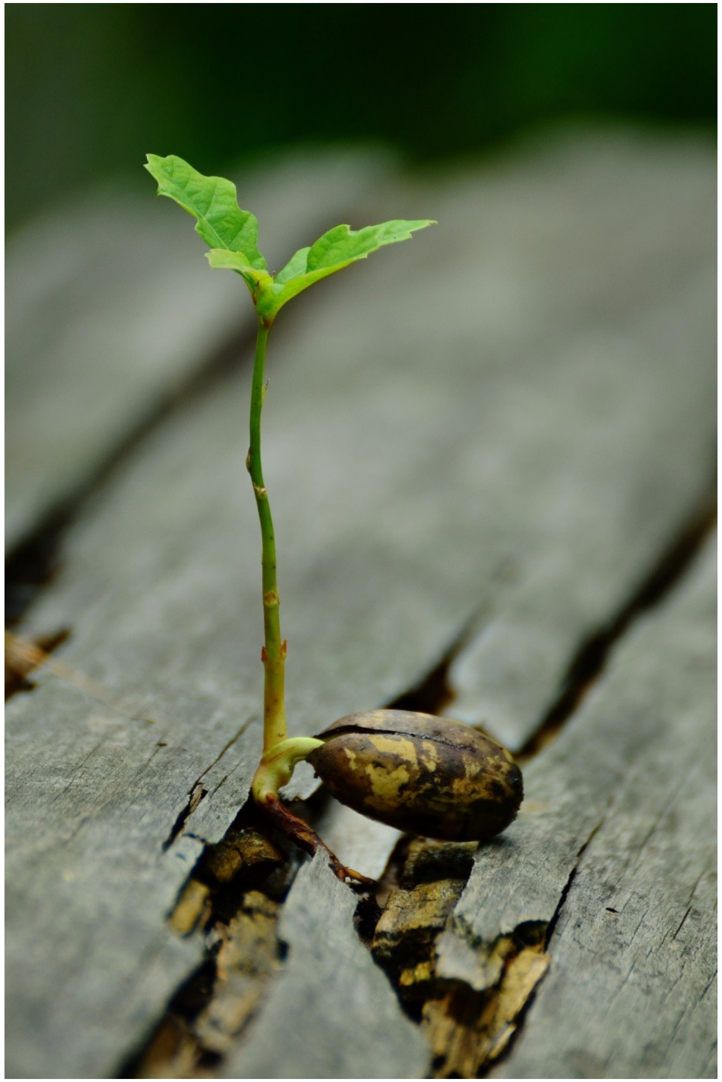

Source: congerdesign via Pixabay

- Usability is relevant; starting point “data protection by default”
- Data protection commissioners are not trained in usability issues → info needed
- Fines/sanctions for deficiencies caused by bad usability? → evidence needed
- Standing shoulder-to-shoulder with consumer protection
- GDPR as game changer?
  - Promise of a level playing field
  - We are not there, yet!