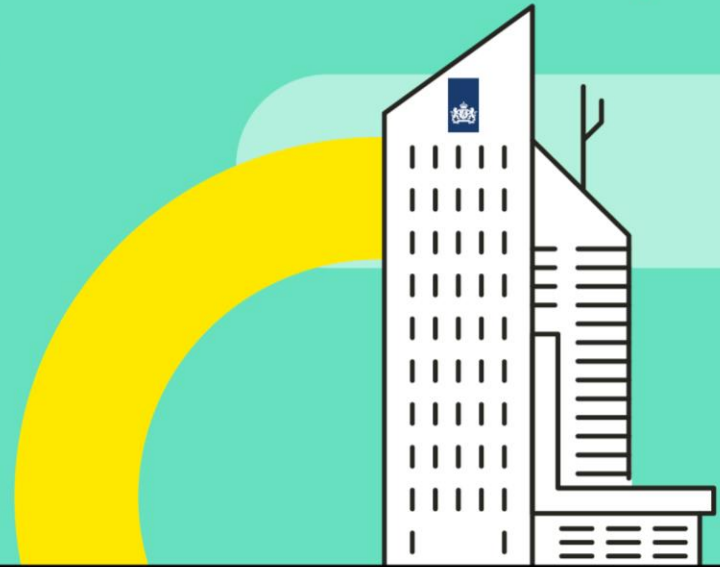


Norms and rules for regulation

A framework for interpretation

Robert van Doesburg



What is norm engineering?

“Norm Engineering converts legal language and regulations into structured data models.”

Source: <https://www.beinformed.com/the-worlds-first-norm-engineering-conference/#Agenda>

Engineering is about ...

1. practical solutions for real-world problems,
2. solutions based on sound scientific theory,
3. making solutions cost-efficient and scalable.

Theory on norms and rules

“Every time we enter a room, open our mouths to speak, walk down the street, conduct a meeting, play a game of cards, write an email, or wage a war, norms are in play.

All our interactions with others are mediated by a complex multiplicity of norms.”

We are interested in 'norms' understood not as statistical generalizations (...) but as something like accepted rules or normative principles.

“Rules were many things before they became first and foremost algorithms, i.e., instructions subdivided into steps so small and unambiguous that even a machine could execute them.

Some of these earlier genres of rules would still be readily recognizable as such, including laws, rituals, and recipes.”

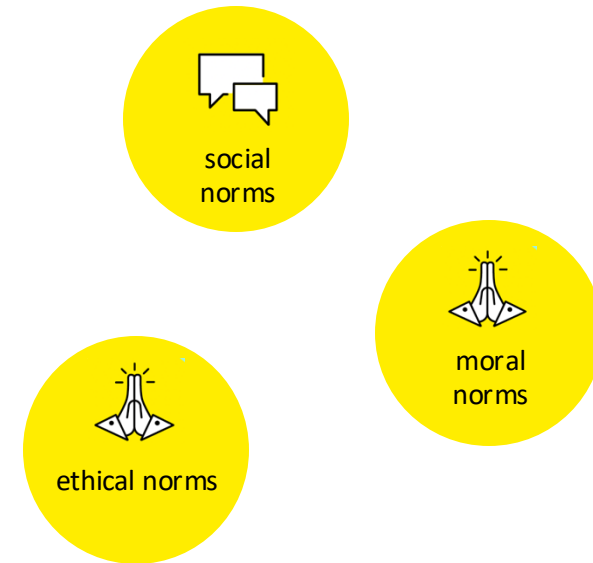
Lorraine Daston. 2022. Rules: A short history of what we live by. (p. 8.)

Formal* norms



Formal* norms are codified in official documents

Non-formal norms



Non-formal norms are not codified in an official document

Geoffrey Brennan et al. 2013. Explaining norms. (p. 40-92)

*) Formal norms are not formal in the logical sense.

Fundamental rights in legal science

Four types of beneficial rights

1. Claim (What others must do for me)*
2. Liberty (What I may do for myself)
3. Power (What I can do against others)
4. Immunity (What others can not do against me)

John Salmond. 1902. Jurisprudence: or the theory of the law. (p. 238)

* 'Right in the strict and proper sense'.

Beneficial rights only exist in relations

1. Claim-Duty No claim without a duty
2. Liberty–No claim A liberty is the absence of a duty
3. Power-Liability If I use my power to act, that results in someone holding a liability.
4. Immunity-Disability An immunity trumps a power, (it is the absence of a power)

Fundamental legal relations

1. Claim-Duty

Liberty–No claim

(the absence of a duty)

2. Power-Liability

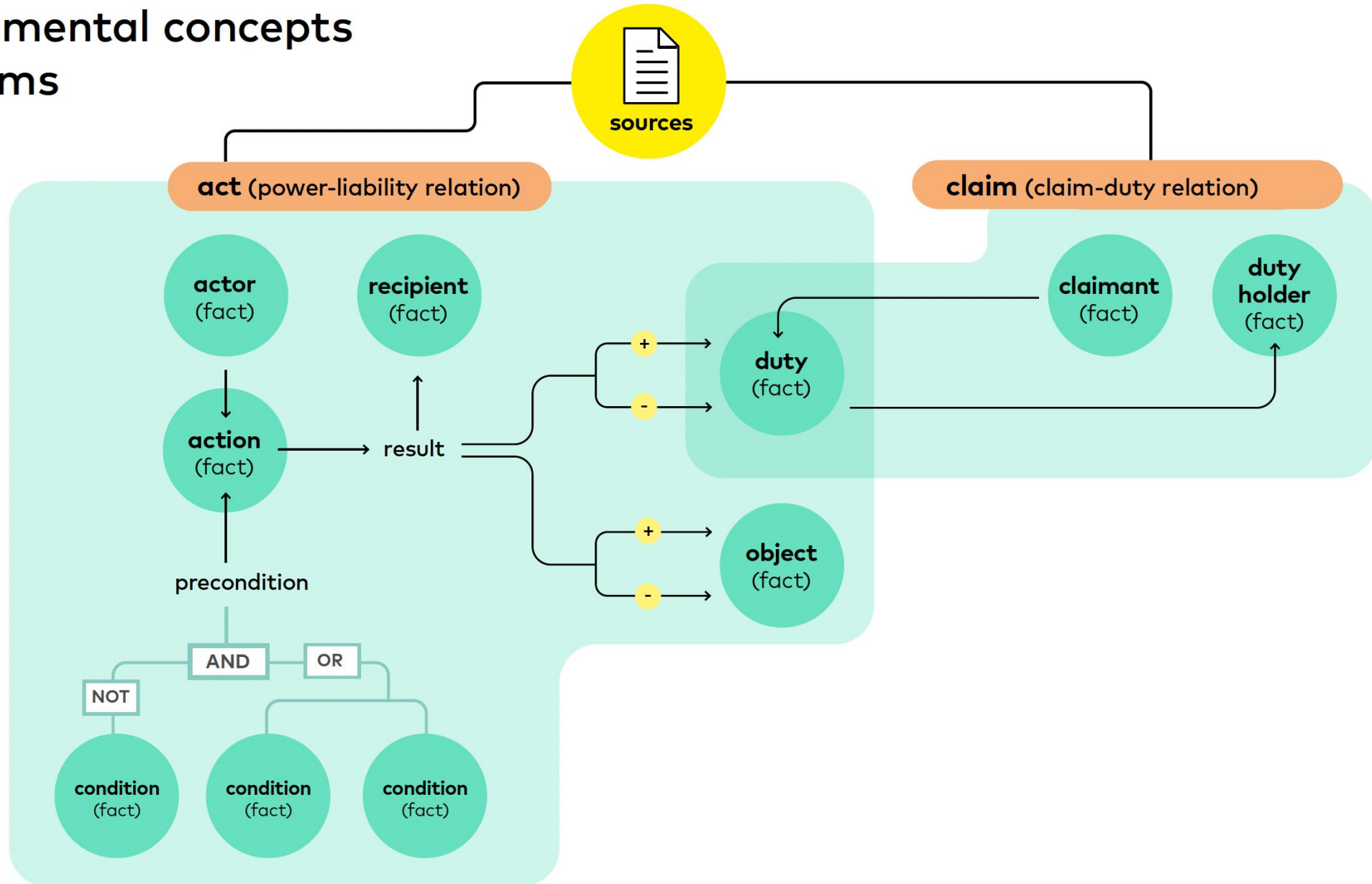
Immunity-Disability

(the absence of a power)

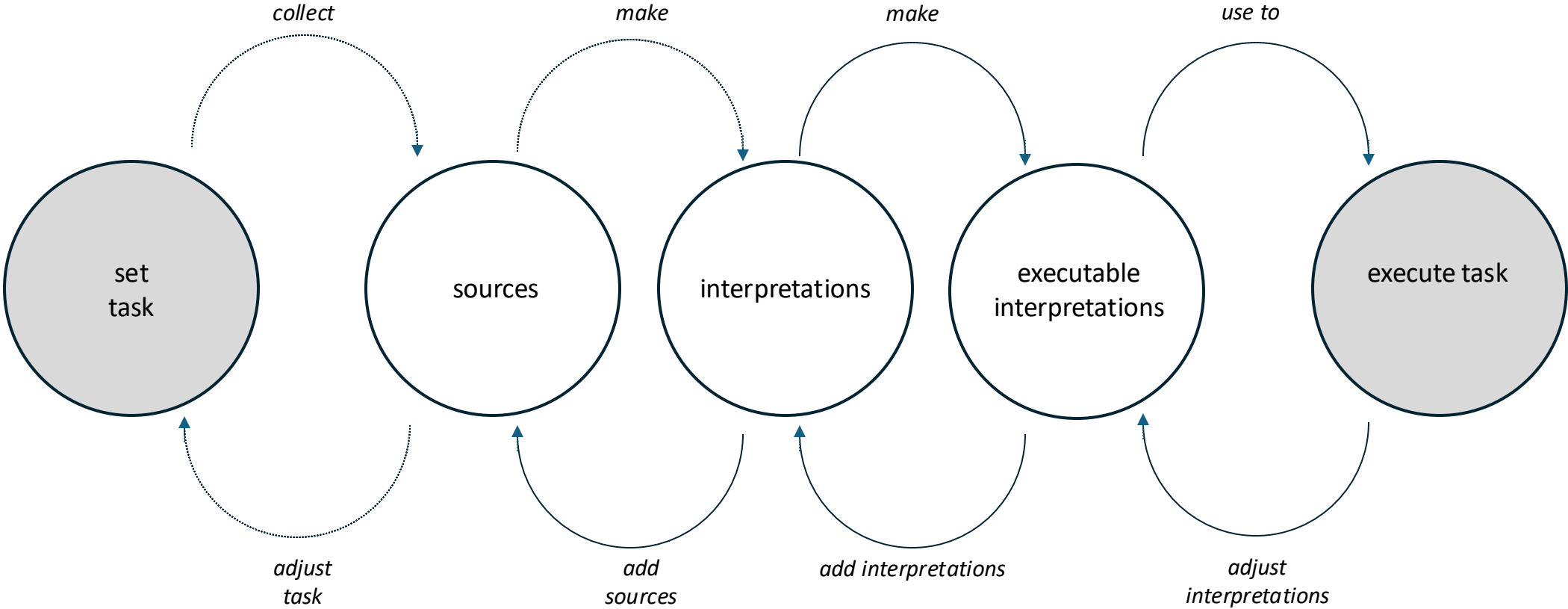
Legal norms are a subset of formal norms.

Therefore,
legal relations are normative relations.

Fundamental concepts of norms



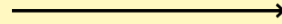
A framework for norms and rules



Practical solutions of interpreting regulations



SOURCES



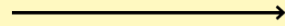
Article 5 GDPR (Principles relating to processing of personal data)

1. Personal data shall be:
 - (a) processed lawfully, fairly and in a transparent manner in relation to the data subject ('lawfulness, fairness and transparency');
 - (b) collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes; ... ('purpose limitation');
 - (c) adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed ('data minimisation');
 - (d) accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that personal data that are inaccurate, ... ('accuracy');
 - (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; ... ('storage limitation');
 - (f) processed in a manner that ensures appropriate security of the personal data, ... ('integrity and confidentiality').

2. The controller shall be responsible for, and be able to demonstrate compliance with, paragraph 1 ('accountability').



sources



Article 5 GDPR (Principles relating to processing of personal data)

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- (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; ... ('storage limitation');
- (f) processed in a manner that ensures appropriate security of the personal data, ... ('integrity and confidentiality').

2. The controller shall be responsible for, and be able to demonstrate compliance with, paragraph 1 ('accountability').

Turning annotations into an interpretation of collecting personal data



Article 5 GDPR (Principles relating to processing of personal data)



act	collect personal data by controller
action	to collect
actor	controller
object	personal data
recipient	
precondition	personal data are processed lawfully, fairly and in a transparent manner in relation to the data subject AND personal data are collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes AND personal data are processed in a manner that ensures appropriate security of the personal data
result (+)	personal data collection
result (-)	
source	Personal data shall be: 1. (a), (b), (c), (d), (e), (f) 2. The controller shall be responsible for, and be able to demonstrate compliance with, paragraph 1 ('accountability').
comments	

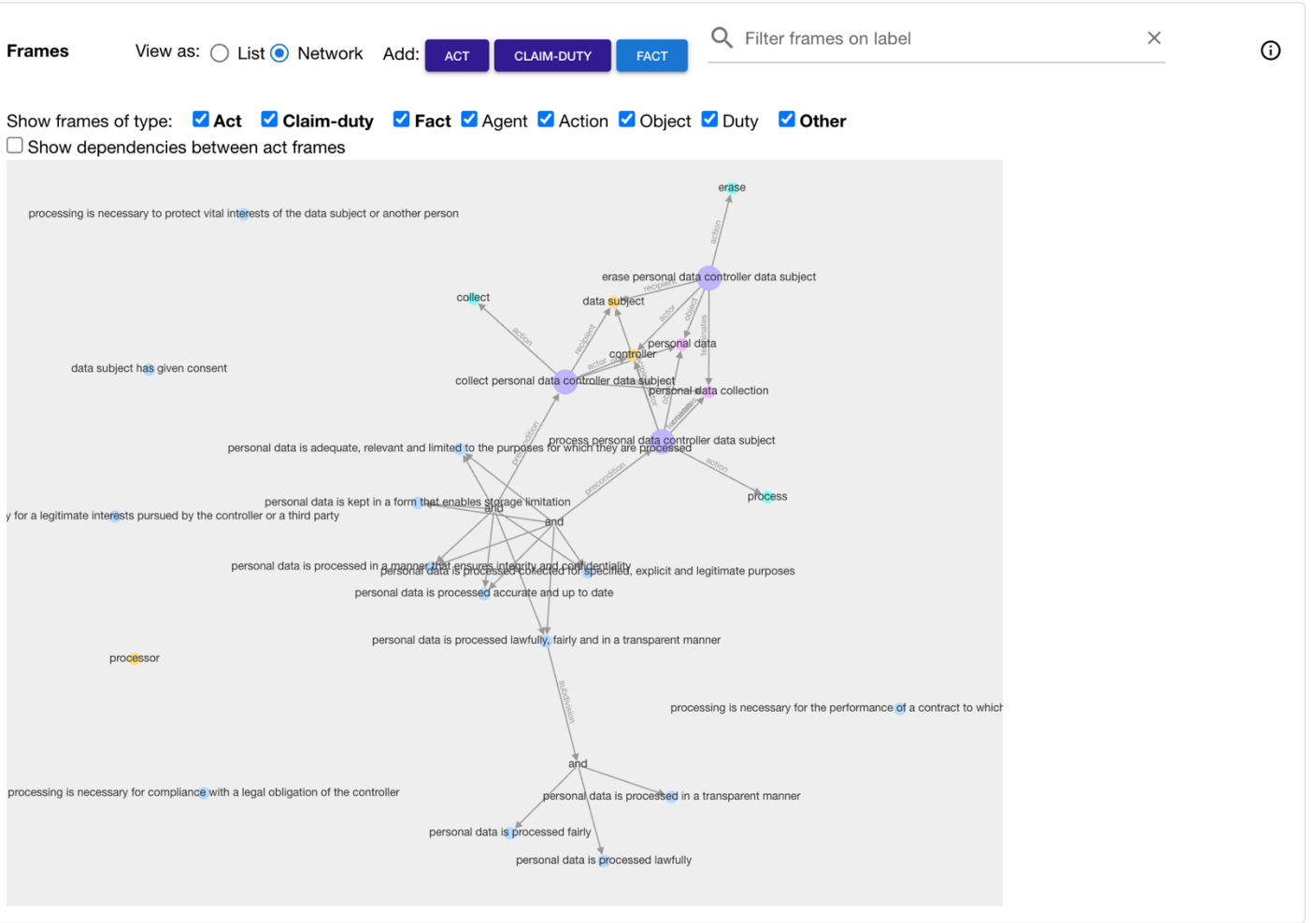
Solutions that are efficient and
scalable

gitlab.com/normativesystems



Sources **GENERAL DATA PROTECTION ACT**

- > Article 4 Definitions
- > Article 5 Principles relating to processing of personal data
 - > 1. Personal data shall be:
 - (a) processed lawfully, fairly and in a transparent manner in relation to the data subject ('lawfulness, fairness and transparency');
 - (b) collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes; further processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes shall, in accordance with Article 89(1), not be considered to be incompatible with the initial purposes ('purpose limitation');
 - (c) adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed ('data minimisation');
 - (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 ('accuracy');
 - (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; personal data may be stored for longer periods insofar as the personal data will be processed solely for archiving purposes in the public interest,



CHOPPR

IMPORT

TREE

Find tree element

Preamble 169

Preamble 170

Preamble 171

Preamble 172

Preamble 173

Chapter I General principles

Article 1 Subject-matter

Numbered paragraph

Numbered paragraph

Numbered paragraph

Article 2 Material scope

Numbered paragraph

Numbered paragraph

item (a)

item (b)

item (c)

item (d)

Numbered paragraph

Numbered paragraph

Article 3 Territorial scope

Numbered paragraph

Numbered paragraph

item (a)

item (b)

Numbered paragraph

Article 4 Definitions

Definitions 1

Definitions 2

Definitions 3

Definitions 4

Definitions 5

Definitions 6

Definitions 7

Definitions 8

Definitions 9

Definitions 10

Definitions 11

Definitions 12

Definitions 13

Definitions 14

Definitions 15

Definitions 16

item (a)

item (b)

Definitions 17

Definitions 18

Definitions 19

Definitions 20

Definitions 21

Definitions 22

item (a)

item (b)

item (c)

Definitions 23

item (a)

item (b)

Source

Find chunks by text, regexp or separator

Root

Document 32016R0679

04/05/2016

Legal act

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) (Text with EEA relevance)

OJ L 119, 4.5.2016, p. 1–88 (BG, ES, CS, DA, DE, ET, EL, EN, FR, GA, HR, IT, LV, LT, HU, MT, NL, PL, PT, RO, SK, SL, FI, SV)

In force: This act has been changed. Current consolidated version: 04/05/2016

ELI: <http://data.europa.eu/eli/reg/2016/679/oj>

4.5.2016

EN

Official Journal of the European Union

L 119/1

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)

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 16 thereof,

RECIPE

Pre

Recipe

Steps

- Step
- CHAPTER
- Article
- Numbered paragraph
- Definitions
- Step
- Section
- Step
- Enumeration (a, b, c)
- Step
- Preambles

SEPARATORS

Separators

Filter separators...

- Aanwijzing (AvdR)**
Bijvoorbeeld: "Aanwijzing 1.1. Reikwijdte"
- Afkorting**
Bijvoorbeeld: "amvb algemene maatregel van bestuur"
- Afkortingen**
Een lijst met afkortingen.
- Artikel**
Artikel
- Genaamd lid**
Bijvoorbeeld: "Eerste lid."
- Graad**
Onderdeel aangeduid door een nummer en het karakter °
- Hoofdstuk**
Hoofdstuk
- Lid**
Genummerd lid zonder het woord Lid
- Onderdeel**
Bijvoorbeeld: "Onderdeel a:"

Rules and regulations in the Netherlands in 2024

1. Launching regels.overheid.nl (rules.government.nl)
2. Building a prototype for interpreting regulations using fundamental concept of norms and rules (FLINT)
3. Collecting existing alternative methods (and tooling)

Rules and regulations in the Netherlands in 2025

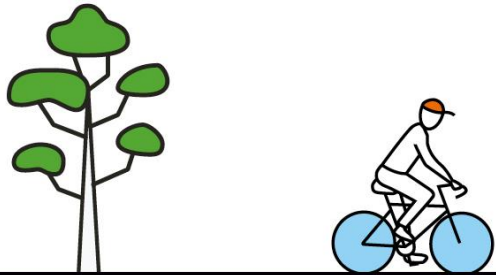
1. Building a community of practice on rule-governance
2. Organizing peer reviews on methods
3. Embrace or create open standards and open-source software
4. Acknowledge commercial business models without vendor lock-in
5. Make a shared agenda for R&D on rule-governance



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website gitlab.com/normativesystems



TNO innovation
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 UNIVERSITY OF AMSTERDAM