

# De wereld van Geo-normen

Annet van der Horn  
Standardization Consultant NEN

May 20, 2010

# De afstand tussen twee (Romeinse) paarden & ruimtevaart



Wat is het verband?



# De as-lengte van Romeinse strijdwagens...



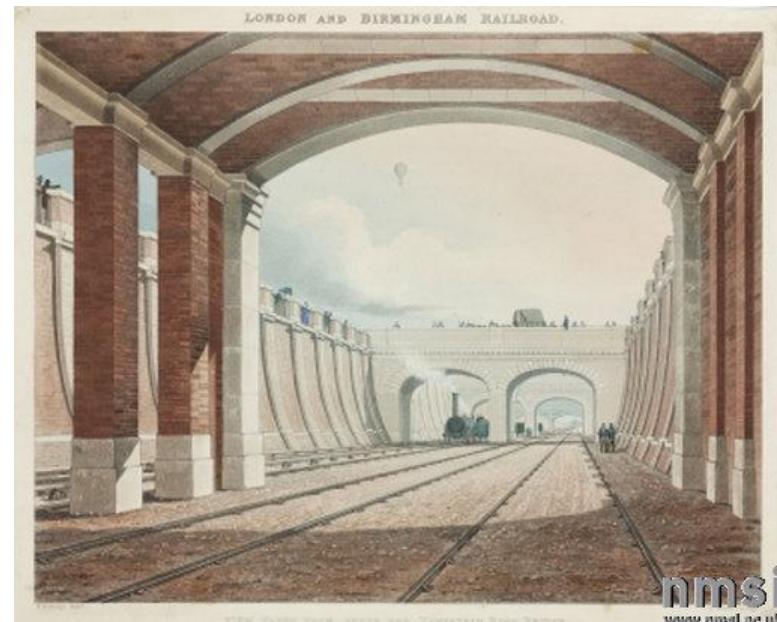
... bepaalde de breedte  
van Romeinse wegen

# ... werd de standaard asmaat ...



... inclusief trein wagons

... van 19<sup>e</sup> eeuwse wagens ...



nmsi  
www.nmsi.ac.uk

**NEN**

# .. Werd de standaard voor moderne treinen ...



Railafstand werd een ontwerp-eis voor nieuwe wagens en daardoor ook voor elementen zoals tunnels ...

# NASA Space Shuttle



Alle onderdelen  
van de Challenger  
zijn over spoor  
getransporteerd ...

... dus railafstand  
en tunnelbreedte  
zijn bepalende  
ontwerpeisen.

# NASA's op paarden gebaseerde space shuttle



Dat is het verband!!



# Inhoud

- Normen
- Geo-normen
- Normalisatie organisaties
- Geo-normalisatie
- De wereld van geo-normen

# Inhoud

- Normen
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# Normen

Vastgelegde afspraken

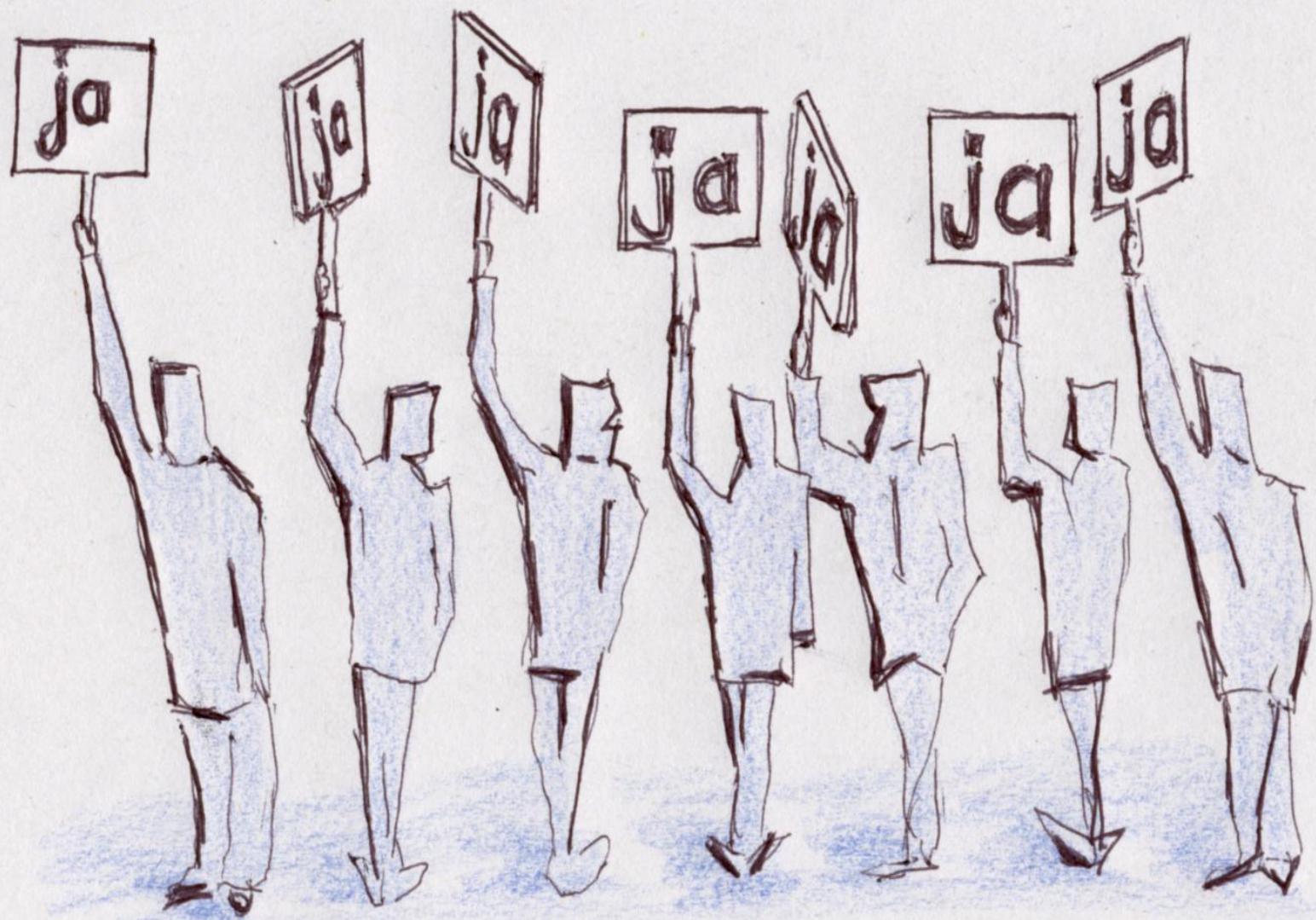
- Breed draagvlak
- Consensus

Met als doel:

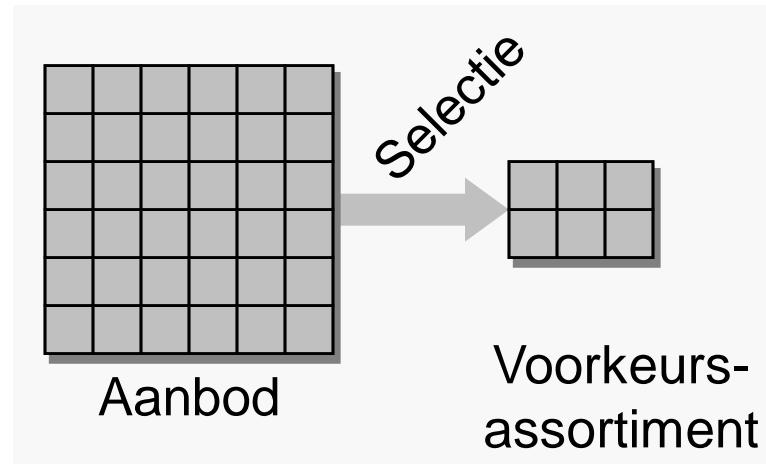
- Voordeel voor de gebruikers
- Voordeel voor de maatschappij

**MEN**

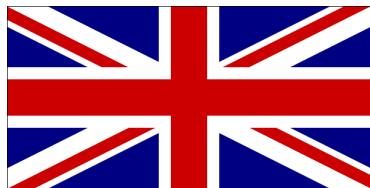




## Standaardisatie



Standaardisatie is een vorm van normalisatie



Standaardisatie = Standardization

Normalisatie = Standardization

# Validatie normen

## Privaatrecht

Bij overeenkomst

Contract  
Certificering  
Folder



Controle en handhaving  
door partijen zelf bv  
certificerende instantie

## Publiekrecht

Bij wet

In wet  
In besluit



Controle en handhaving  
door overheid

# Certificatie



## Certificatie

- **objectief aantoonbaar maken van het voldoen aan vastgestelde eisen (Certificatie-instelling)**

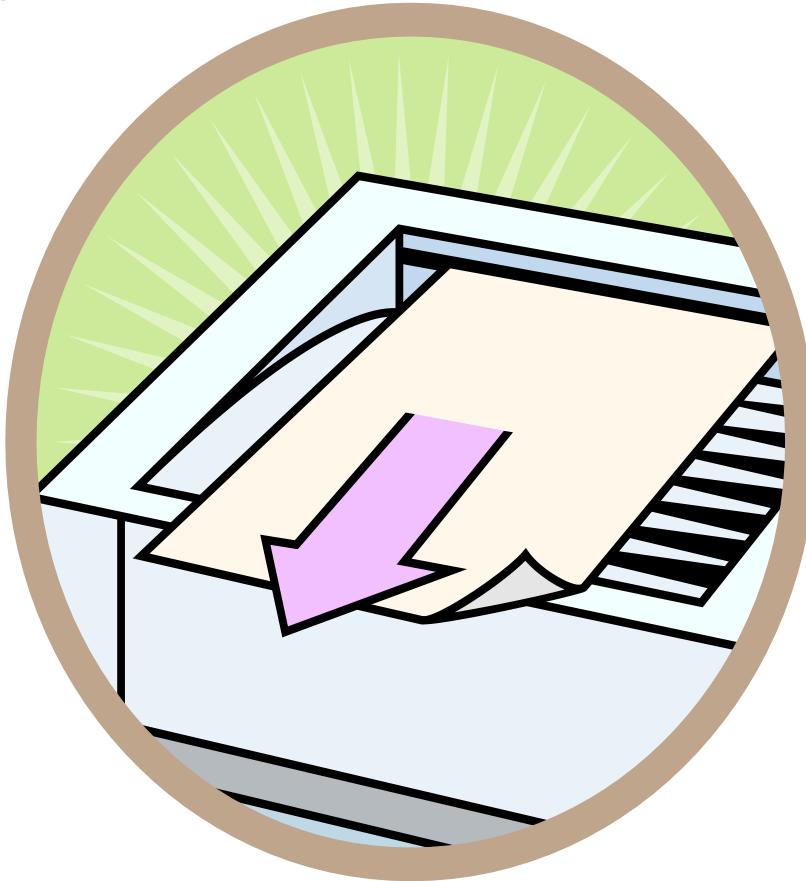
## Schemabeheer

- **afspraken over de manier waarop certificatie-instellingen te werk gaan per onderwerp (NEN)**

**NEN**

# Lastig?

A4-tje...



# ...dankzij

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INTERNATIONAL STANDARD



216

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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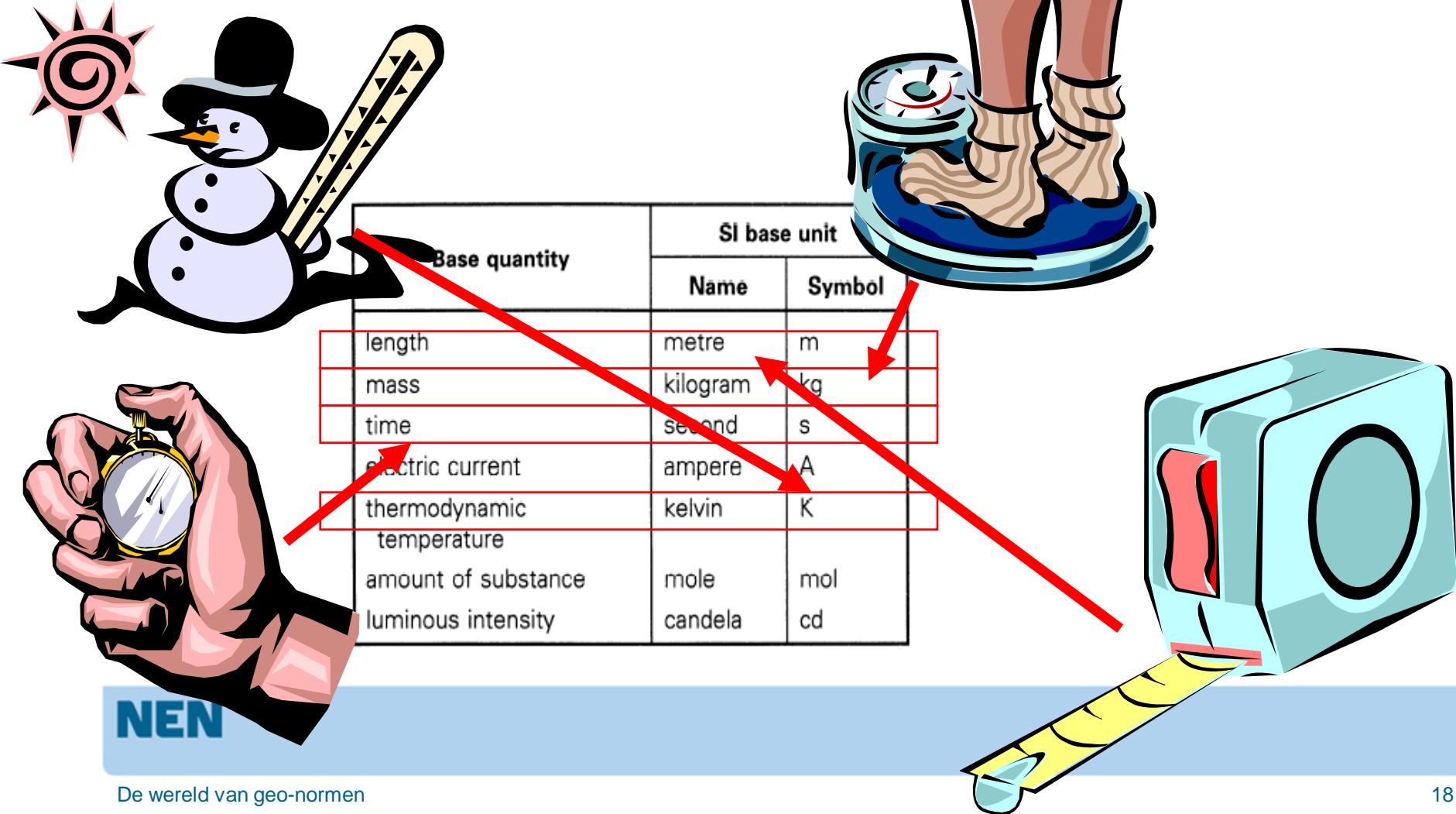
**Writing paper and certain classes of printed matter –  
Trimmed sizes – A and B series**

*Papiers d'écriture et certaines catégories d'imprimés – Formats finis – Séries A et B*

**NEN**

# Lastig?

## Eenheden...



NEN

...dankzij

INTERNATIONAL  
STANDARD

**ISO  
1000**

Third edition  
1992-11-01

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**NEN**

**SI units and recommendations for the use  
of their multiples and of certain other units**



**NEN**

# Inhoud

- Normen
- **Geo-normen**
- Normalisatie organisaties
- Geo-normalisatie
- De wereld van geo-normen



# NEN 3610

- Basismodel Geo-informatie - Termen, definities, relaties en algemene regels voor de uitwisseling van informatie over aan de aarde gerelateerde ruimtelijke objecten



**NEN**

# NEN-EN-ISO 19115

## Geographic information – Metadata

- Provide data producers with appropriate information to characterize their geographic data properly;
- Facilitate the organization and management of metadata for geographic data;
- Enable users to apply geographic data in the most efficient way by knowing its basic characteristics;
- Facilitate data discovery, retrieval and reuse. Users will be better able to locate, access, evaluate, purchase and utilize geographic data;
- Enable users to determine whether geographic data in a holding will be of use to them.

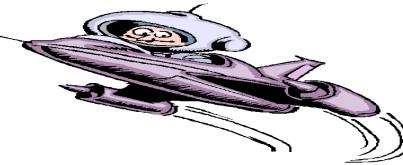
# NPR-CEN/TR 15449

Standards, specifications, technical reports and guidelines, required to implement Spatial Data Infrastructure

- to identify standards required to implement a SDI in Europe;
- to propose a roadmap for future standards;
- to provide recommendations for measures to be taken in order to support implementation and maintenance of a SDI.

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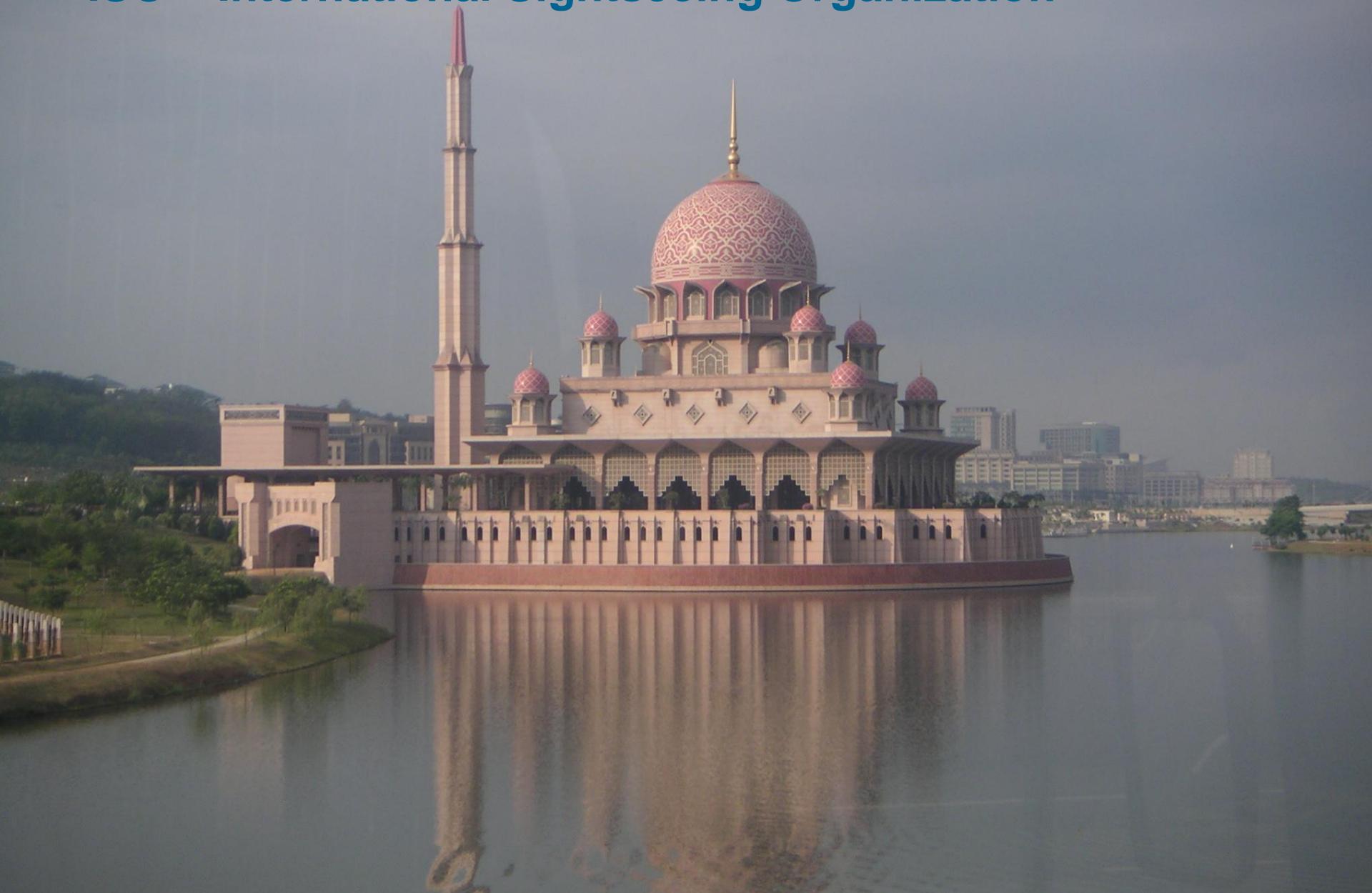
Gebied	Tele-communicatie	Elektrotechniek	Overig
		 Commission Electrotechnique Internationale International Electrotechnical Commission Международная Электротехническая Комиссия	 International Organization for Standardization
			
			

# ISO

- Aantal landen lid:  
161
- Aantal ‘International Standards’ en vergelijkbare documenten:  
18 083



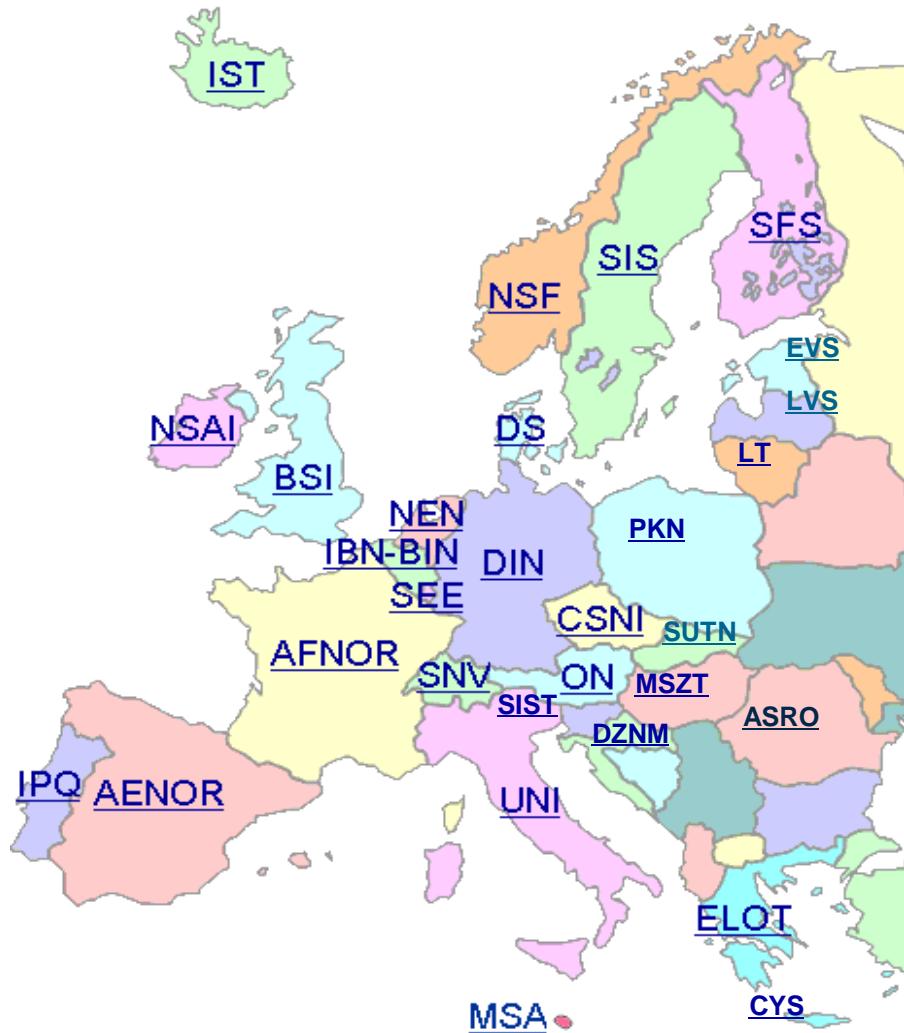
**ISO = International Sightseeing Organization**





CEN

- Aantal landen lid:  
30
  - Aantal normen:  
13.934



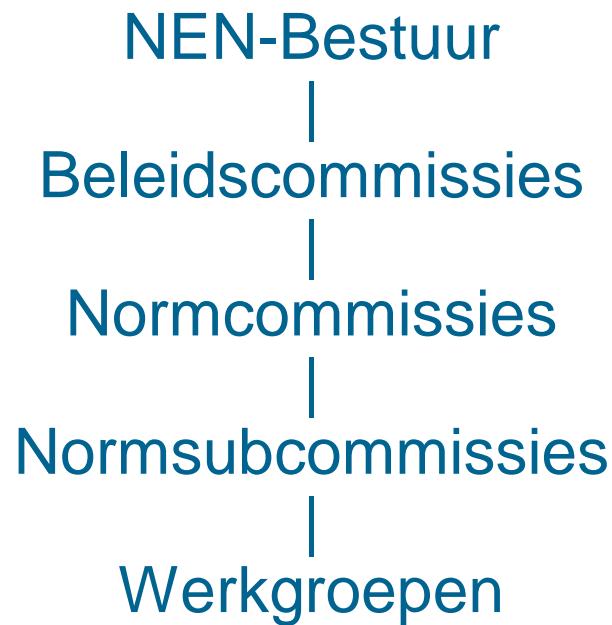
NEN



- Aantal medewerkers:  
300
- Aantal normen en andere documenten:  
60.000



# Organisatie NEN commissies



# Verband ISO – CEN – NEN

	Normalisatie organisatie	Norm-ontwerp	Definitieve norm
Mondiaal	ISO	ISO/DIS	ISO
Door Nederland aanvaarde mondiale norm			NEN-ISO
Mondiaal overgenomen Europese norm			NEN-EN-ISO
Europees	CEN	PrEN	NEN-EN
Nederlands	NEN	Ontw. NEN	NEN

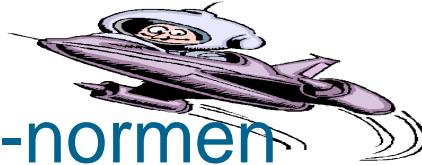
Opm. NEN is verplicht alle Europese normen over te nemen als Nederlandse norm (NEN-EN), onder terugtrekking van conflicterende nationale normen (NEN's)

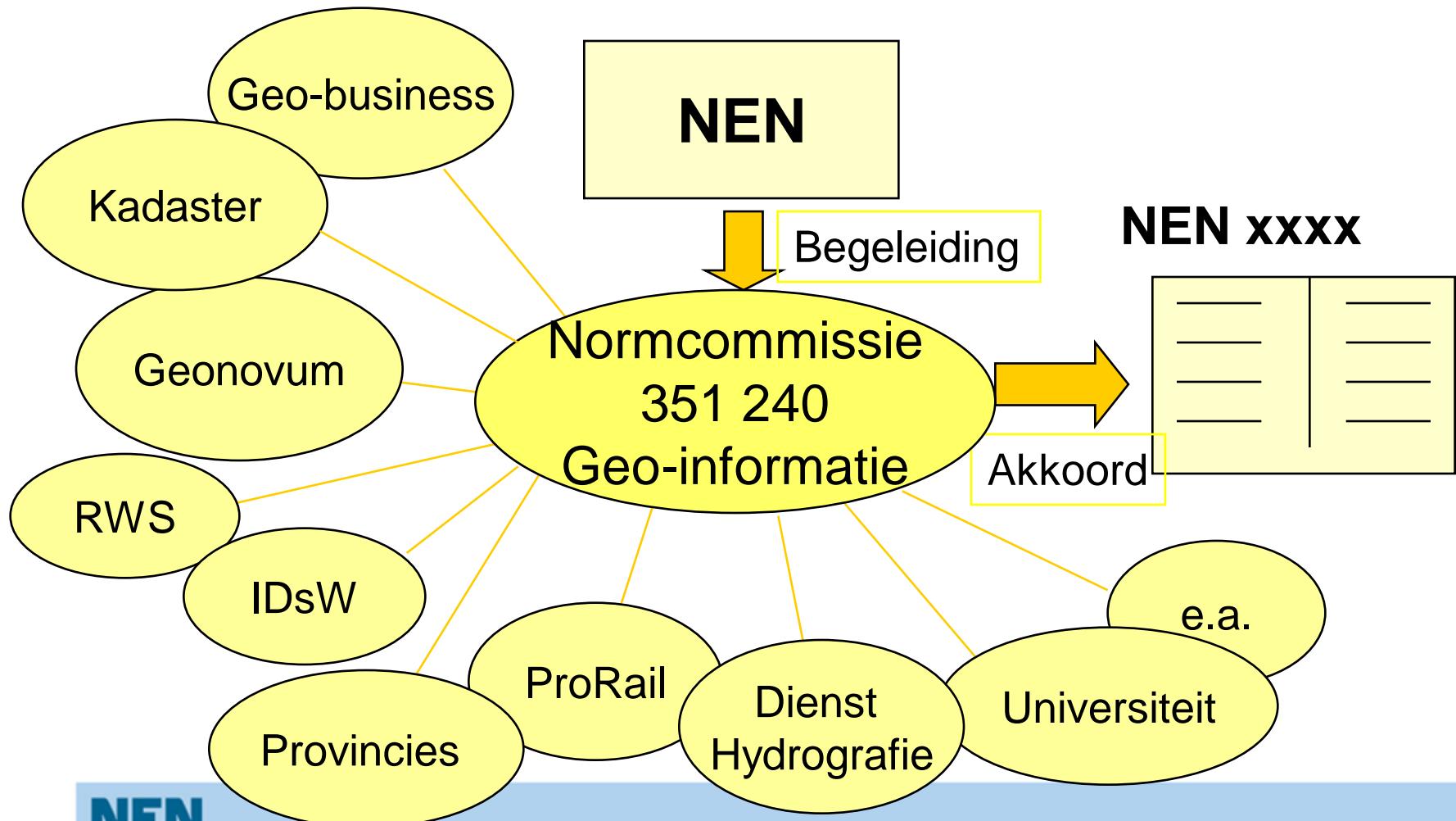


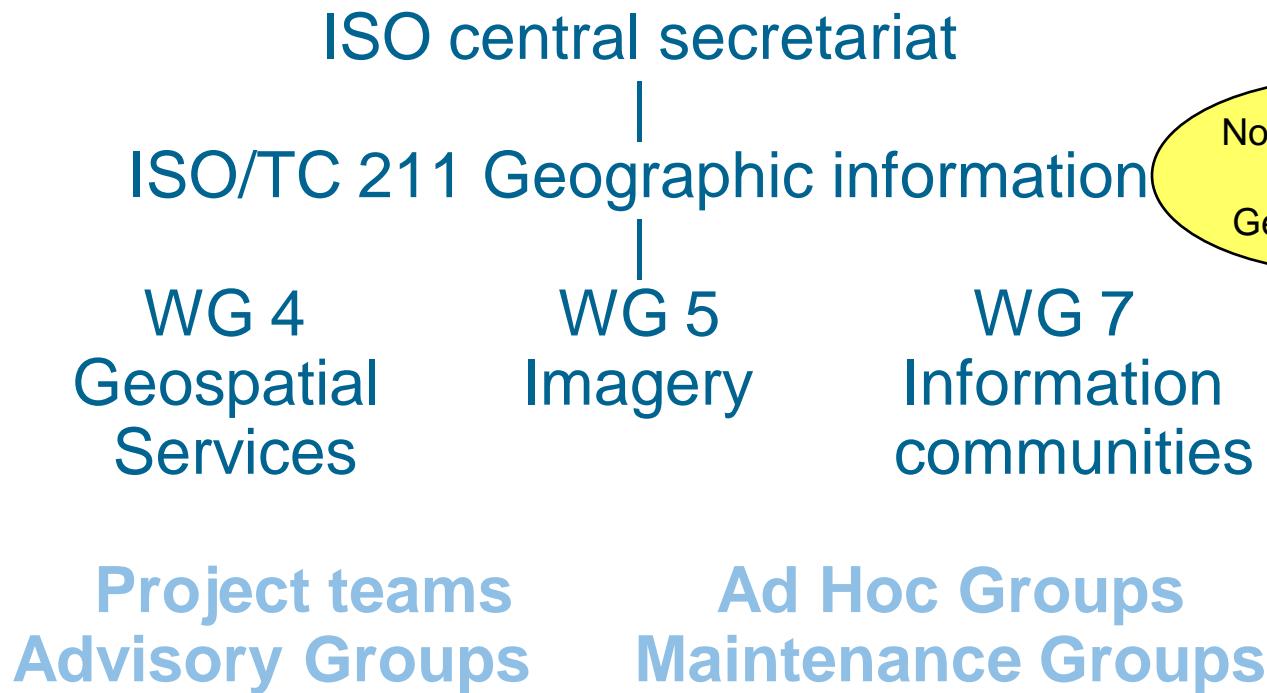
**NEN**

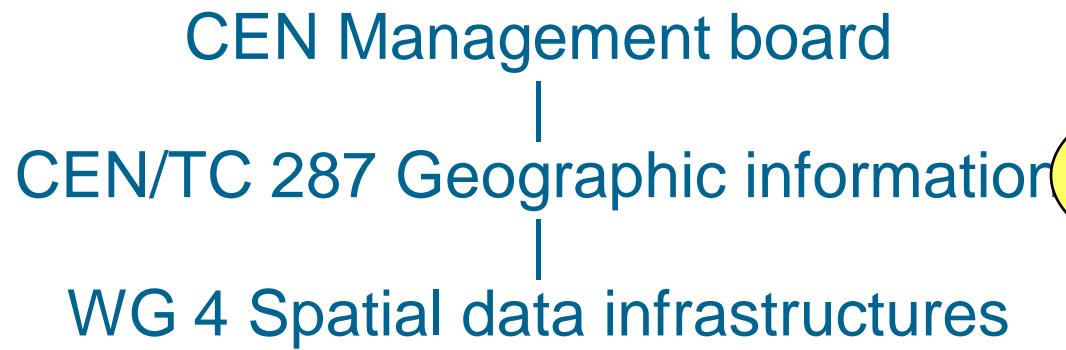
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Normcommissie  
351 240  
Geo-informatie

Advisory Group on Outreach  
Ad Hoc Group on Business plan

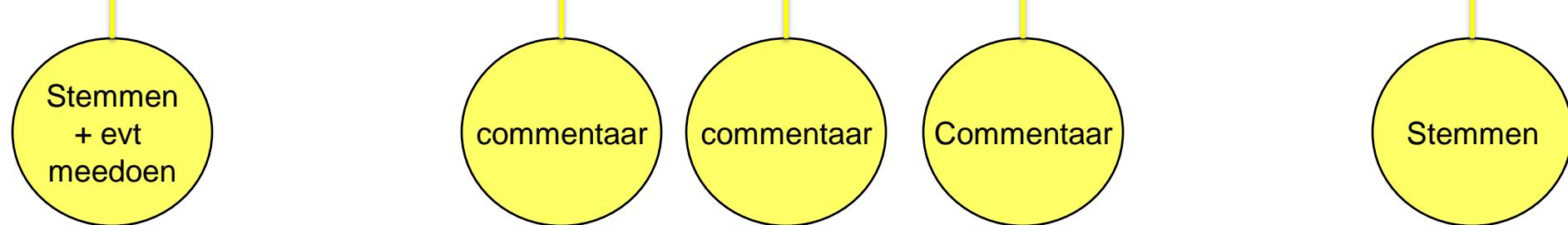
# Normalisatie proces

- ISO

month	1	2	3	4	5	6	7	8	9	1	0	1	1	2	1	3	1	4	1	5	1	6	1	7	1	8	2	9	2	0	2	1	2	2	3	2	4	2	5	2	6	2	7	2	8	2	9	3	0	3	1	3	2	3	3	4	3	5	3	5	6
stage	WD									CD							DIS							comments resolution														F DIS																							

- CEN

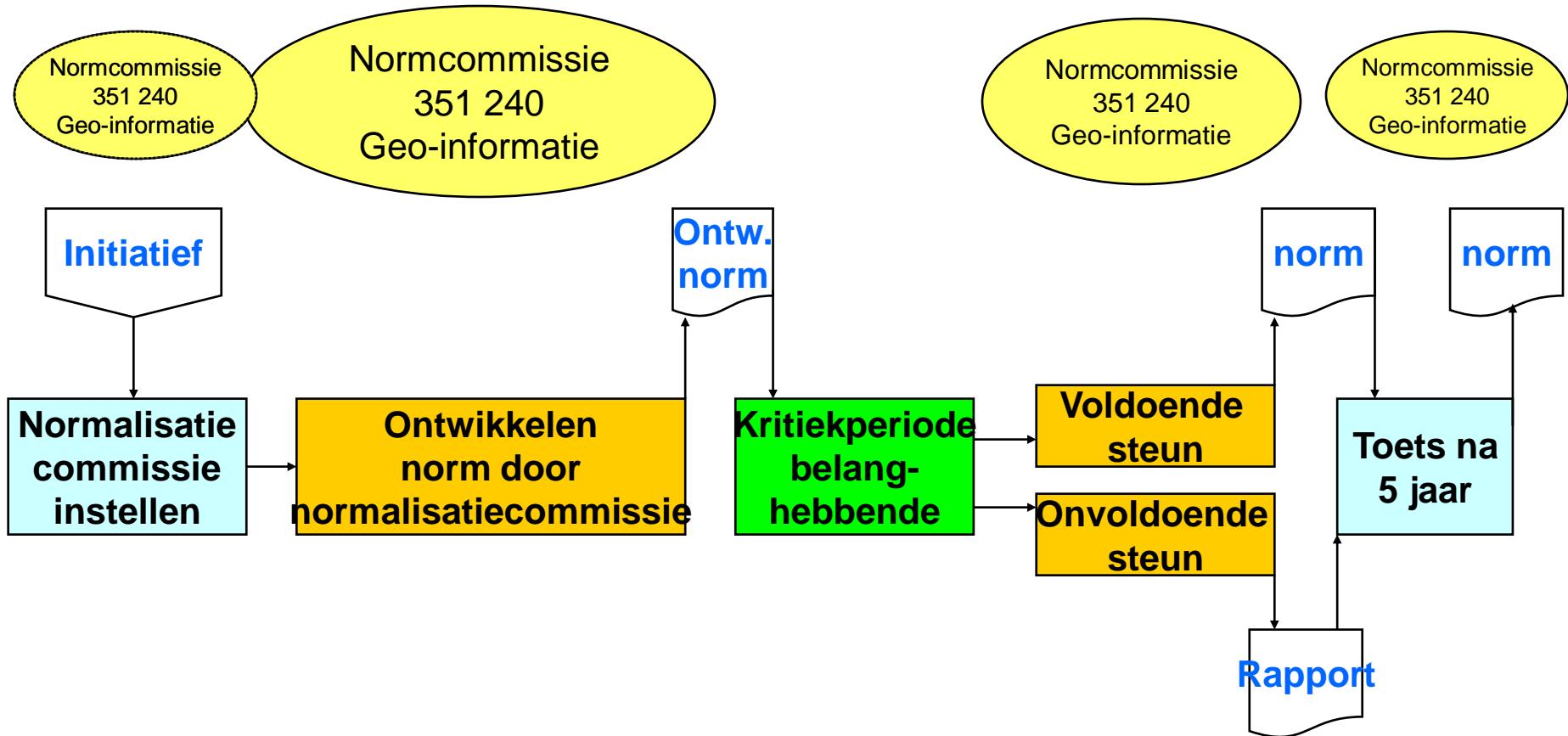
month	1	2	3	4	5	6	7	8	9	1	0	1	1	2	1	3	1	4	1	5	1	6	1	7	1	8	2	9	2	0	2	1	2	2	3	2	4	2	5	2	6	2	7	2	8	2	9	3	0	3	1	3	2	3	3	4	3	5	3	5	6
stage	WD									WD							Enquiry							comments resolution														FV																							



# Weegfactoren CEN Formal Vote

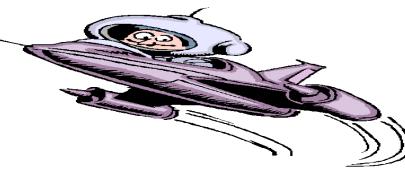
France	29	Belgium	12	Denmark	7	Cyprus	4
Germany	29	Czech Republic	12	Finland	7	Estonia	4
Italy	29	Greece	12	Ireland	7	Latvia	4
United Kingdom	29	Hungary	12	Lithuania	7	Luxembourg	4
		Portugal	12	Norway	7	Slovenia	4
Poland	27			Slovakia	7		
Spain	27	Austria	10			Iceland	3
		Sweden	10			Malta	3
Netherlands	13	Switzerland	10				

# Normalisatie



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# Normen over geo-normen

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## STANDARDS THAT SPECIFY THE INFRASTRUCTURE FOR GEOSPATIAL STANDARDIZATION

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ISO 19101 Geographic information — Reference model

ISO/TS 19103 Geographic information — Conceptual schema language

ISO/TS 19104 Geographic information — Terminology

ISO 19105 Geographic information — Conformance and testing

ISO 19106 Geographic information — Profiles

# Data models



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## STANDARDS THAT DESCRIBE DATA MODELS FOR GEOGRAPHIC INFORMATION

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ISO 19109 Geographic information — Rules for application schema

ISO 19107 Geographic information — Spatial schema

ISO 19137 Geographic information — Core profile of the spatial schema

ISO 19123 Geographic information — Schema for coverage geometry and functions

ISO 19108 Geographic information — Temporal schema

ISO 19141 Geographic information — Schema for moving features

ISO 19111 Geographic information — Spatial referencing by coordinates

ISO 19112 Geographic information — Spatial referencing by geographic identifiers

# Information management

## STANDARDS FOR GEOGRAPHIC INFORMATION MANAGEMENT

ISO 19110 Geographic information — Methodology for feature cataloguing

ISO 19115 Geographic information — Metadata

ISO 19113 Geographic information — Quality principles

ISO 19114 Geographic information — Quality evaluation procedures

ISO 19131 Geographic information — Data product specifications

ISO 19135 Geographic information — Procedures for item registration

ISO/TS 19127 Geographic information — Geodetic codes and parameters

ISO/TS 19138 Geographic information — Data quality measures



# Geo services

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## STANDARDS FOR GEOGRAPHIC INFORMATION SERVICES

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ISO 19119 Geographic information — Services

ISO 19116 Geographic information — Positioning services

ISO 19117 Geographic information — Portrayal

ISO 19125-1 Geographic information — Simple feature access — Part 1: Common architecture

ISO 19125-2 Geographic information — Simple feature access — Part 2: SQL option

ISO 19128 Geographic information — Web map server interface

ISO 19132 Geographic information — Location based services — Reference model

ISO 19133 Geographic information — Location based services — Tracking and navigation

ISO 19134 Geographic information — Location base services — Multimodal routing and navigation

# Encoding Thema's

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## STANDARDS FOR ENCODING OF GEOGRAPHIC INFORMATION

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ISO 19118 Geographic information — Encoding

ISO 6709 Standard representation of geographic point location by coordinates

ISO 19136 Geographic information — Geography Markup Language (GML)

ISO/TS 19139 Geographic information — Metadata — XML schema implementation

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## STANDARDS FOR SPECIFIC THEMATIC AREAS

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ISO/TS 19101-2 Geographic information — Reference model — Part 2: Imagery

ISO 19115-2 Geographic information — Metadata — Part 2: Extensions for imagery and gridded data

# Meer info:

- [www.isotc211.org](http://www.isotc211.org)
- [www.GIstandards.eu](http://www.GIstandards.eu)
- [www.nen.nl](http://www.nen.nl)



**NEN**