

EUROPEAN SURVEY DIAGRAMM

POTENTIALS & PERSPECTIVES

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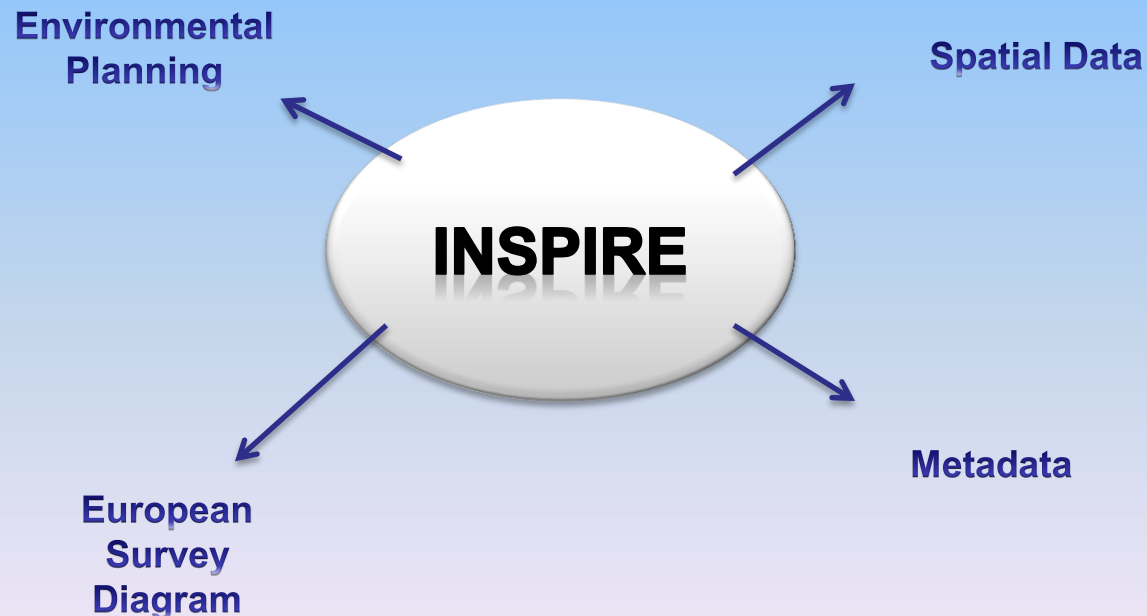
What are we dealing with?

- An engineering surveying diagram (survey diagram) that must be carried out under common specifications and regulations amongst the E.U. member states
- It should be valid in all E.U. member countries
- Only certified surveyors should have the right to compile and authorize it
- The ESD should give a thorough description of the parcel and potentially be taken into consideration in legal actions

Why go European?

INSPIRE DIRECTIVE

- The ESD is a direct product of the INSPIRE Directive
- It is **not** an entity that pre-existed and therefore should now be INSPIRE compliant
- It shall be considered as “*INSPIRE product*”



INSPIRE regulations

Reference System

Map Projection

Scales

ISO Standards

For the 3D and 2D (horizontal component), the European Terrestrial Reference System 1989 (ETRS89) shall be used for the areas within the geographical scope of ETRS89. ETRF2000 at some epoch may be the realization Frame.

The International Terrestrial Reference System (ITRS) or other geodetic coordinate reference systems compliant with ITRS shall be used in areas that are outside the geographical scope of ETRS89.

For the computation of latitude, longitude and ellipsoidal height, the parameters of the GRS80 ellipsoid shall be used.

INSPIRE regulations

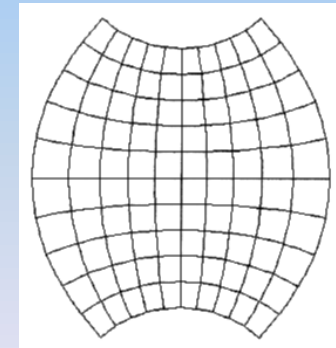
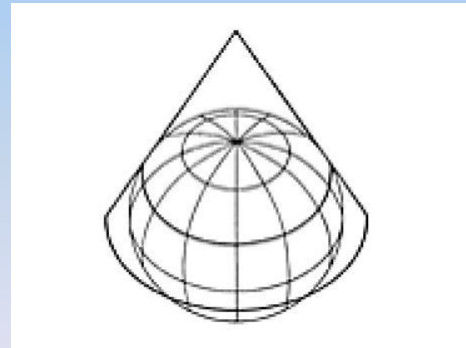
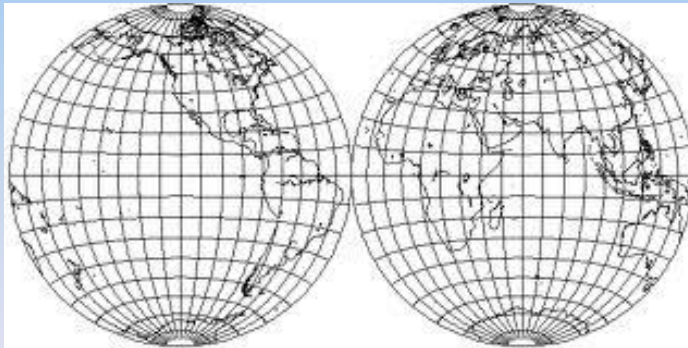
Reference System

Map Projection

Scales

ISO Standards

For representation with plane coordinates one of the Lambert Azimuthal Equal Area (ETRS89-LAEA), the Lambert Conformal Conic (ETRS89-LCC) or the Transverse Mercator (ETRS89-TMzn) projection shall be used.



INSPIRE regulations

Reference System

Map Projection

Scales

ISO Standards

Scales may vary depending on each project that uses spatial data (e.g. cadastre, GIS, environmental planning, etc), from large scales such as 1:1,000 to smaller scales up to 1:500,000

NOTICE:

The scales issue is totally “project dependant” and therefore INSPIRE provides us with flexibility in terms of defying the standard scales of the ESD

INSPIRE regulations

Reference System

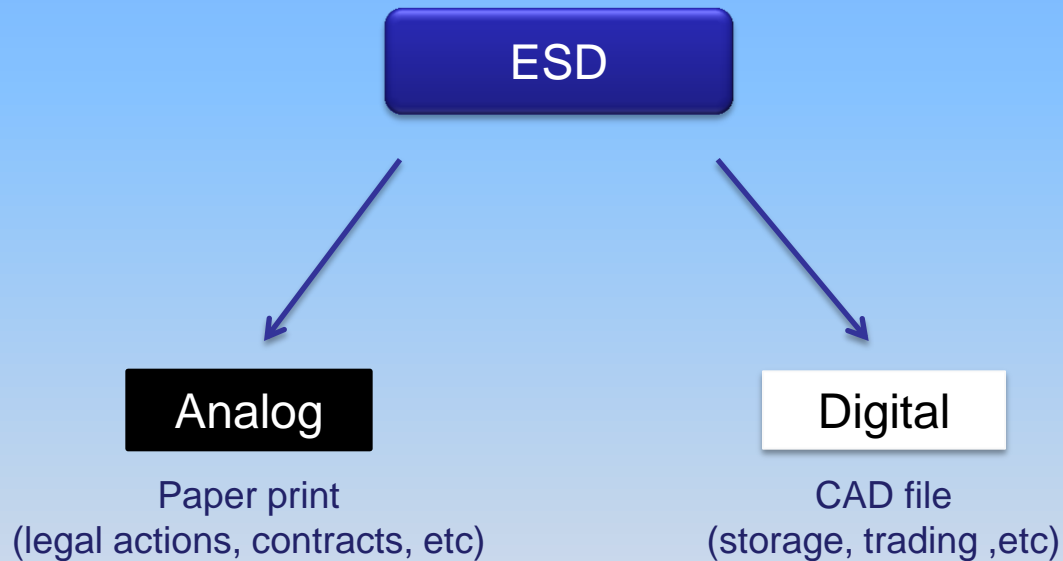
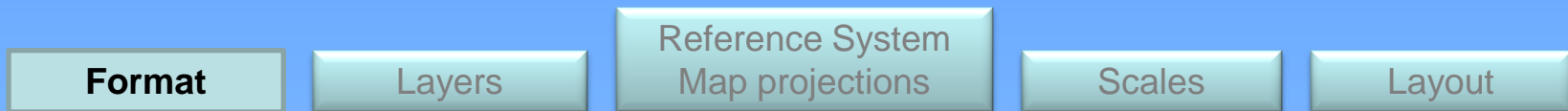
Map Projection

Scales

ISO Standards

ISO NAME	RELEASE DATE	DESCRIPTION
ISO 19111	2007	Geographic Information – Spatial referencing by coordinates
ISO 19111-2	2009	Geographic Information – Spatial referencing by coordinates – Part 2: Extension for parametric values
ISO 19115	2005	Geographic Information – Metadata
ISO/TS19127	2005	Geographic Information – Geodetic Codes and Parameters
ISO 2533	1975	International standard atmosphere
ISO 6709	2008	Standard representation of geographical point position by coordinates

ESD Components



Establishment of a unique file format for ESD that contains all the specifications that will be adopted for the ESD

ESD Components

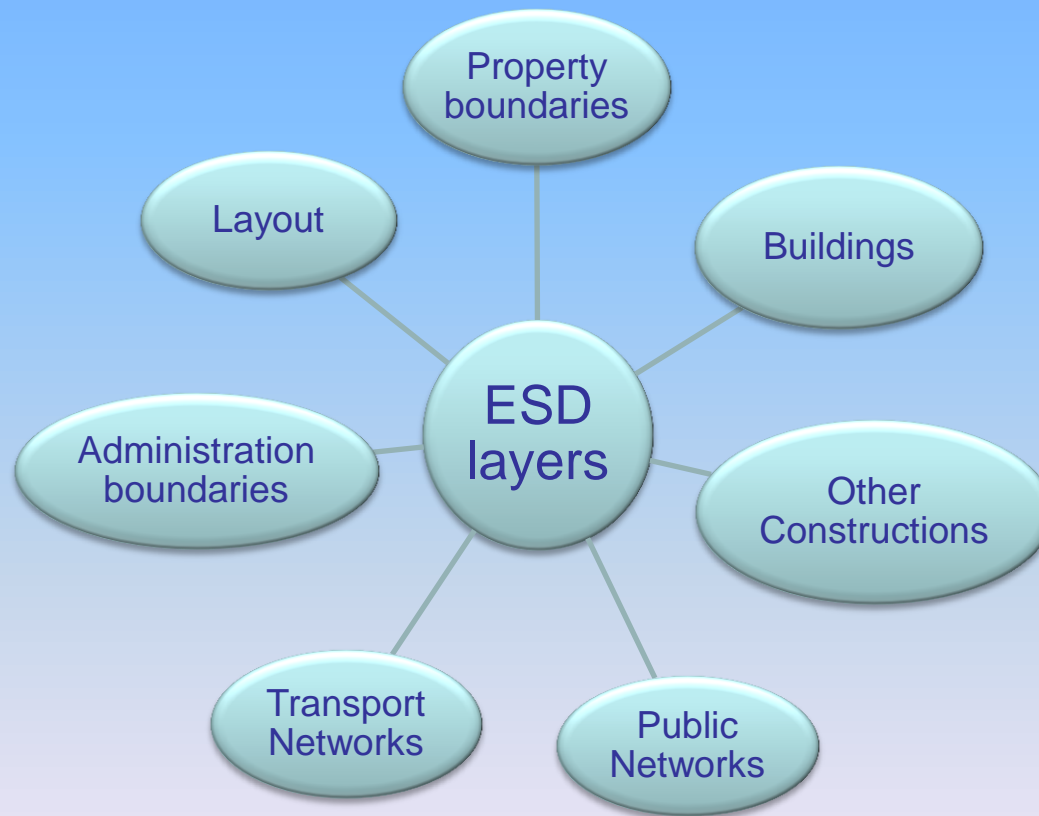
Format

Layers

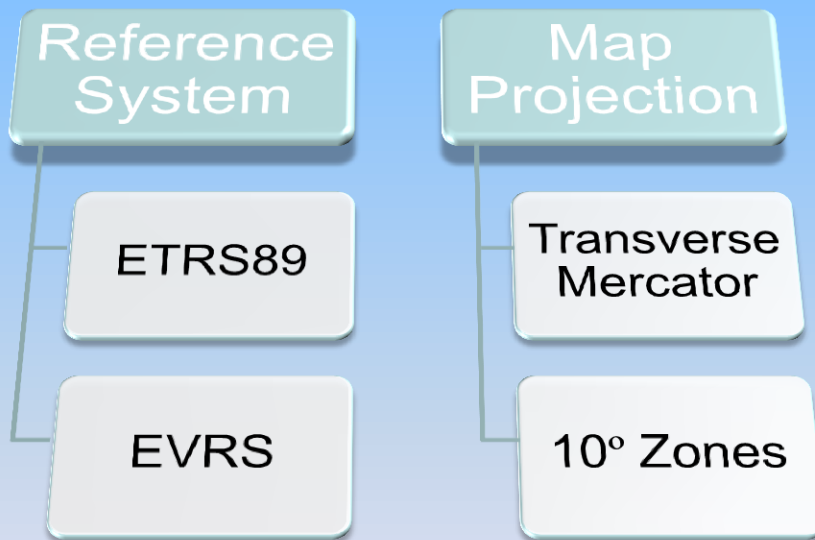
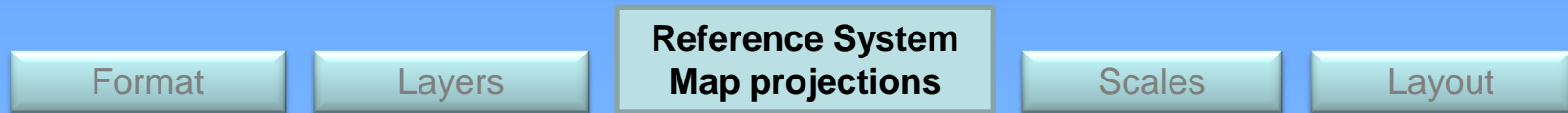
Reference System
Map projections

Scales

Layout



ESD Components



INSPIRE COMPATIBILITY



ESD Components

Format

Layers

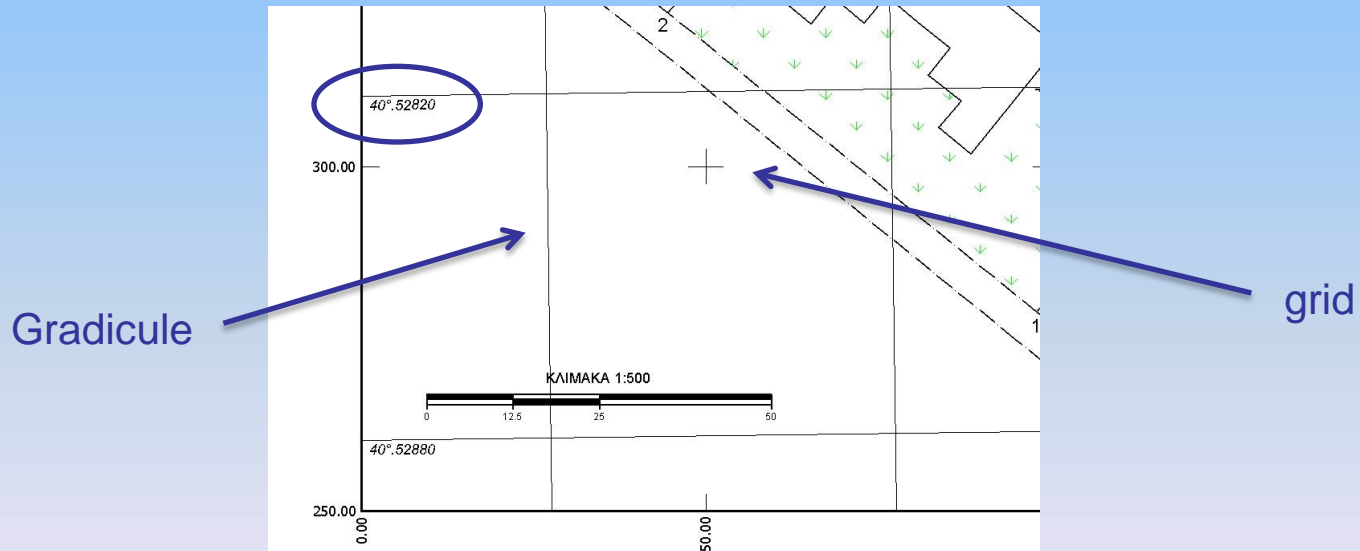
**Reference System
Map projections**

Scales

Layout



A gradicule of geocentric coordinates (ϕ, λ) in ITRFxx for GNSS navigation



ESD Components

Format

Layers

Reference System
Map projections

Scales

Layout

1:200

Urban
areas

1:500

Rural
areas

1:1,000

Extended
rural areas

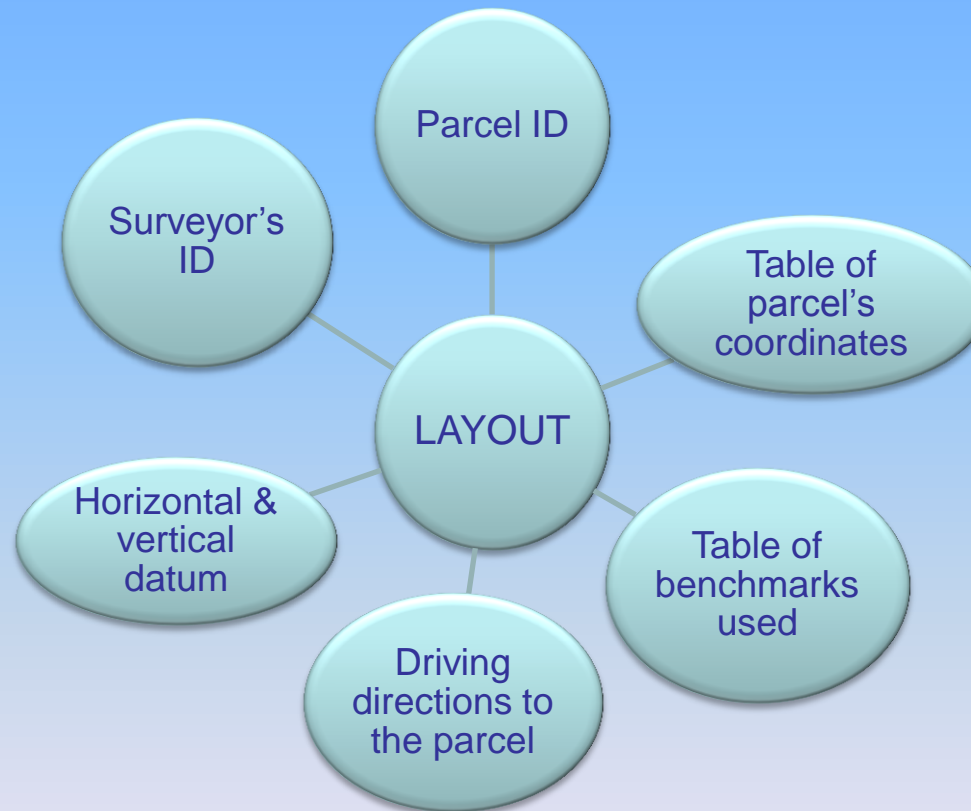
ESD Components

Format

Layers

Reference System
Map projections

Scales

Layout

Important Issues



BOUNDARIES



LANGUAGE

1	Revenue Zone	--- -- -- --
2	Halka-boundary	--- -- -- --
3	Village-Boundary	--- -- -- --
4	Reserve-Forerst	--- -- -- --
5	Rail Broadguage	--- -- -- --
6	Rail Naroguage	--- -- -- --
7	Rail Others	--- -- -- --
8	Metalled-Road	--- -- -- --
9	Unmetalled-Road	--- -- -- --
10	River	--- -- -- --
11	Stream	--- -- -- --
12	Canal	--- -- -- --

SYMBOLS



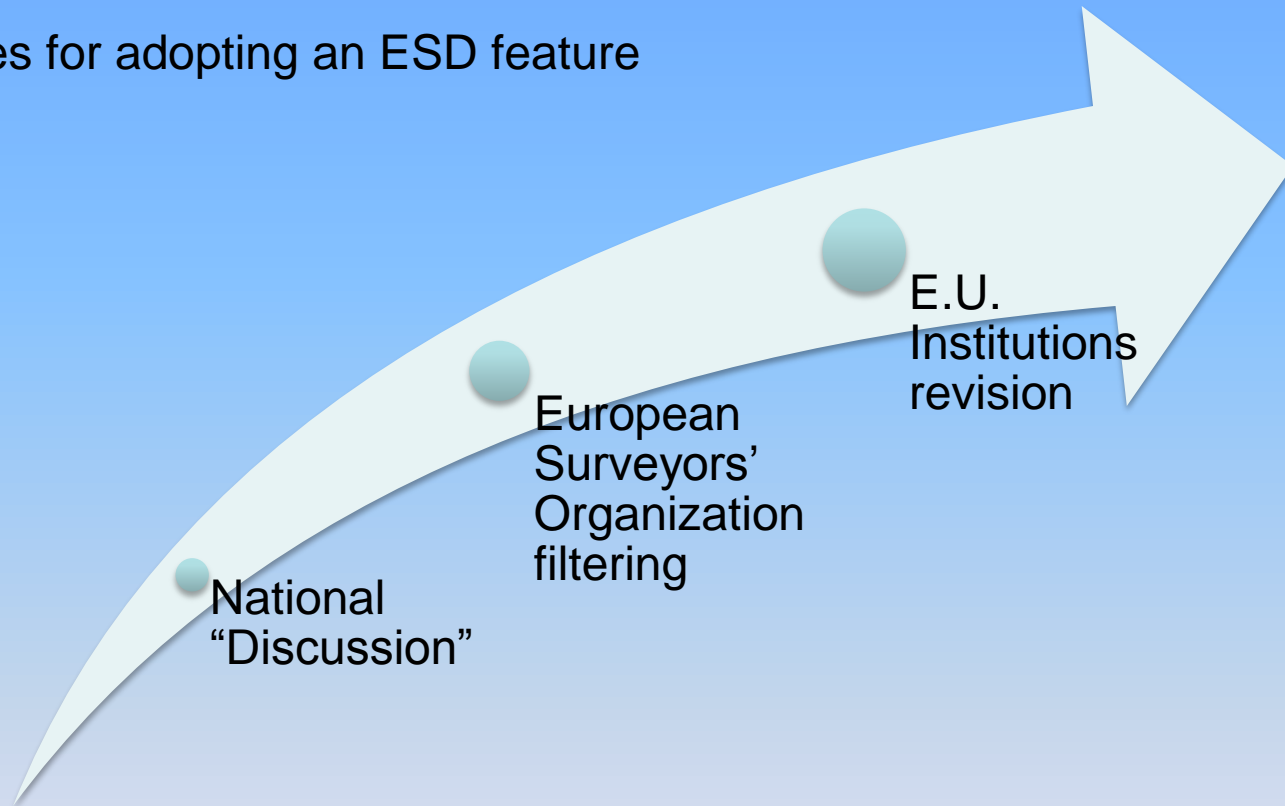
USE OF THE
ESD



LEGAL STATUS

Proceedings

The stages for adopting an ESD feature



Proceedings

STAGE 1: National “Discussion”

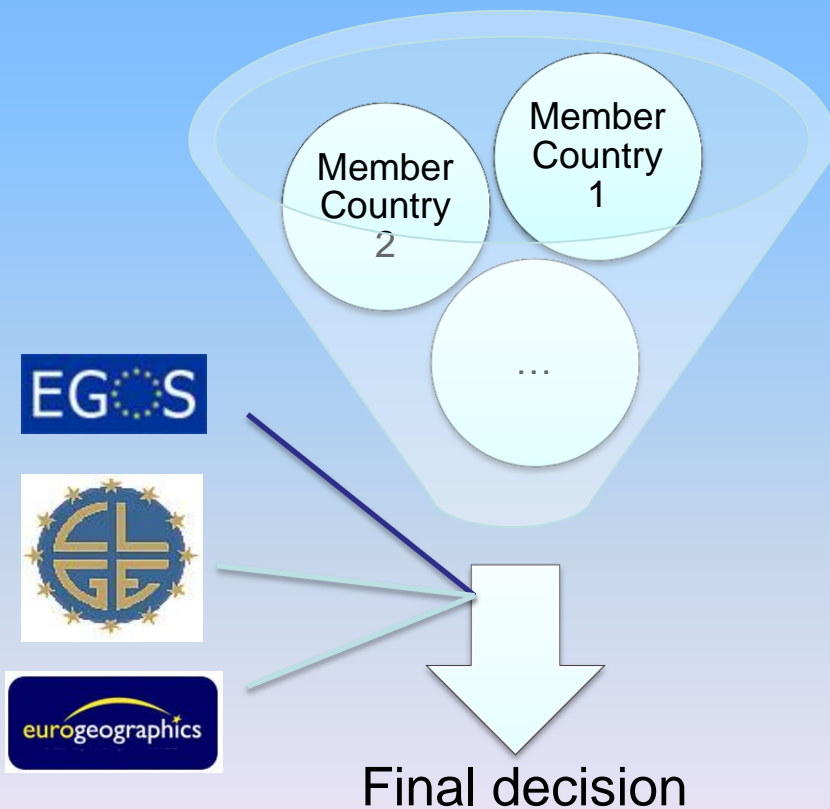


National Mapping Authority
(OKXE / HEMCO in Greece)

HARSE/
Technical Chamber of Greece

Proceedings

STAGE 2: Filtering National Proposals

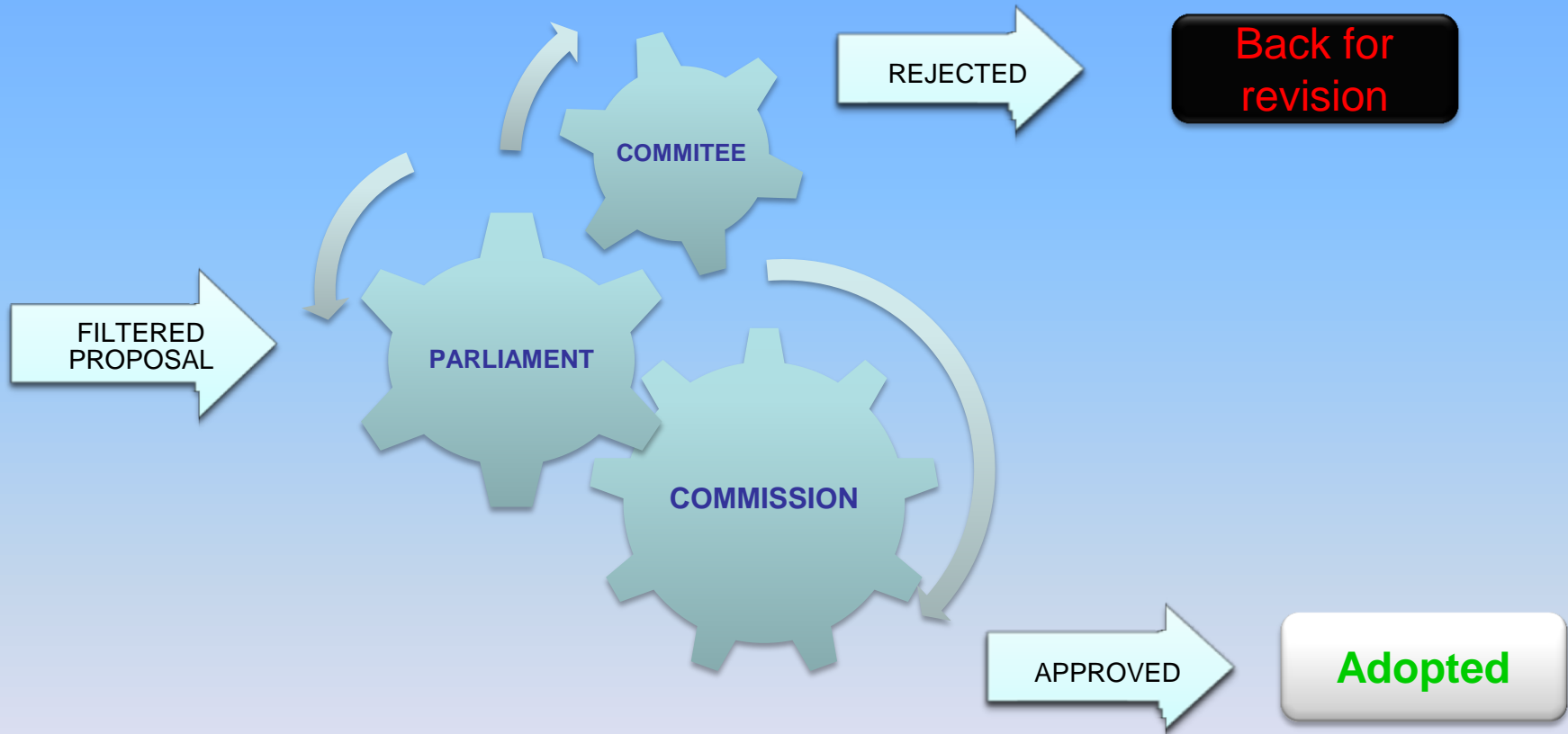


The filtering and evaluation process for every member state's proposal, should be coordinated and carried out by a European Organization of Surveyors

Important

Proceedings

STAGE 3: E.U. Revision



Conclusion

- ✓ An INSPIRE – related proposal
- ✓ Interoperability in action
- ✓ Introduction of common technical specs
- ✓ Leading role for Surveyors' Organizations in Europe
- ✓ Complicated issues to handle (different land property status, laws, etc)
- ✓ New professional opportunities for all European surveyors

THE END

*Thank you for your
attention*

