

RIKSANTIKVARIERIEÄMBETET

# **Standards for cultural heritage**

**European CEN / Technical committee TC 346,  
Conservation of cultural heritage.**

**Swedish SIS / Tekniska kommitté TK 479  
Bevarande av kulturarv.**

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# Standards more systematically used since the French Revolution

Establishment of shared concepts and meanings is a precondition for cultural interaction. Therefore, standardisation is an age-old process.

Standard = a consensus-built, repeatable way of doing something.



# Standards for conservation and maintenance of old buildings

Standards for new materials and for new buildings are not suitable for ruins, churches, archeological sites and listed buildings.

We need standards that fits weathered materials and old constructions.



# What is a standard?

It is a common, agreed solution to a recurrent problem.

Standards are voluntary to apply, but may serve as a mandatory reference, for example, in government regulations and procurement.

A standard that is accepted on a European level, will also automatically be accepted as National among the countries taking part.





# Consensus between different professions and different countries

A standard is a document, established by consensus, approved by a recognized body that provides for common and repeated use.

Standards are **based on** the consolidated results of **science, technology** and **experience** and aimed at the promotion of optimum community benefits.

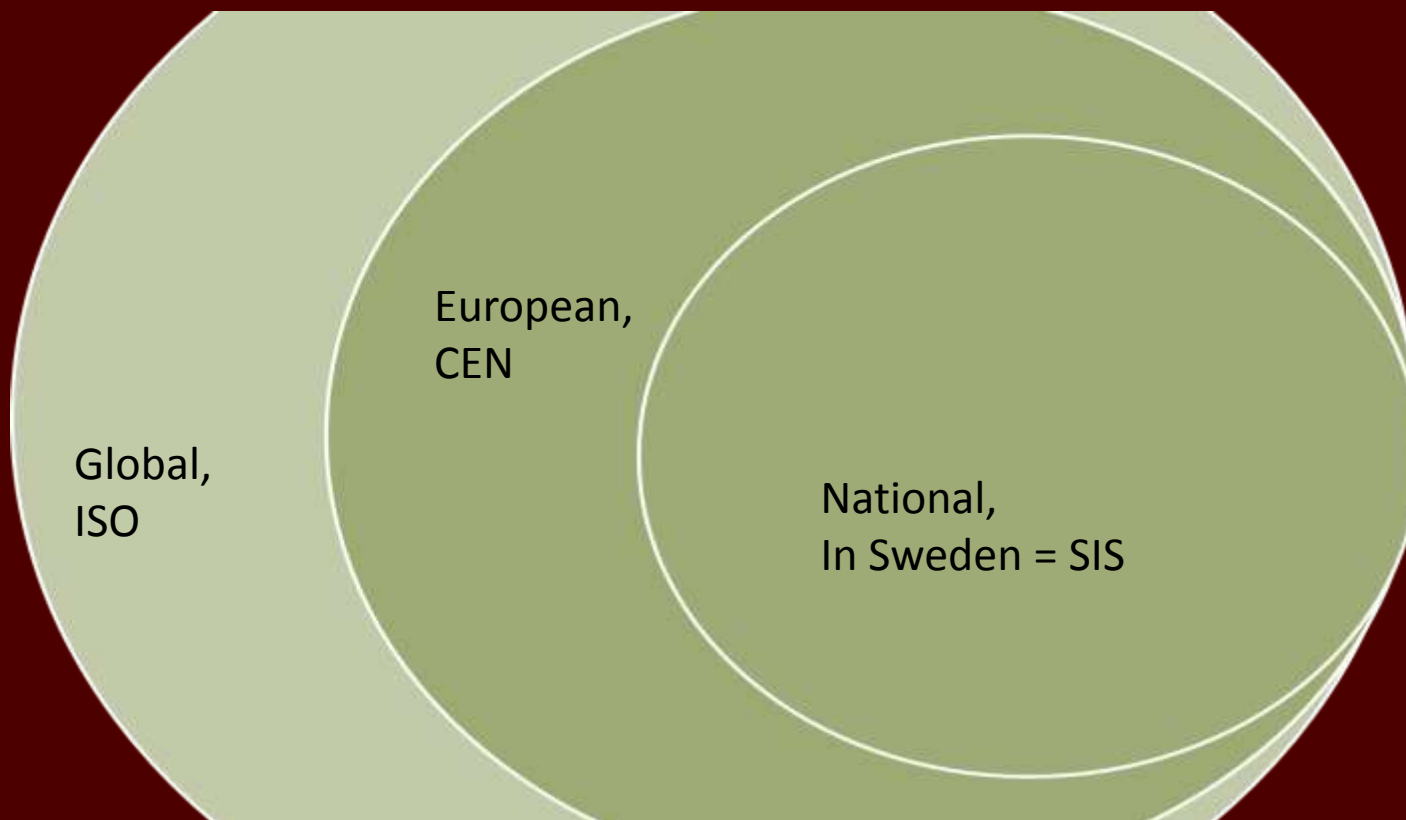


The first European standard for Cultural Heritage was published in 2008.

Today we have 33 standards from the Technical Committee 346 in CEN.



# Three different levels:





# CEN / Technical Committee 346, Conservation of cultural heritage

Goal:  
Characterisation of materials,  
the processes,  
practice,  
methodologies and  
documentation.

To support its preservation,  
protection and maintenance  
and to enhance its  
significance.

It includes characterisations  
of deterioration processes  
and environmental  
conditions.



# 13 Working groups in TC 346

Today I will focus on standards from these for groups:

- WG1, General methodologies and terminology
- WG 11, Conservation process
- WG 2, Characterisation and analysis of porous inorganic materials constituting cultural heritage
- WG 3, Evaluation of methods and products for conservation works on porous inorganic materials constituting cultural heritage

# Main general terms EN 16096:2012

Defines terms like:

- Damage
- Deterioration
- Weathering
- Conservation
- Restoration
- Maintenance
- Cleaning
- Reconstruction
- Renovation
- Repair







# To collect data, take samples and write reports in a similar way

- To define basic methodology for collecting and processing data and findings.
- To specify the structure and content of reports.
- A process guide to help plan, commission and execute investigations.





# Condition survey and report of built cultural heritage EN 16096:2012

A condition survey is a management tool.

This condition survey of structures and materials, is the first step when developing plans and measures needed to keep built cultural heritage in a stable well-maintained condition. It acts as the basis for recommending preventive conservation, maintenance and immediate repairs and for a more detailed planning.

Preventive conservation, regular condition surveys and maintenance is the best way to conserve.



# A tool for evaluation

A damage is an alteration that reduces significance or stability.

To know if something is damaged or to know if an entrepreneur, a method or a material might have damaged a building you need two reports, a survey that is made **before** the work begins. And a report that is written **after**.



# EN 16572:2015

**”Glossary of technical terms concerning mortars for masonry, renders and plasters used in cultural heritage”**

Translations of the terms in French, German, Dutch, Italian, Greek, Swedish and Spanish have been provided.

Translations in other languages may be added in later revisions.



# An example:

## 3.2.2

pointing mortar (en)

mortier de joint (fr)

Fugenmörtel (de)

voegmortel (nl)

malta da stilatura (it)

κονίαμα αρμών (gr)

fogbruk (se)

mortero de junta (sp)

mortar used to fill the outer part of an existing mortar joint (usually not greater than one-third of the total depth of the joint)





# 16515:2015 Guidelines to characterize natural stone used in cultural heritage

This European Standard specifies a methodology for the characterization of sound or deteriorated stones by using the most appropriate analytical techniques on samples taken from the object.

- Contains guidelines for the selection of methods to determine mineralogical, textural, physical, chemical and mechanical properties of natural stone.
- This information is used to define rock typology and to evaluate the stone's condition.





# Uniform methodology makes comparison easier

The characterization of a stone is an essential step for a conservation plan, in order to decide on appropriate remedial interventions, to achieve better working practices, and technologies for conservation interventions including stone replacements.

Therefore, it is important that it is achieved through a consistent and uniform methodology.





And a common and agreed glossary, process and working method between different competences will ensure that European experts can exchange information on test and analysis methods between each other.



# What are the Swedish National Heritage Board doing to promote standards?

- Spreading awareness of already accepted standards
- Producing information sheets about the new standards
- Workshops and conferences
- Enhance interest in ongoing work items and on current standards
- Apply standards in guiding documents or as mandatory reference, for example, in government regulations and procurement.





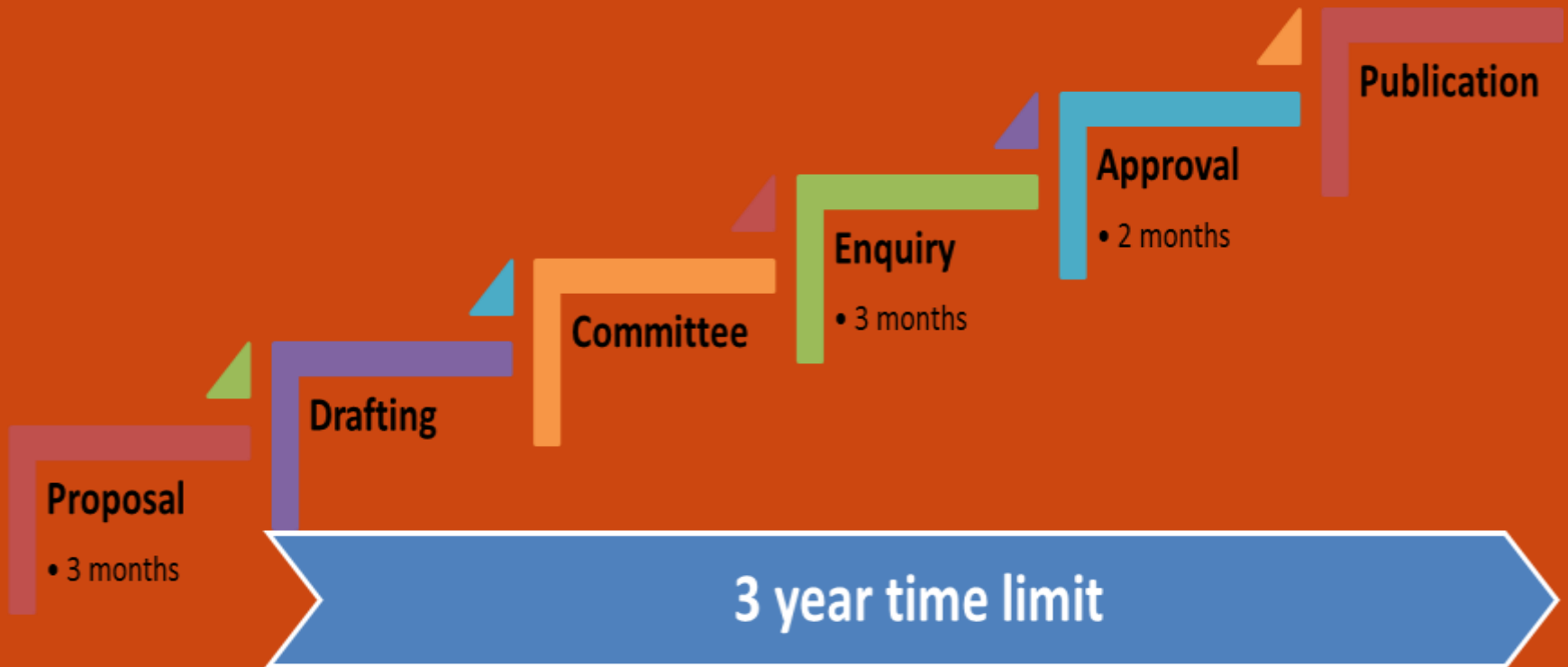
# Goals for the Swedish National Heritage Board:

- Increase knowledge and application of the existing cultural heritage standards.
- Increase Swedish participation in standardization work
- Develop more standards suitable for cultural heritage conservation.





# The different stages developing standards



# How can you participate?

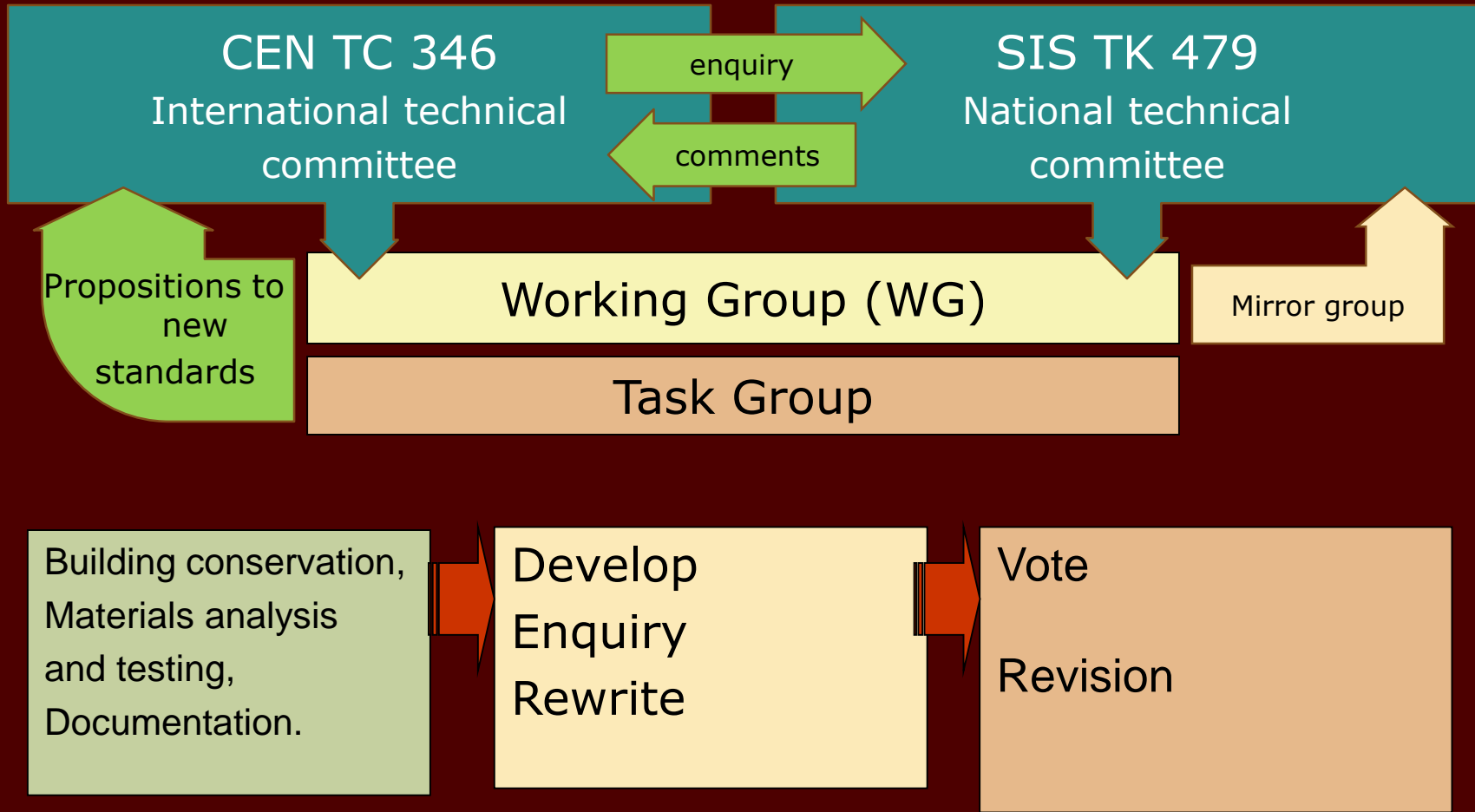
- As an expert in the technical committé 346 in CEN.
- Working actively in a european working group with a particular standard.
- Be an expert in a national mirror group



**Characterisations of deterioration processes and environmental conditions will be increasingly important due to climate change.**



# The process:







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# Several standards for built cultural heritage and listed buildings

Test methods - Determination of water absorption by capillarity

Test methods - Colour measurement of surfaces

Main general terms and definitions

Methodology for sampling from materials of cultural property - General rules

Condition survey and report of built cultural heritage



- Procedures and instruments for measuring humidity in the air and moisture exchanges between air and cultural property
- Test methods - Measurement of water absorption by pipe method
- Test methods - Determination of drying properties
- Extraction and determination of soluble salts in natural stone and related materials used in and from cultural heritage



- Guidelines to characterize natural stone used in cultural heritage
- Glossary of technical terms concerning mortars for masonry, renders and plasters used in cultural heritage
- Surface protection for porous inorganic materials  
- Laboratory test methods for the evaluation of the performance of water repellent products





- Methods of measurement of moisture content, or water content, in materials constituting immovable cultural heritage
- Conservation process - Decision making, planning and implementation
- Cleaning of porous inorganic materials - Laser cleaning techniques for cultural heritage

