



**Impact and Importance of European
Harmonisation governed by the
Construction Products Directive
(CPD) and the Public Procurement
Directive (PPD)**

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Preface

Harmonized technical specifications and regulations are important means for achieving a common European internal market without trade barriers. This is accomplished through harmonized European Standards or European Technical Approvals. The directives governing this harmonization, and the standardization work based on this, are of utmost importance to each National Road Administration (NRA) in its endeavours to attain the goals in its national transport policy adopted by the Government.

The Research and Development Division at the Swedish National Road Administration (SNRA) is to coordinate and support the Administration in its participation in national and international standardization efforts. As part of its task, the R&D Division has been responsible for the Western European Road Directors (WERD) Sub-Group Standardisation secretariat since January 1, 1998 on behalf of the SNRA.

The WERD association was formed in 1988 to promote informal collaboration between the European Union road authorities (as well as Iceland, Norway and Switzerland) and to function as a channel for these authorities to present their views to the European Commission as well as to various other stakeholders in general. WERD is supported in its work by the Deputy European Road Directors (DERD) and a number of specialist groups (Sub-Groups).

At their meeting in Helsinki on May 11 and 12, 1998, the DERD assigned Sub-Group Standardisation the task of compiling information concerning the interaction between the Construction Products Directive (CPD) and the Public Procurement Directive (PPD). The findings were presented to the DERD at their meeting in Paris on May 18 and 19, 2000, when it was decided that the document would be translated into a few languages and published. The document at hand is the outcome. In addition to this English edition, there is one available in French, German and Swedish.

The preparation of this document has been coordinated and finalised by the secretariat of WERD Sub-Group Standardisation.

Borlänge, May 2001



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1 Summary

In order to make the common market in Europe a reality, technical barriers to trade must be removed. This is made with the help of a new method, *The New Approach*, which was sanctioned by the EEC Council in 1985. The principle is to harmonise the national legislations for a limited number of essential requirements.

The harmonising process works through directives. On one hand the road authorities are regulators on which the Construction Products Directive (CPD) has an impact. On the other hand the road authorities act as road owners, i. e. public clients, upon which the Public Procurement Directive (PPD) has an impact. In European harmonisation it is therefore essential for the road authorities to be involved and have a real influence in order to get European standards and technical approvals coherent with the efforts to achieve goals set up by the different national governments. It is therefore a crucial issue for the European road authorities to get enough impact on the formulation and follow up of mandates from the Commission to CEN and EOTA, as well as to get enough impact on the harmonisation work carried out by CEN and EOTA, respectively.

The basis for the CPD is that requirements for products are defined and verified by the CE marking while the requirements for works or part of works are defined nationally. The requirements included in the national regulations should, however, be compatible with the mandated requirements expressed in harmonised standards (EN) or in Guidelines for European technical Approvals (ETAGs) ending up in CE marking in order to avoid obstacles to trade. Existing national requirements must therefore be converted through the implementation of harmonised technical specifications.

The technical specifications used in tender documents often make reference to different national technical standards etc. These must be exchanged or converted in order to comply with the PPD obligation to define products or works in terms of reference to European standards (EN) and European Technical Approvals (ETAs) even if there is no mandate from the Commission. Therefore, the road authorities are, when acting as public clients, obliged to use the so-called voluntary parts of European standards as well.

In the future, the role of the different bodies involved in attesting the conformity with specified requirements will be very important as they more or less take over the role of product approvals from the road authorities.

2 Introduction

The European Road Authorities are responsible for reaching political goals set up by their governments to obtain:

- Increased traffic safety
- Decreased environmental impact of roads and traffic
- Increased accessibility and mobility
- Effective road network management in order to ensure value for public money (reduced service life cost).

An effective road network management moreover calls for mechanical resistance and durability as relevant performance criteria for road, bridge and tunnel structures.

On one hand the road authorities are regulators on which the Construction Products Directive (CPD) has an impact. On the other hand the road authorities act as road owners, i. e. public clients, upon which the Public Procurement Directive (PPD) has an impact. In European harmonisation it is therefore essential for the road authorities to be involved and have a real influence in order to get European standards and technical approvals coherent with the efforts to achieve goals set up by the different national governments. It is therefore a crucial issue for the European road authorities to get enough impact on the formulation and follow up of mandates from the Commission to CEN and EOTA, as well as to get enough impact on the harmonisation work carried out by CEN and EOTA, respectively. The reason for this is explained in Figure 1.

The efforts to reach the goals set up for the road authorities are however, due to the CPD and the PPD, governed by European standardisation carried out by CEN or harmonisation through European Technical Approvals (ETA) based on ETA Guidelines (ETAG) worked out by EOTA. European harmonisation, either by CEN or EOTA, usually takes its starting point in a Commission directive.

A directive can in its turn end up in a mandate to either CEN or EOTA. The Commission has given 28 mandates to CEN for the compilation of harmonised standards (EN) and over 10 mandates to EOTA for the compilation of ETA guidelines (ETAGs) based on the CPD.

In the future, the role of the different bodies involved in attesting the conformity with specified requirements will be very important as they more or less take over the role of product approvals from the road authorities.

3 The new approach directives

In order to make the common market in Europe a reality, technical barriers to trade must be removed. To make the European single market functional a common set of harmonised rules must be implemented in the member countries. This is made with the help of a new method, *The New Approach*, which was sanctioned by the EEC Council in 1985. This new method has improved and made more effective the work with the harmonisation of technical rules for different product areas. The principle is to harmonise the national legislations for a limited number of essential requirements according to the Article 100 of the Rome-Treaty.

The harmonising process works through directives. The directives have a binding effect as to the goals set up in them, but the member states can choose the methods to reach these goals in their national legislation. The directives regulate the basic conditions for essential requirements, such as safety, which are to be satisfied by a product. Products, which satisfy these conditions, may be sold freely inside and between the European countries. By this a common or single market is created.

The new approach is based on four basic principles:

1. The content of the directives is limited to basic, most important requirements (essential requirements).
2. The technical specifications required are produced by the European standardisation organisation (independent from EU).

3. Standards are in principle free to be applied.
4. Products manufactured according to harmonised standards are expected to satisfy the basic requirements presented in the directive.

According to the new approach the directives must aim themselves at larger fields of products, not individual products. Such areas are electrical equipment, toys, machinery, household appliances and construction products.

The new approach directives usually define the requirements in non-specific terms. This is due to the intention to let the European standardisation develop more specific demands on products and groups of products. Therefore the Commission issues mandates under the directives. These mandates are assignments from the Commission to work out European standards (EN) or guidelines for European Technical Approval (ETA) of a product or a group of products.

4 The Public Procurement Directive (PPD)

4.1 Common rules in the technical field

The Public Procurement Directive, PPD (93/37/EEC) regulates the procedures concerning public procurement and public works contracts in the European Community (European Economic Area). The PPD obliges the public authority to define the product it wants to purchase in terms of reference to European specifications even if there is no mandate from the Commission to work them out. European specifications are in this context the same as technical specifications (see Glossary). Concerning the technical field in which the road authorities are acting, common rules are stated in Article 10 of the PPD. This article provides that "without prejudice to the legally binding national technical rules, in so far as these are compatible with Community law, the technical specifications (...) shall be defined by the contracting authorities by reference to national standards implementing European standards, or by reference to European technical approvals or by reference to common technical specifications".

4.2 Exceptions

A contracting authority may depart from Article 10 of the PPD if:

- the standards, European technical approvals or common technical specifications do not include any provision for establishing conformity, or technical means do not exist for establishing satisfactorily the conformity of a product to these standards, European technical approvals or common technical specifications;
- use of these standards, European technical approvals or common technical specifications would oblige the contracting authority to acquire supplies incompatible with equipment already in use or
- use of the standards would entail disproportionate costs or disproportionate technical difficulties, but only as part of a clearly defined and recorded strategy with a view to the changeover, within a given period, to European standards, European technical approvals or common technical specifications.

- the project concerned is of a genuinely innovative nature for which the use of existing European standards, European technical approvals or common technical specifications would not be appropriate.

Contracting authorities relying on these possibilities for departing from the general rule must, wherever possible, state the reasons for doing so in the contract notice published in the Official Journal or in the contract documents. They are required, at all events, systematically to record the reasons in their internal documentation and to communicate them on request to Member States and to the Commission.

4.3 Cases where no European harmonised technical specifications exist

When no European standards, European technical approvals or common technical specifications exist, the technical specifications for contracts:

(a) are to be defined by reference to the national technical specifications recognised as complying with the essential requirements listed in the Community directives on technical harmonisation, in accordance with the procedures laid down in those directives, and in particular in accordance with the procedures laid down in the Construction Products Directive (CPD);

(b) may be defined by reference to national technical specifications relating to the design and method of calculation and execution of works and use of materials;

(c) may be defined by reference to other documents. In such cases, reference should be made, in order of preference, to:

- (i) national standards implementing international standards accepted by the country of the contracting authority;
- (ii) other national standards and national technical approvals of the country of the contracting authority;
- (iii) any other standard.

5 The Construction Products Directive (CPD)

5.1 Essential requirements

Construction has in many countries been regarded as a sector protected with its own principles and systems. The Construction Products Directive (89/106/EEC) was published in 1989 and aims to eliminate barriers to trade and initiate a free trade with construction products. Still the directive is not working in practice since the technical specifications necessary to perform CE marking are still not available. In 1999, the first construction products bearing the CE mark entered the market, but while harmonisation work still is ongoing, the national rules continue to apply in the construction field until relevant European technical specifications exist.

One condition for European technical specifications is that mandates have been produced. The European Commission gives mandates, i.e. an assignment to CEN or EOTA to work out a harmonised standard or guideline for European technical approval. For solving the interpretation problems of the CPD and related mandates, the Commission in co-operation with national construction authorities appointed to the Standing Committee on Construction, has published a series of Guidance Papers.

The directive for construction products is one of the first written according to the new approach and includes in principle all construction products. The goal of the directive is to facilitate the trade of construction products, which are expected to be used permanently in buildings and civil engineering works. The construction products must ensure, or not jeopardise, that the buildings and structures they are used in meet the following essential requirements:

1. Mechanical resistance and stability
2. Safety in case of fire
3. Hygiene, health and the environment
4. Safety in use
5. Protection against noise
6. Energy economy and heat retention.

The CPD is different in some ways from other directives based on the new approach with respect to the following:

- the essential requirements are not related to the product itself but on the finished works, which presume that the product is used as intended by the manufacturer, and
- construction products cannot be accorded the CE marking directly on the requirements of the directive but first after they are proven to agree with a harmonised standard (EN), or by a European Technical Approval (ETA).

5.2 Interpretative documents

The CPD assume requirements related to finished works and not to products. Therefore, the connection to product requirements is defined in six interpretative documents, one for each essential requirement. These documents describe how the general requirements are to be applied on construction products, which should have such properties that the finished works will satisfy the essential requirements. Works include both buildings and civil engineering works. The interpretative documents, which give a concrete form to the six essential requirements in the CPD, were completed in 1994 and constitute the basis for mandates and harmonised standards. These documents are not binding but serve as guidelines when the mandates are formulated. The Interpretative Documents do not include regulations of new member states (Austria, Finland, and Sweden).

5.3 Mandates and technical specifications

The new approach for writing directives has resulted in a noticeable intensification and a volume increase of the standardisation work in Europe. Through assignments, called mandates, the Commission gives independent European standardisation organisation (CEN, CENELEC and ETSI) the responsibility to prepare harmonised standards. In the mandates, which are produced by the EC, the intended use is given for the products while the technical details are worked out by CEN, CENELEC or ETSI in the harmonised standards.

The standardisation work is directed to product standards and general testing methods. For construction products, 600 harmonised standards and 1500 different supporting standards will be prepared. About 400 of the supporting standards are already in use and the first harmonised standards was available under the year 2000. Harmonised standards differ from other European standards by the fact that products, which satisfy the harmonised standard, may bear the CE-marking.

However, it should be taken into account that the CE-marking does not cover the entire standard since there is also a voluntary part, see Figure 2. Depending on the decisions of CEN as to what is to be included in the voluntary respectively the harmonised part, problems may arise for the road authorities.

The Commission also gives mandates for working out guidelines (ETA Guidelines) for European technical approvals (ETA). The guidelines are produced by the European Organisation for Technical Approval, EOTA, for products which are not covered in the standards and which might be unique and innovative. Thereby, these products may also bear the CE marking.

5.4 Attestation of conformity

The conformity of a product with the requirements specified in a harmonised standard (EN) or a European technical approval (ETA) must be attested. Detailed instructions for the attestation procedure are given in the technical specification. The Construction Product Directive (CPD) gives six different options for the attestation of conformity. All options require a production control system from the manufacturer. For all options except one a third party certification is assumed.

Which of the six options that apply is decided by the Commission and specified in the Mandate to CEN and EOTA, respectively.

The six different options are called

1. System 1+
2. System 1
3. System 2+
4. System 2
5. System 3
6. System 4

System 4 is the basic AoC-procedure. This system is entirely based on the production control of the manufacturer, and that the manufacturer also declares or attests the conformity with specified requirements.

System 3 corresponds to System 4 with the additional requirement that a certified body (third party) must execute an Initial Type Testing (ITT) of the product in question. In system 4 the manufacturer instead executes the Initial Type Testing.

System 2 corresponds to System 4 but with an important additional requirement. This is that a certified body (third party) must approve the quality control system of the manufacturer.

System 2+ corresponds to System 2 with the additional requirement that the certified body (third party) moreover currently makes a survey of the test results when applying the approved quality control system.

System 1 corresponds to System 2+, however changed with respect to who makes the Initial Type Testing. In System 1 the certified body (third party) executes the Initial Type Testing, while in System 2+, the manufacturer executes this testing.

System 1+ corresponds to System 1, however complemented with auditing activities by the certified body (third party) by randomly choosing product samples for testing. The samples are picked up when these products are placed on the market.

In the future, the role of the different bodies involved in attesting the conformity with specified requirements will be very important as they more or less take over the role of product approvals from the road authorities.

5.5 CE marking

CE marking is not a proof of quality but a statement that the product satisfies the minimum requirement for being on the market expressed by the CPD. The product must also comply with all relevant requirements, expressed in other directives than CPD. When conformity with the technical requirements is attested, the product may bear the CE mark and may be sold without obstruction inside the European Community as well as countries belonging to the European Economic Area. Whether or not the CE-marked products will find any purchaser is however another question.

The background to the CE-marking of construction products is shown in Figure 3.

5.6 Levels and classes

The CPD says that levels and classes may be needed due to difference in climate, tradition and safety level. However, levels and classes were never included in the mandates. The requirements in the mandates act as an assignment from the Commission to the standardisation organisation to work out a harmonised standard. The lack of levels and classes in the mandates has been widely discussed in the preparation of standards. The Guidance Paper E "Levels and classes" clarifies the situation sufficiently.

6 National legislation and technical specifications

The basis for the CPD is that requirements for products are defined and verified by the CE marking while the requirements for works or part of works are defined nationally. The requirements included in the national regulations should, however, be compatible with the mandated requirements expressed in harmonised standards (EN) or in Guidelines for European technical Approvals (ETAGs) ending up in CE marking in order to avoid obstacles to trade. Existing national requirements must therefore be converted through the implementation of harmonised technical specifications.

The technical specifications used in tender documents often make reference to different national technical standards etc. These must be exchanged or converted in order to comply with the PPD obligation to define products or works in terms of reference to European standards (EN) and European Technical Approvals (ETAs) even if there is no mandate from the Commission. Therefore, the road authorities are, when acting as public clients, obliged to use the so-called voluntary parts of European standards as well.

7 Glossary

Technical specifications - means the totality of the technical requirements contained in regulations and tender documents.

The Commission – The Commission of the European Communities (CEC).

Directive – Legal document from the EEC to be integrated by the Members States in their national legislation or regulations.

ETA Guideline (ETAG) is a document drafted by and for the [EOTA Approval Bodies](#) as a result of a mandate from the Commission and EFTA. Its basic aim is to establish how Approval Bodies should evaluate the specific characteristics/requirements of a product or family of products. An ETAG is a binding document which requires the approval of EOTA, the consultation of the Commission and the publication by Member States in their respective official language(s).

CUAP – a consensus procedure for the compilation of an ETA without ETAG.

CE Mark – can be put on products which meet the demands of the EEC Directives.

Interpretative documents – Documents explaining the six essential requirements stated in the CPD.

Mandate – Assignment from the Commission to work out standards by CEN or guidelines for European technical approval (ETAg) by EOTA.

Harmonised standard – Standard which differs from other European standards by the fact that products which satisfy the harmonised standard may bear the CE-marking. Harmonised standards are prepared according to mandates from the Commission.

CEN – European Standardisation Organisation.

EOTA – European Organisation for Technical Approval.

EEC – European Economic Community.

EFTA - European Free Trade Area. Set up in 1959 by Great Britain, Denmark, Norway, Sweden, Portugal and Switzerland for trade between these countries without a common external tariff, and excluding trade in agricultural products . Members today are Norway, Iceland, Lichtenstein and Switzerland.

CENELEC - European Committee for Electrotechnical Standardization.

ETSI – European Telecommunications Standards Institute.

8 Web-links of interest

The Commission

http://europa.eu.int/comm/index_en.htm

EOTA European Organisation for Technical Approvals

<http://www.eota.be/>

CEN European Committee for Standardisation

<http://www.cenorm.be/>

CENELEC European Committee for Electrotechnical Standardization

<http://www.cenelec.be/>

ETSI European Telecommunications Standards Institute

<http://www.etsi.fr/>

Figure 1. *Mandatory Use of European Standards and/or acceptance of European Technical Approvals (ETA)*

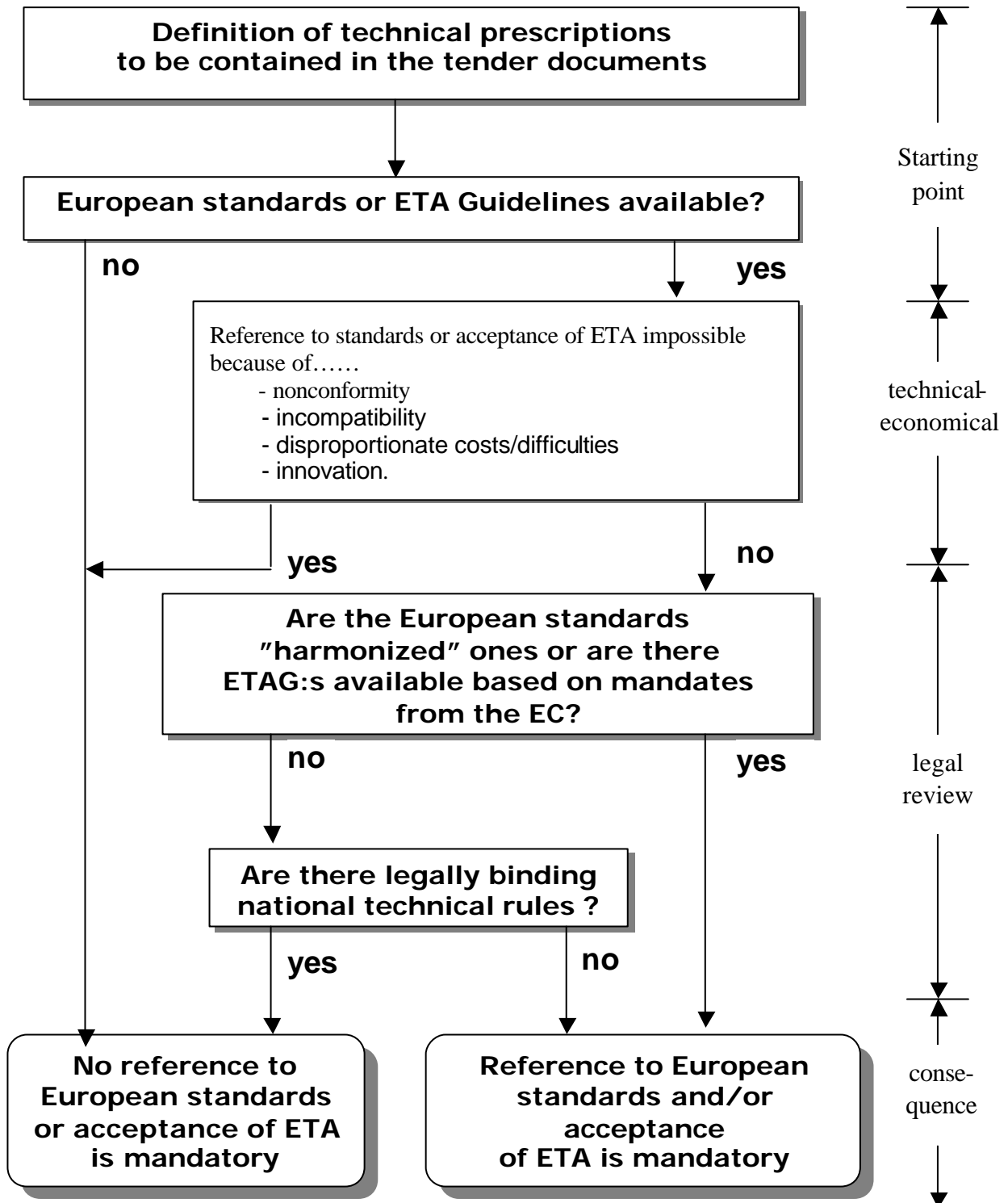


Figure 2. *Product Standard with harmonised part.*

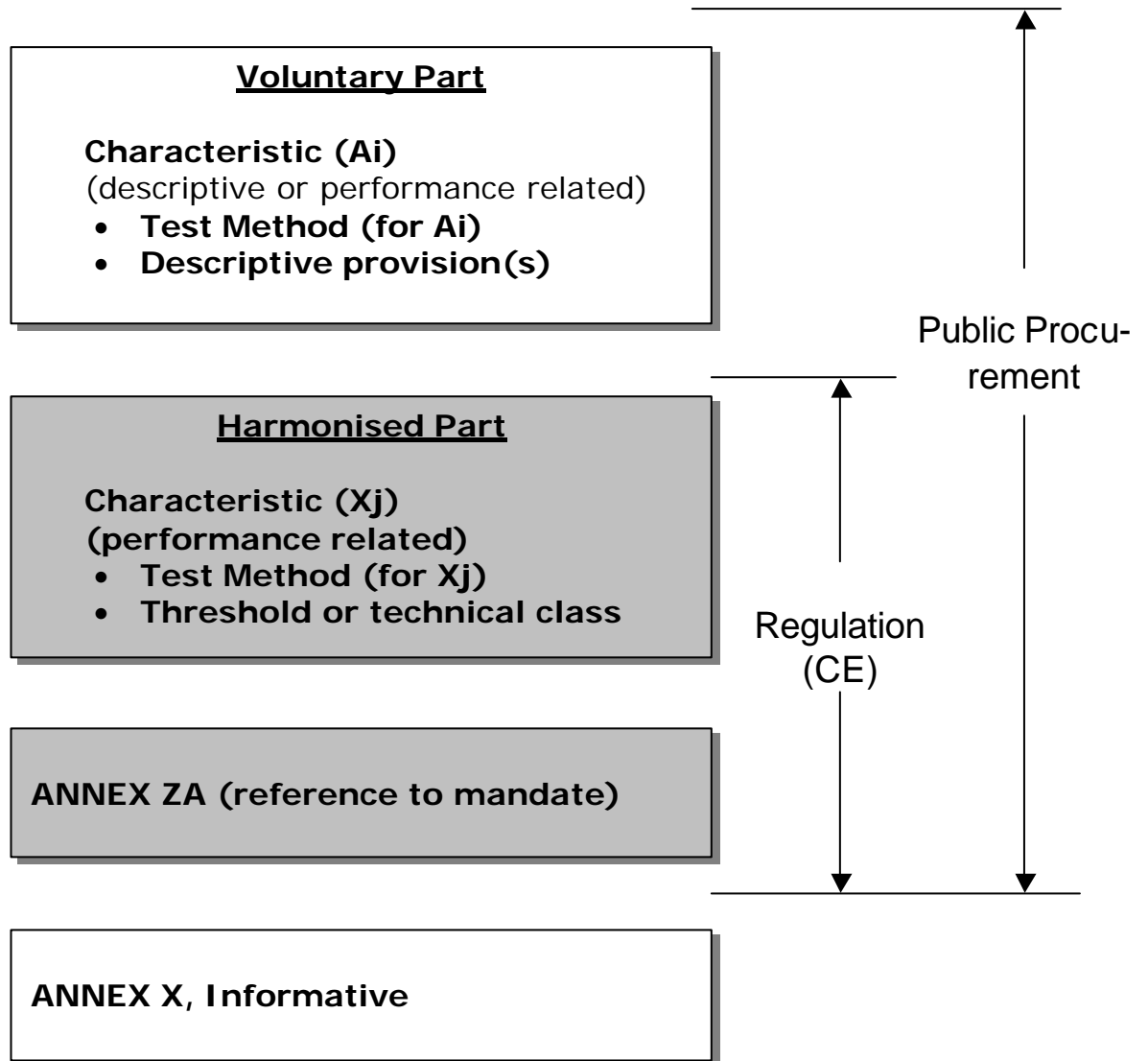


Figure 3. Background to CE-marking of Construction Products.

