



Steve Denton

EUROCODE Conference | Berlin | 24 May 2023

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1. Background
2. Why design standards matter
3. Aims for the evolution of Structural Eurocodes
4. Programme, status and next steps

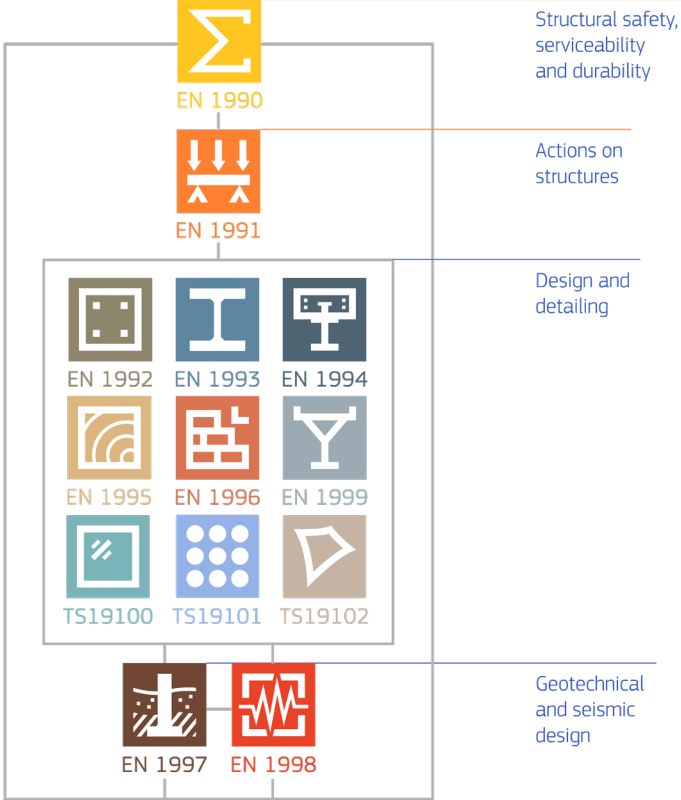
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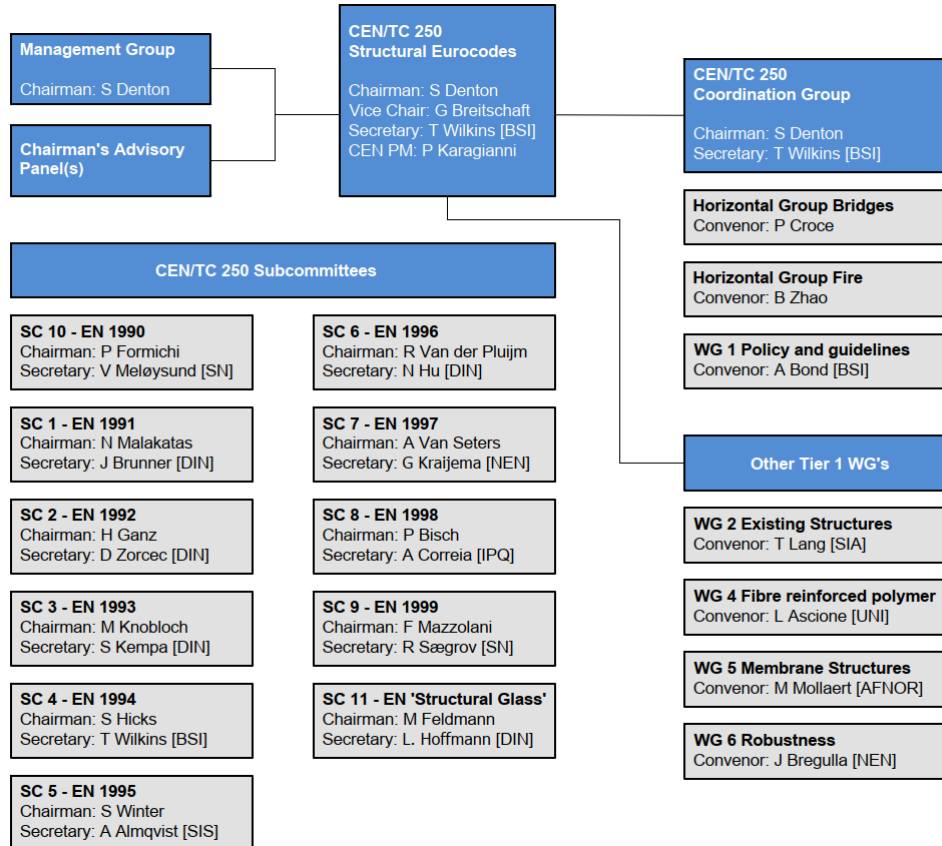
My background

- Chairman of CEN/TC 250 Structural Eurocodes
- WSP's Head of Civil and Bridge Engineering
- Visiting Professor at the University of Bath
- Advisor to Clients and Government
- Fellow of Royal Academy of Engineering (and FICE, FIStructE)

2nd Generation Structural Eurocodes



CEN/TC 250 – Structural Eurocodes



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Why design standards matter

Impact

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Verification of
adequacy

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Feedback

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**New Societal
demands**

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Research to
application

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Aims for the evolution of Structural Eurocodes

Aims for the evolution of Structural Eurocodes

✓ Enhanced
Ease of Use

Aims for the evolution of Structural Eurocodes

✓ Enhanced
Ease of Use

✓ Exemplary
levels of
international
consensus

Aims for the evolution of Structural Eurocodes

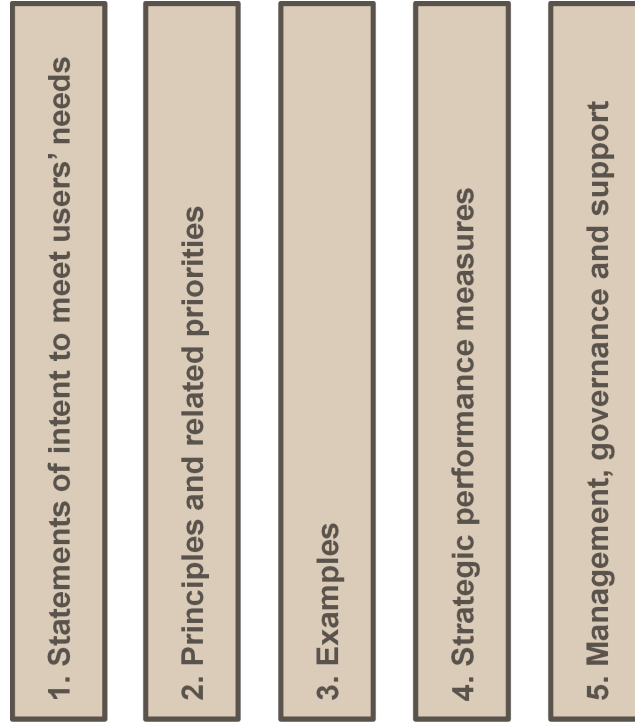
✓ **Enhanced
Ease of Use**

✓ **Exemplary
levels of
international
consensus**

CEN/TC 250's vision on the second generation of the Structural Eurocodes

*“Whilst respecting the achievements of the past, our vision for the second generation of Structural Eurocodes is to create **a more user-orientated** suite of design standards that are recognised as the most trusted and preferred in the world.”*

Five pillars to enhance ease of use of the Eurocodes



- 1. Statements of intent to meet users' needs
- 2. Principles and related guidelines
- 3. Examples
- 4. Strategic performance measures
- 5. Management, governance and support

Clear definition of our primary audience

PRIMARY TARGET AUDIENCE

Practitioners – Competent engineers

DEFINITION

Competent civil, structural and geotechnical engineers, typically qualified professionals able to work independently in relevant fields

Statements of intent to meet our users needs (1 of 2)



CATEGORIES OF EUROCODES' USERS	CEN/TC 250 STATEMENTS OF INTENT
Practitioners – Competent engineers [Primary target audience]	We will aim to produce Standards that are suitable and clear for all common design cases without demanding disproportionate levels of effort to apply them
Practitioners – Graduates	We will aim to produce Eurocodes that can be used by Graduates where necessary supplemented by suitable guidance documents and textbooks and under the supervision of an experienced practitioner when appropriate
Expert specialists	We will aim not to restrict innovation by providing freedom to experts to apply their specialist knowledge and expertise
Product Manufacturers	Working with other CEN/TCs we will aim to eliminate incompatibilities or ambiguities between the Eurocodes and Product Standards

Statements of intent to meet our users needs (2 of 2)

- 1. Statements of intent to meet users' needs
- 2. Principles and related guidelines
- 3. Examples
- 4. Strategic performance measures
- 5. Management, governance and support

CATEGORIES OF EUROCODES' USERS	CEN/TC 250 STATEMENTS OF INTENT
Software developers	We will aim to provide unambiguous and complete design procedures. Accompanying formulae will be provided for charts and tables where possible
Educators	We will aim to use consistent underlying technical principles irrespective of the intended use of a structure (e.g. bridge, building, etc.) and that facilitate the linkage between physical behaviour and design rules
National regulator	We will endeavour to produce standards that can be referenced or quoted by National Regulations
Private sectors businesses	We will continue to promote technical harmonization across European markets in order to reduce barriers to trade
Clients	We will produce Eurocodes that enable the design of safe, serviceable, robust and durable structures, aiming to promoting cost effectiveness throughout their whole life cycle, including design, construction and maintenance
Other CEN/TCs	We will engage proactively to promote effective collaboration with those other CEN/TCs that have shared interests

Principles and priorities



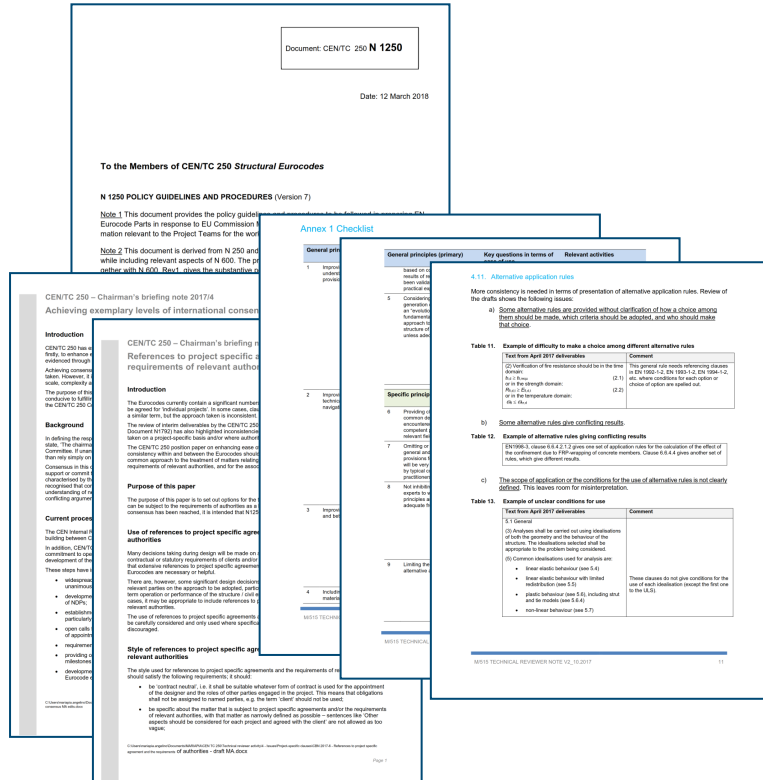
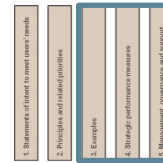
General principles (primary)

- 1 Improving clarity and understandability of technical provisions of the Eurocodes
- 2 Improving accessibility to technical provisions and ease of navigation between them
- 3 Improving consistency within and between the Eurocodes
- 4 Including state-of-the-art material the use of which is based on commonly accepted results of research and has been validated through sufficient practical experience
- 5 Considering the second generation of the Eurocodes as an “evolution” avoiding fundamental changes to the approach to design and to the structure of the Eurocodes unless adequately justified

Specific principles (secondary)

- 6 Providing clear guidance for all common design cases encountered by typical competent practitioners in the relevant field
- 7 Omitting or providing only general and basic technical provisions for special cases that will be very rarely encountered by typical competent practitioners in the relevant field
- 8 Not inhibiting the freedom of experts to work from first principles and providing adequate freedom for innovation
- 9 Limiting the inclusion of alternative application rules
- 10 Including simplified methods only where they are of general application, address commonly encountered situations, are technically justified and give more conservative results than the rigorous methods they are intended to simplify
- 11 Improving consistency with product standards and standards for execution
- 12 Providing technical provisions that are not excessive sensitive to execution tolerances beyond what can be practically achieved on site

Guidance, management, support, measurement



- Appointment of Technical Reviewer
- Detailed review of deliverables
- Development of TC 250 document N1250 'Policy Guidelines and Procedures'
- Provision of examples and advice

Aims for the evolution of Structural Eurocodes

✓ Enhanced
Ease of Use

✓ Exemplary
levels of
international
consensus

Achieving exemplary levels of international consensus

The chairman shall do everything possible to obtain a unanimous decision of the Technical Committee. If unanimity on a subject is not obtainable, the chairman shall try to seek consensus rather than rely simply on a majority decision.

***CEN Internal Regulations -
Responsibility of the Chairman of a CEN TC***

Achieving exemplary levels of international consensus

CEN/TC 250 – Chairman's briefing note 2017/4

Working
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CEN/TC 250 – Chairman's briefing note 2017/4
Achieving exemplary levels of international consensus
Bristol 31/10/2017

Introduction
CEN/TC 250 has established two overarching objectives for the evolution of the Structural Eurocodes: firstly, to enhance ease of use, and secondly, to achieve exemplary levels of international consensus, evidenced through positive votes from CEN members.
Achieving consensus is an essential step in our work and clearly a key challenge in the delivery of the CEN/TC 250 work programme, given its scale, complexity and international impact.
The purpose of this Chairman's Briefing Note is to set out a framework, which encourages behaviours conducive to fulfilling CEN/TC 250's objective. It is based on discussions at meetings of CEN/TC 250 and was requested by the CEN/TC 250 Coordination Group. It will be discussed further at the CEN/TC 250 meeting to be held in Berlin in November 2017.

Background
In defining the responsibilities of the Chairman of a Technical Committee, the CEN Internal Regulations state, "The chairman shall do everything possible to obtain a unanimous decision of the Technical Committee. If unanimity on a subject is not obtainable, the chairman shall try to seek consensus rather than rely simply on a majority decision."
Consensus in this context means that there is general agreement on an outcome that everyone can support or commit to, even if it is not the favourite of each party. Crucially, therefore, it must be recognised that consensus is the outcome of a process of engagement and dialogue during which (i) the understanding of needs and perspectives of all parties concerned builds collectively over time and (ii) any conflicting arguments are reconciled.

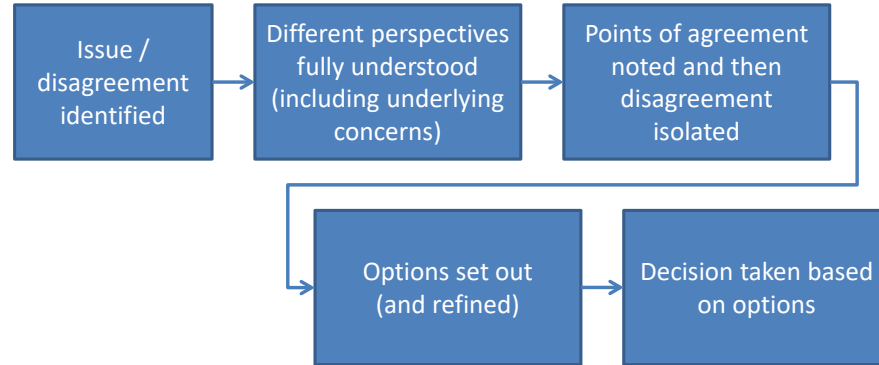
Enabling consensus building
The CEN Internal Regulations establish roles, responsibilities and processes that promote consensus building between CEN members and stakeholders.
In addition, CEN/TC 250 has taken significant steps to support consensus building, aligned with the TC's commitment to openness and transparency throughout the execution of Mandate M5/15 and the development of the second generation of EN Eurocodes.
These steps have included:

- widespread consultation on the development of the CEN/TC 250 work programme, that was unanimously endorsed by the TC;
- development of unanimously agreed position papers on enhancing ease of use and the reduction of NDRs;
- establishing ad-hoc groups to examine issues of concern to CEN/TC 250 members, particularly when of a horizontal nature;
- open calls for experts to serve on Project Teams, providing transparency of obligations and terms of appointment;
- requirement for Project Teams to develop background documents;
- providing opportunities for CEN members to comment on draft interim deliverables at multiple milestones during their development by Project Teams;
- development and on-going review of N1250, providing consistent guidance to all those engaged in Eurocode evolution.

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CEN/TC 250 Management and Administration Body in Paris, Turk, and Zürich - Achieving exemplary levels of international consensus/2017-4 - Achieving exemplary levels of international consensus - Issue 00/00/000

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Mandate M/515 and CEN/TC 250 programmatic response



CEN/TC 250
Response to Mandate M/515

'Towards a second generation of EN Eurocodes'

CEN/TC 250 - N 993

May 2013

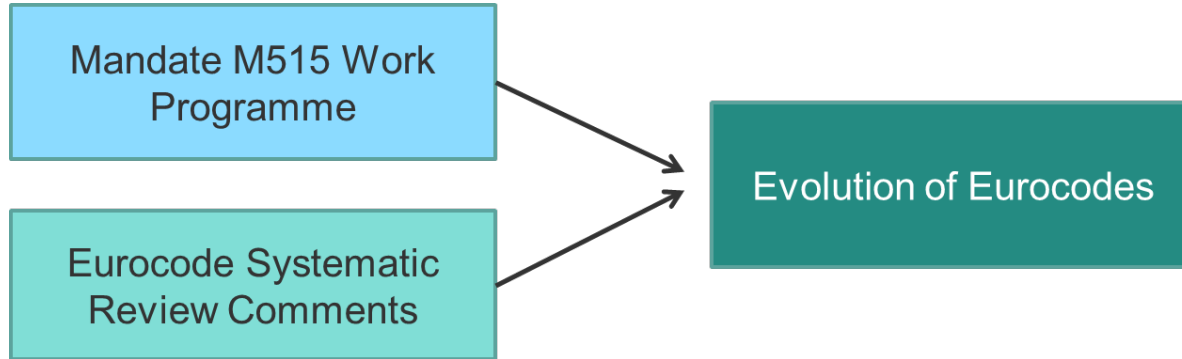
SC/WG etc

- Task 1
- Task 2
- Task n

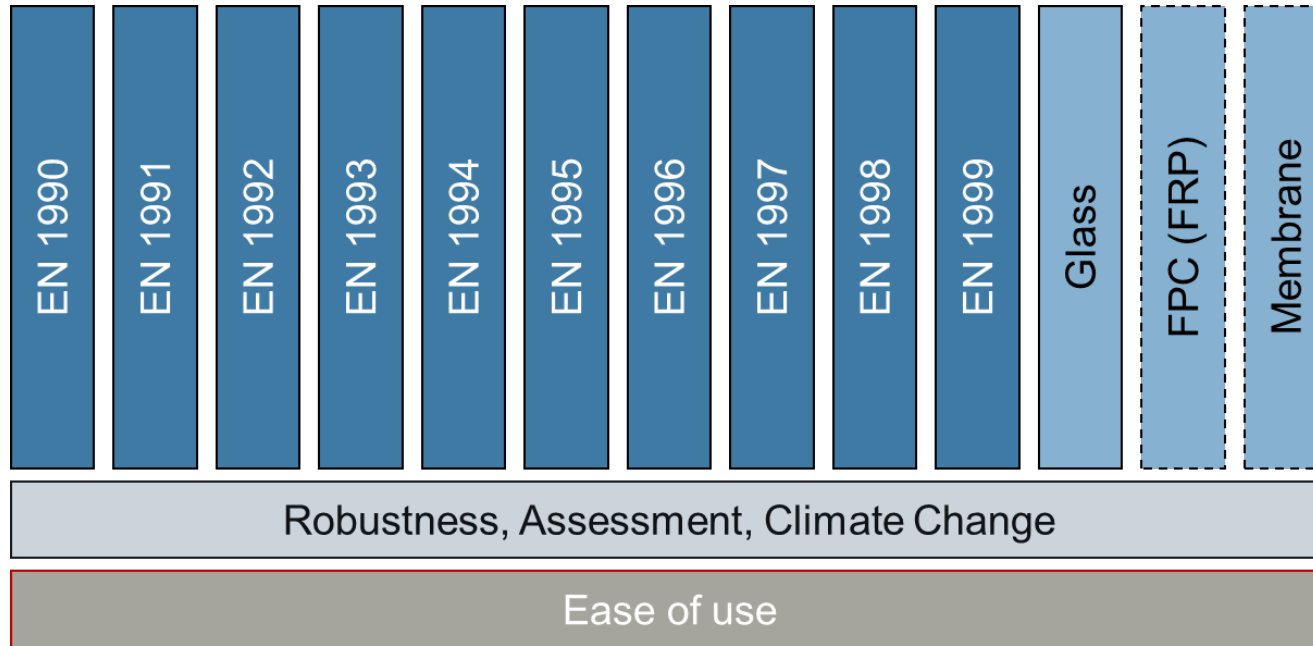
Sub-task

Task	Sub-task	Key Deliverables	Key Dates
1	1.1	1.1.1	1.1.2
1	1.2	1.2.1	1.2.2
1	1.3	1.3.1	1.3.2
1	1.4	1.4.1	1.4.2
1	1.5	1.5.1	1.5.2
1	1.6	1.6.1	1.6.2
1	1.7	1.7.1	1.7.2
1	1.8	1.8.1	1.8.2
1	1.9	1.9.1	1.9.2
1	1.10	1.10.1	1.10.2
1	1.11	1.11.1	1.11.2
1	1.12	1.12.1	1.12.2
1	1.13	1.13.1	1.13.2
1	1.14	1.14.1	1.14.2
1	1.15	1.15.1	1.15.2
1	1.16	1.16.1	1.16.2
1	1.17	1.17.1	1.17.2
1	1.18	1.18.1	1.18.2
1	1.19	1.19.1	1.19.2
1	1.20	1.20.1	1.20.2
1	1.21	1.21.1	1.21.2
1	1.22	1.22.1	1.22.2
1	1.23	1.23.1	1.23.2
1	1.24	1.24.1	1.24.2
1	1.25	1.25.1	1.25.2
1	1.26	1.26.1	1.26.2
1	1.27	1.27.1	1.27.2
1	1.28	1.28.1	1.28.2
1	1.29	1.29.1	1.29.2
1	1.30	1.30.1	1.30.2
1	1.31	1.31.1	1.31.2
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1	1.35	1.35.1	1.35.2
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1	1.38	1.38.1	1.38.2
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1	1.44	1.44.1	1.44.2
1	1.45	1.45.1	1.45.2
1	1.46	1.46.1	1.46.2
1	1.47	1.47.1	1.47.2
1	1.48	1.48.1	1.48.2
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1	1.54	1.54.1	1.54.2
1	1.55	1.55.1	1.55.2
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1	1.59	1.59.1	1.59.2
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1	1.63	1.63.1	1.63.2
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1	1.68	1.68.1	1.68.2
1	1.69	1.69.1	1.69.2
1	1.70	1.70.1	1.70.2
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1	1.72	1.72.1	1.72.2
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1	1.76	1.76.1	1.76.2
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1	1.82	1.82.1	1.82.2
1	1.83	1.83.1	1.83.2
1	1.84	1.84.1	1.84.2
1	1.85	1.85.1	1.85.2
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1	1.88	1.88.1	1.88.2
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1	1.90	1.90.1	1.90.2
1	1.91	1.91.1	1.91.2
1	1.92	1.92.1	1.92.2
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1	1.94	1.94.1	1.94.2
1	1.95	1.95.1	1.95.2
1	1.96	1.96.1	1.96.2
1	1.97	1.97.1	1.97.2
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1	1.99	1.99.1	1.99.2
1	1.100	1.100.1	1.100.2

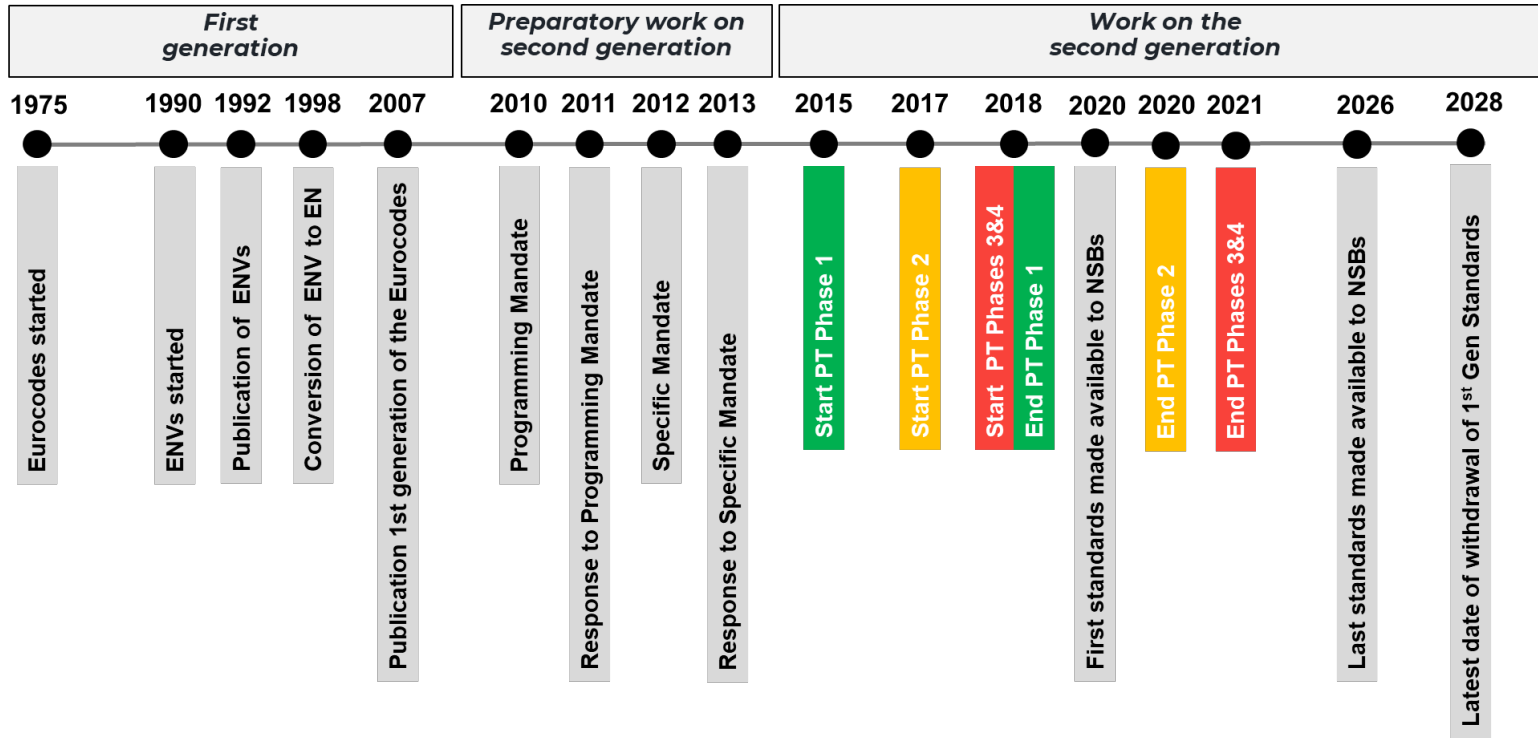
Mandate M/515 and CEN/TC 250 programmatic response



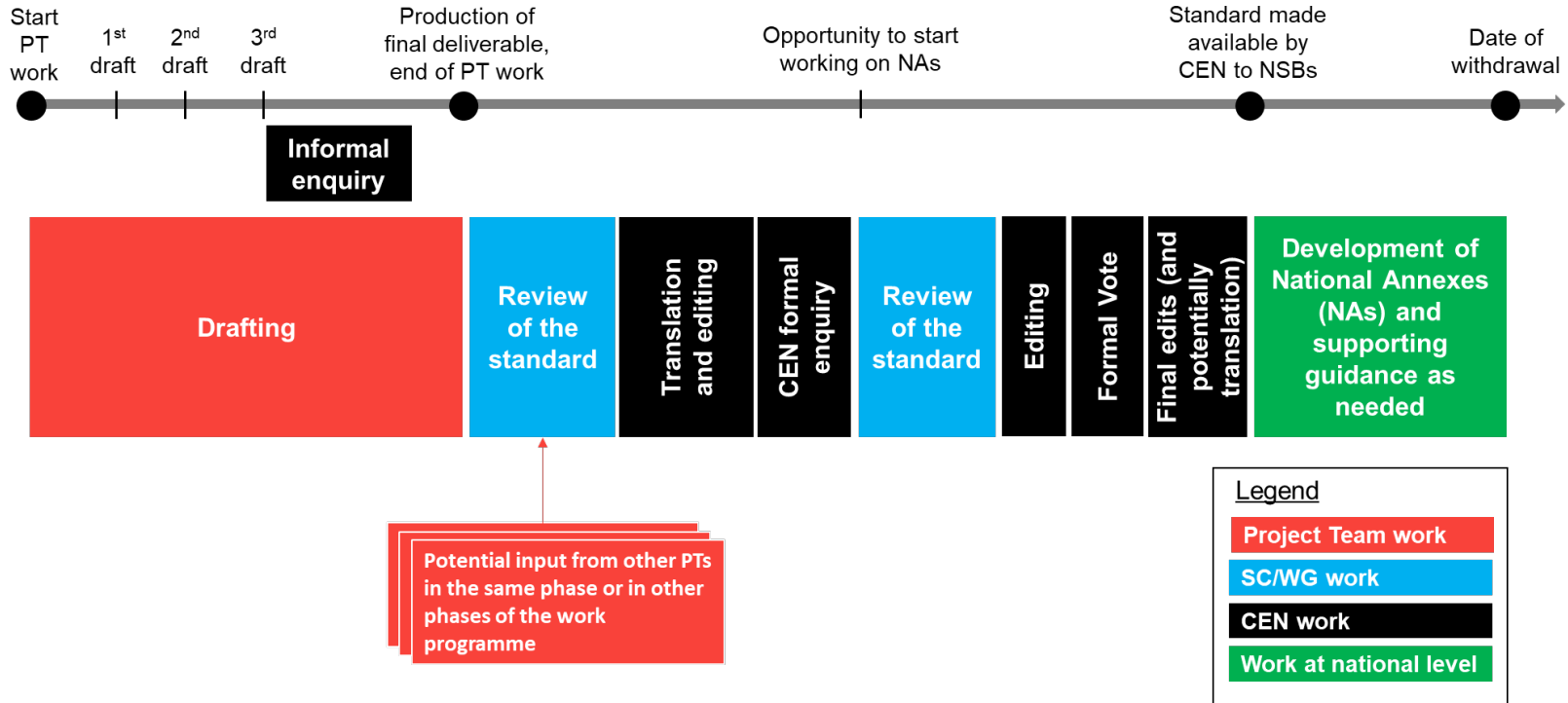
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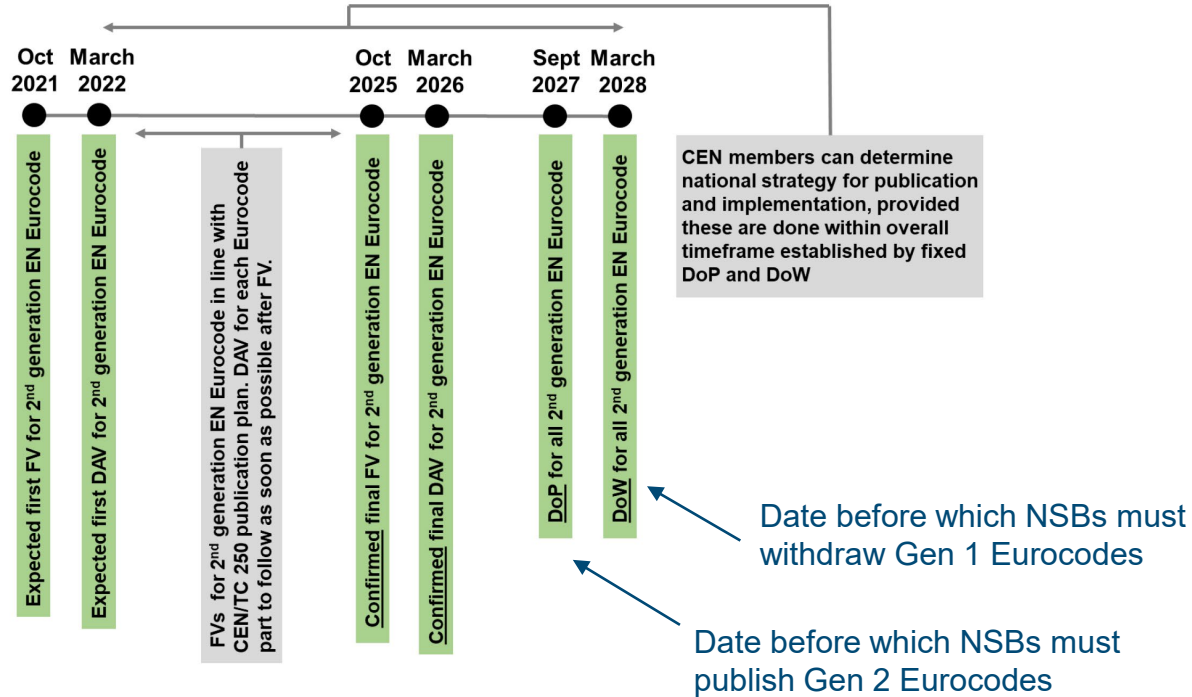


National Implementation

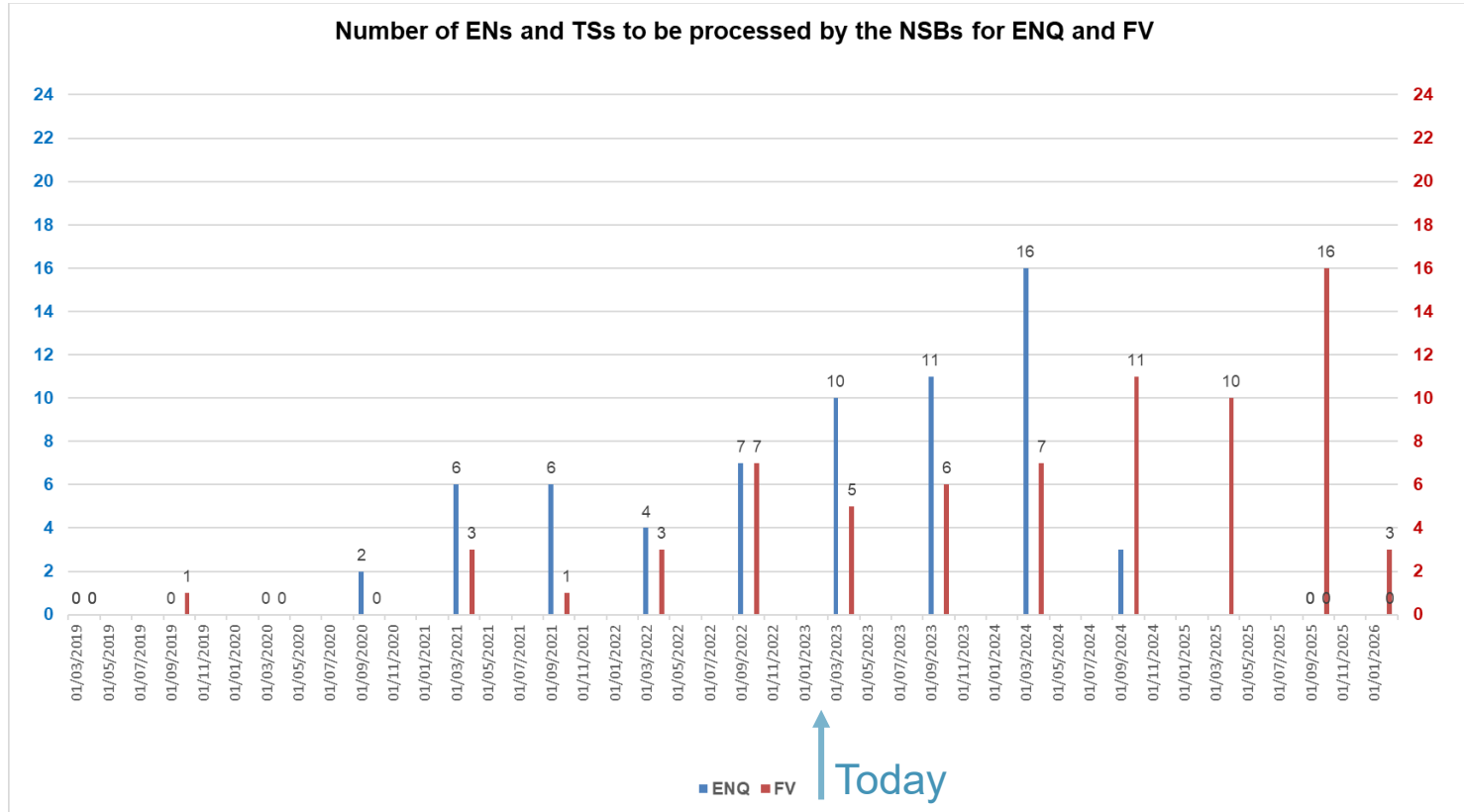
Definitions

- Date of availability (DAV): Date when the definitive text in the official language versions of an approved CEN/CENELEC publication is distributed by the Central Secretariat
- Date of withdrawal (DoW): Latest date by which national standards conflicting with an EN have to be withdrawn

National Implementation



Latest status





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