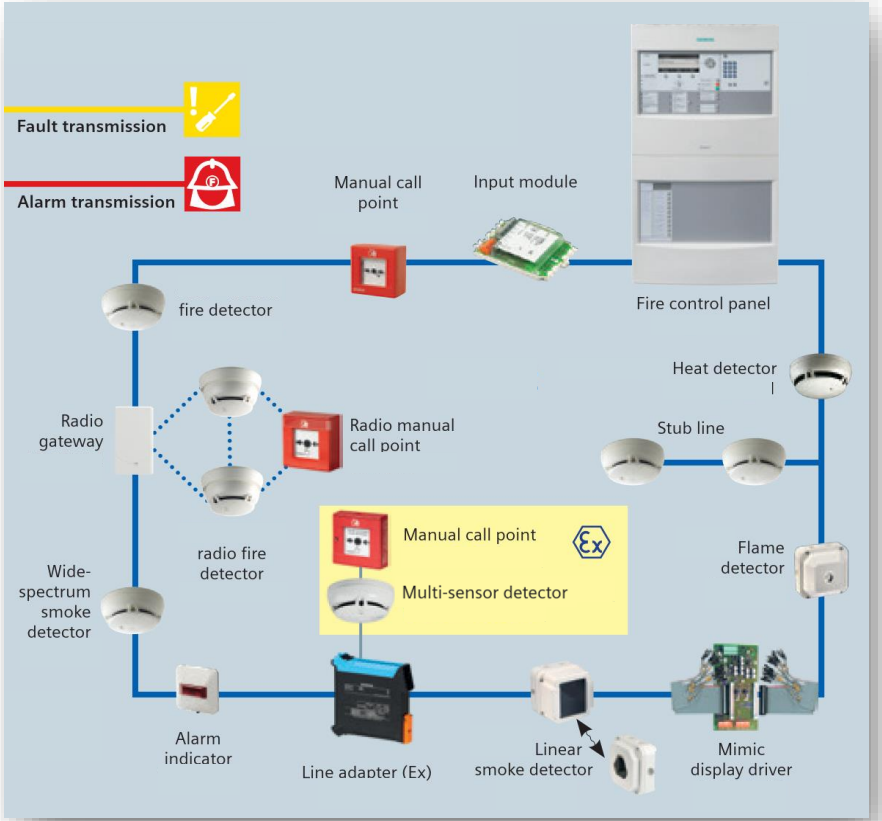
Challenges of the Construction Products Regulation for fire detection and alarm standards

Lance Rütimann – Euralarm – 19 Nov 2019

Scope of a fire detection and alarm system (FDAS)

Affected standards are harmonised standards (hEN's) issued by the CEN Technical Committees **CEN/TC 72 "Automatic fire detection systems"** and CEN/TC 191 "Fixed firefighting systems".

This presentation looks only at CEN/TC 72 and the EN 54 standard series for fire detection and fire alarm systems.



Overview of hEN's for "fire detection and fire alarm systems" → 16 parts !

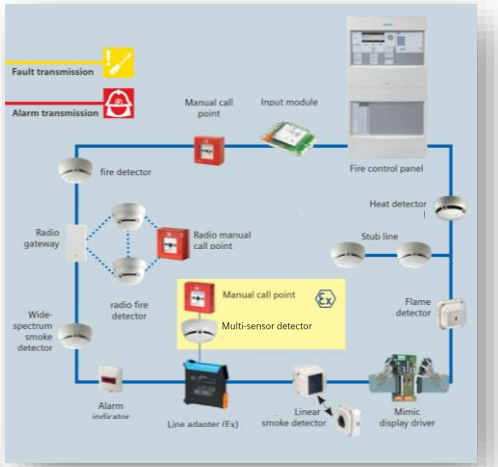
hEN	Part	Description
EN 54-2:1997 EN 54-2:1997/A1:2006 EN 54-2:1997/AC:1999	2	Control and indicating equipment
EN 54-3:2001/A1:2002 EN 54-3:2001/A2:2006	3	Fire alarm devices – Sounders
EN 54-4:1997 EN 54-4:1997/A1:2002 EN 54-4:1997/A2:2006 EN 54-4:1997/AC:1999	4	Power supply equipment
EN 54-5:2000/A1:2002 EN 54-5:2017+A1:2018	5	Heat detectors - Point detectors
EN 54-7:2000/A1:2002 EN 54-7:2000/A2:2006 EN 54-7:2018	7	Smoke detectors - Point detectors using scattered light, transmitted light or ionization
EN 54-10:2002 EN 54-10:2002/A1:2005	10	Flame detectors - Point detectors

hEN	Part	Description
EN 54-11:2001 EN 54-11:2001/A1:2005	11	Manual call points
EN 54-12:2002 EN 54-12:2015	12	Smoke detectors - Line detectors using an optical beam
EN 54-16:2008	16	Voice alarm control and indicating equipment
EN 54-17:2005 EN 54-17:2005/AC:2007	17	Short-circuit isolators
EN 54-18:2005 EN 54-18:2005/AC:2007	18	Input/output devices
EN 54-20:2006 EN 54-20:2006/AC:2008	20	Aspirating smoke detectors
EN 54-21:2006	21	Alarm transmission and fault warning routing equipment
EN 54-23:2010	23	Fire alarm devices - Visual alarm devices
EN 54-24:2008	24	Components of voice alarm systems - Loudspeakers
EN 54-25:2008 EN 54-25:2008/AC:2012	25	Components using radio links

Source: https://ec.europa.eu/growth/tools-databases/nando/index.cfm?fuseaction=cp.hs&cpr=Y#hs

European Application standards build on the European Product standards

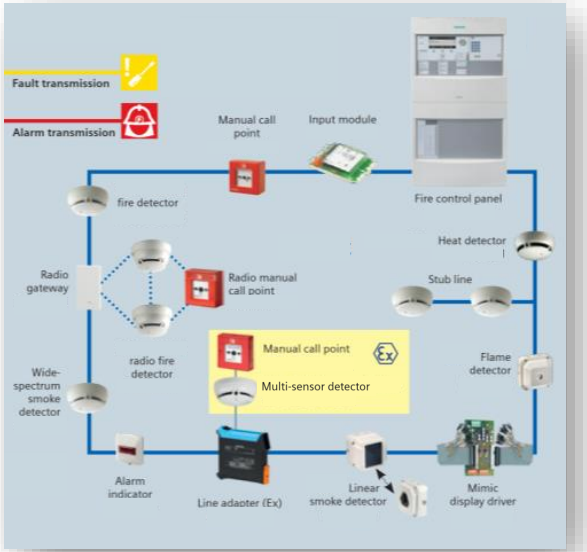
Products/Systems Standards



National Application Standards

National standards define the design, installation, commissioning and maintenance. They rely on the set characteristics of the components in the EN54 series.

CPR addresses a broad scale of products. This creates problems!



Bringing these two different worlds under one scheme is equivalent to “squaring the circle”.

[Products covered by harmonised standards under the CPR](https://ec.europa.eu/growth/tools-databases/nando/index.cfm?fuseaction=directive.notifiedbody&dir_id=33)
https://ec.europa.eu/growth/tools-databases/nando/index.cfm?fuseaction=directive.notifiedbody&dir_id=33

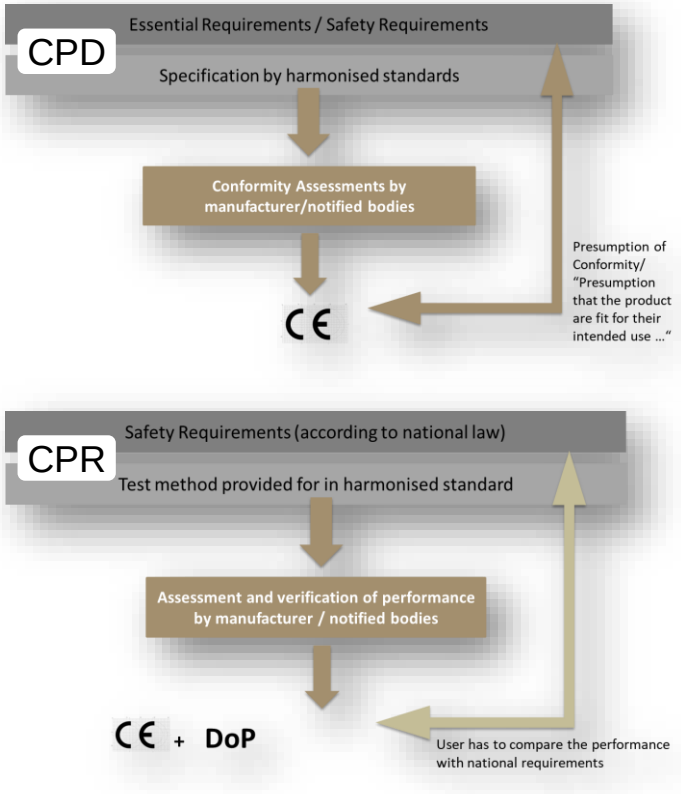
Applying the CPR to the EN54 series has lead to significant complications

One of Euralarm's key objectives is the a pan-European certification and one market, which the CPR would support:

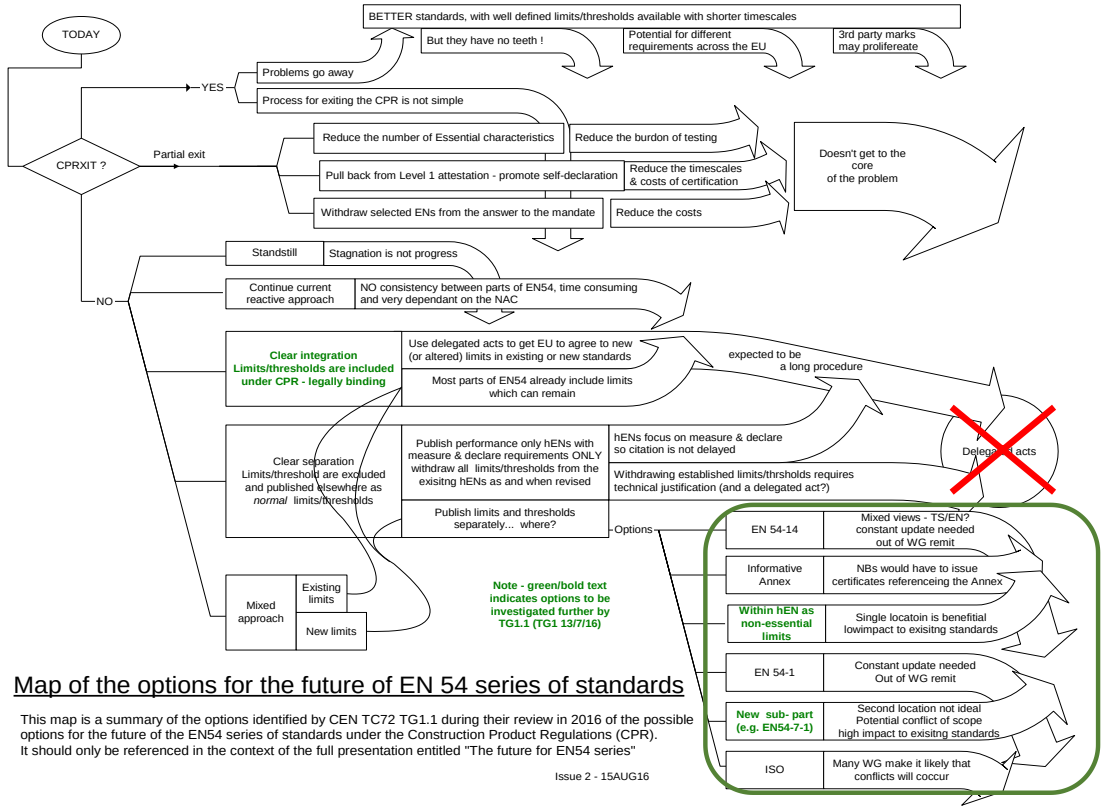
- 3rd party testing based on public standards
- remove national requirements that hinder market access

However…

- revision of standards has not yet sufficiently taken into account the new CPR regulatory approach
- fire protection products are regularly covered by a number of other harmonisation acts where hEN specify the essential safety requirements.
- harmonised standards of the fire protection industry are difficult to reduce to test methods
- references to the revised standards have not yet been published in the OJ



CEN/TC 72 strategic task group reviewed the options in 2016



Map of the options for the future of EN 54 series of standards

This map is a summary of the options identified by CEN TC72 TG1.1 during their review in 2016 of the possible options for the future of the EN54 series of standards under the Construction Product Regulations (CPR).
It should only be referenced in the context of the full presentation entitled "The future for EN54 series"

Issue 2 - 15AUG16

Road map of possible routes was used to summarise options

Clear preference to

- keep performance criteria
- avoid the Delegated Acts (time-consuming and inflexible)
- meet “common technical language” and “pass/fail” requirements

Euralarm task force established in 2017 some guiding principles on the CPR

Euralarm supports…

- unified product standards that apply across the EU and EFTA states, and encompass all product characteristics and performance features, defining minimum requirements and measures to assess conformity.
- 3rd party certification of products (Certificate of Constancy of Performance) by Notified Bodies.
- a CE mark indicating product conformity with its declared performance.
- an approach for performance characteristics used in special applications where such performances have been considered and deemed to be appropriate.

Euralarm does not support…

- the omission or removal of the performance limits currently defined in published hENs and candidate hENs as this would lead to:
  - time-consuming revision of national regulations/guidelines to adopt the limits
  - the risk that they will be altered/modified by member states thereby impeding the free movement of goods and services
- the use of Delegated Acts, as this would put product or performance levels and classes into EU law thereby hindering the ability to make timely corrections or changes based on innovation or field results.

Introduction of “Open Descriptions” and Development of EN54 standard using OD

4.20 On-site adjustment of response behaviour

4.20.1 Description

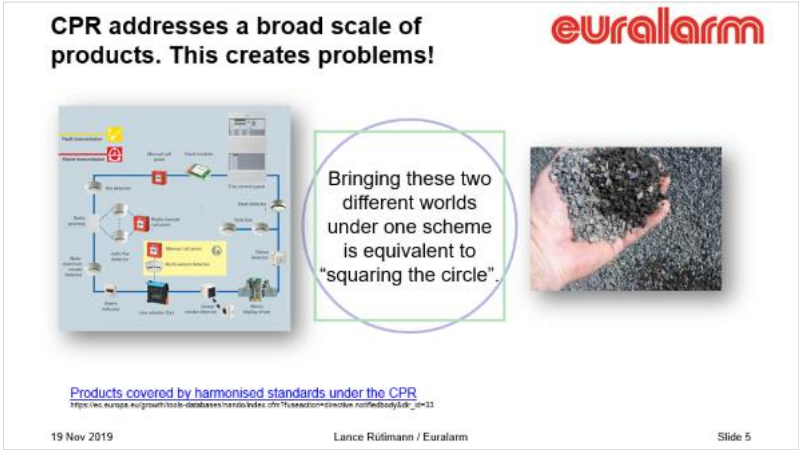
The provision for on-site adjustment of the detector response behaviour shall be expressed in accordance with Table 19 and the assessment method in 4.20.2.

Table 19 – On-site adjustment of response behaviour

Description	Criteria
1	• There is a provision for on-site adjustment of the response behaviour AND • The response behaviour can only be adjusted by the use of a code or special tool or by removing the detector from its base or mounting.
0	• There is a provision for on-site adjustment of the response behaviour AND • The response behaviour can be adjusted without any of the following: the use of a code or special tool or by removing the detector from its base or mounting.
X	• There is no provision for on-site adjustment of the response behaviour

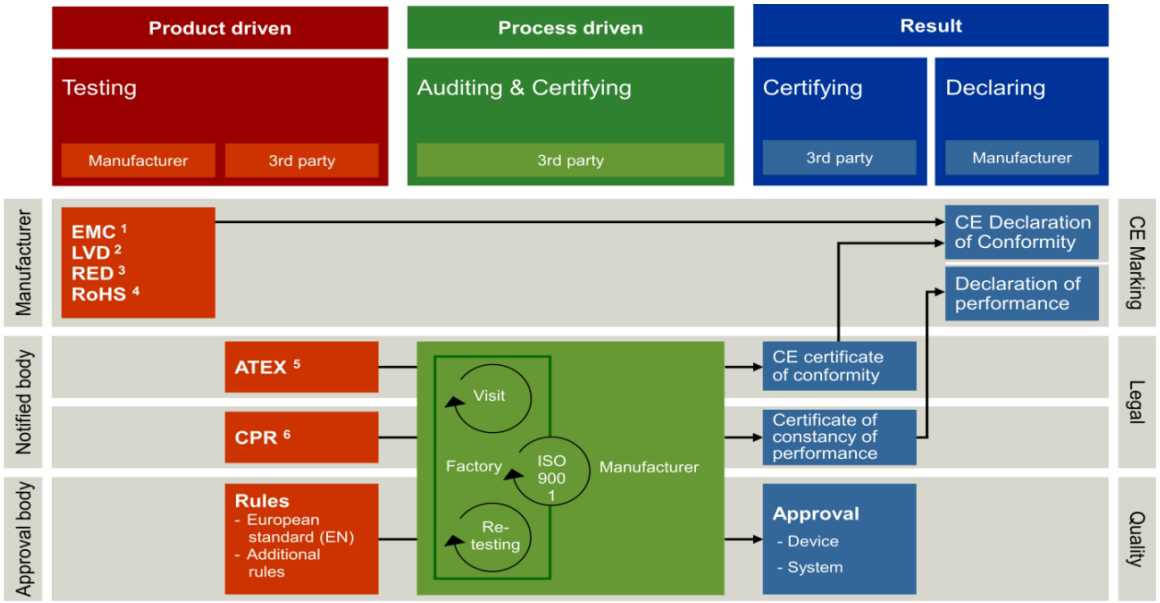
The CPR requires rethinking

- A key fact must be taken into consideration in the revision of the CPR. For the level of detail it attempts to address, it has a scope that is too large.
- Hence a division of the CPR into two parts such as:
  - one for products of the technical building equipment,
  - one for construction products, which are not also covered by further harmonisation acts



ZVEI position on the CPR revision published April 2018

Coordinating all requirements could be a greater challenge



Future with Cybersecurity, Waste Framework Directive, etc. is also to be considered.

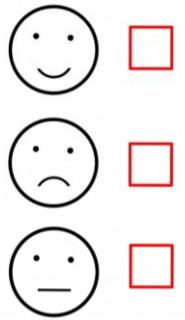
Conclusions

Good News

- Recognition that a revision of the CPR is needed
- Open Descriptions offers a way forward that best meets the requirements of the industry and the CPR, but could also be a way forward for other industries

Bad News

- Every national application standard must be reviewed and adapted
- Alignment with the international standard ISO 7240 is at great risk



Unclear

- Impact of future policies and legislation (e.g. cybersecurity)
- Holistic handling all the regulatory requirements

Lance Rütimann
Vice President
Chairman Section Fire

Euralarm
6300 Zug, Switzerland
lance.ruetimann@euralarm.org