



**An insight into sprinkler business and
development at the European level**

Alan Brinson – 20 March 2024



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SPRINKLER NETWORK

Agenda



Sprinkler market and influences



New influences and trends



Relevance of European standards



The future



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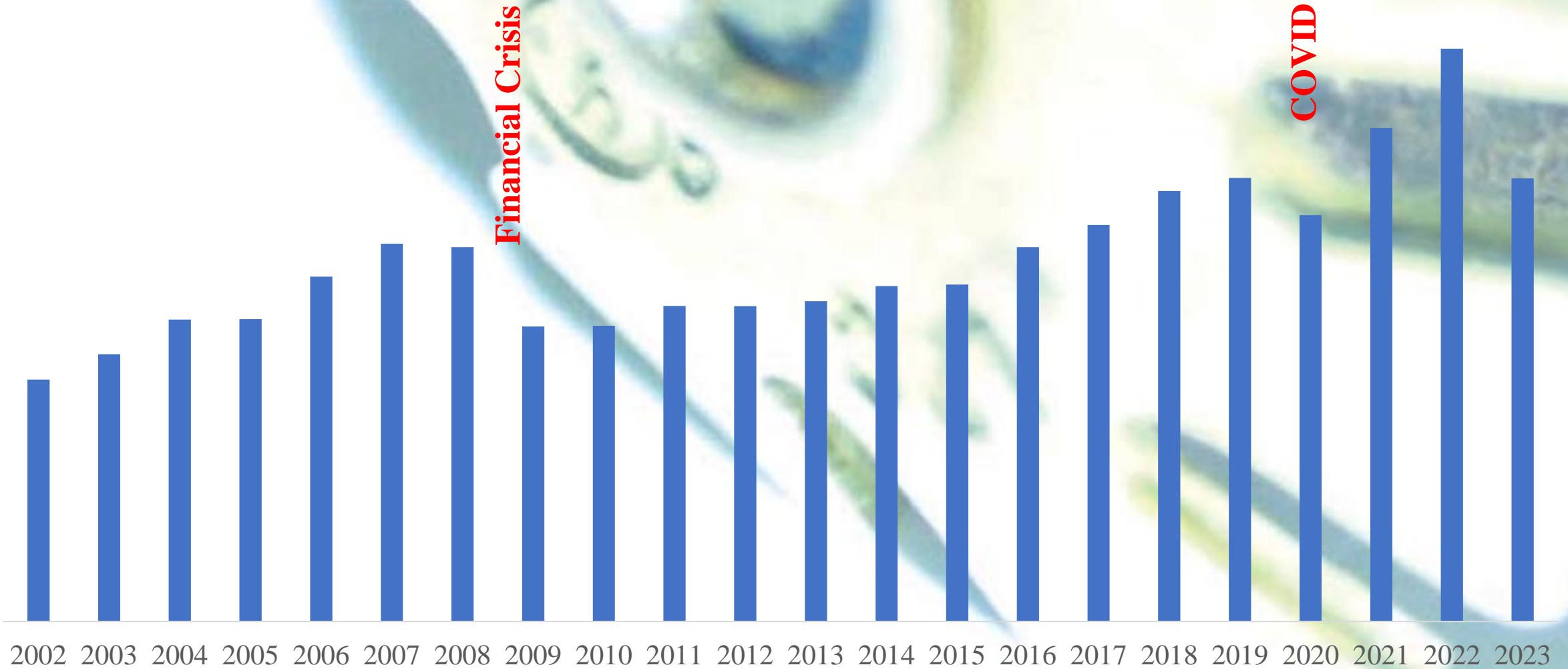


Sprinkler market and influences



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European sprinkler shipments – IFSA data



Why are sprinkler systems purchased?

- ❖ They are required by building codes
 - Directly (e.g. in care homes)
 - Alternative to other measures (e.g. larger compartments)
- ❖ Insurers require sprinklers to underwrite risks
- ❖ Major end users voluntarily fit them (e.g. car companies)

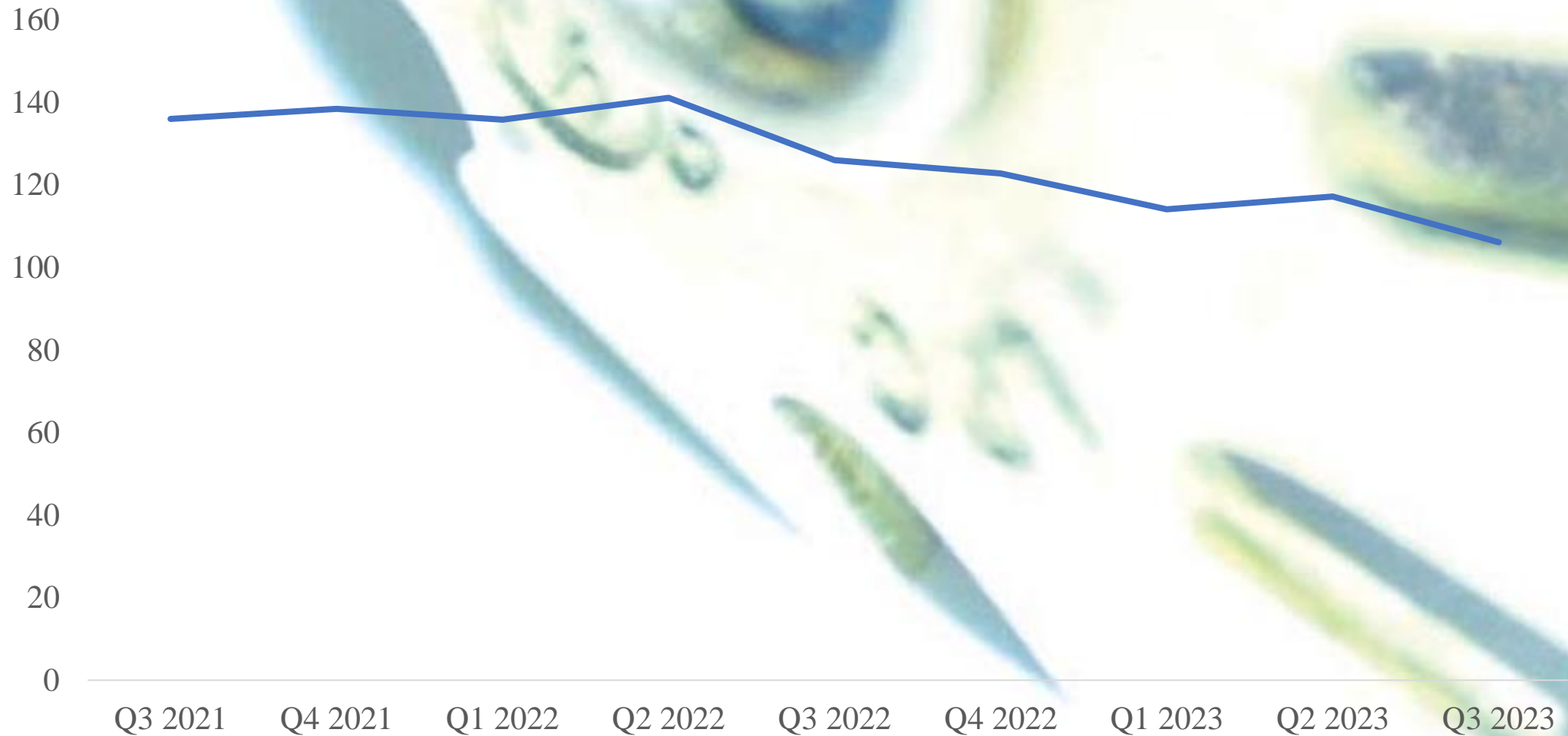
Changes in codes, insurer or end user positions can influence the market – so can construction trends

EU27 construction activity (2015 = 100)



Source: Eurostat

EU27 building permits (2015 = 100)



Source: Eurostat

It is not as bad as it looks

- ❖ Much of the fall in construction and permits is in housing (in most EU countries new housing is not sprinklered)
- ❖ 2023 housing starts were down over 30% in France and Germany compared to 2018-2022
- ❖ EFSN members report high activity in logistics, adding capacity or moving to more efficient new centres, and in data centres
- ❖ Code and insurer requirements are leading to a higher proportion of buildings being fitted with sprinklers



New influences and trends



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Codes in the EU



- ❖ MS regulate fire safety (they have legislative competence)
- ❖ Some devolve fire safety (e.g. Germany to its 16 States)
- ❖ AHJs can be fire brigades, local officials or private companies

- If Hessen (German State that includes Frankfurt) wishes, it can require sprinklers in care homes
- Or the Bordeaux fire brigade can require them in existing underground car parks

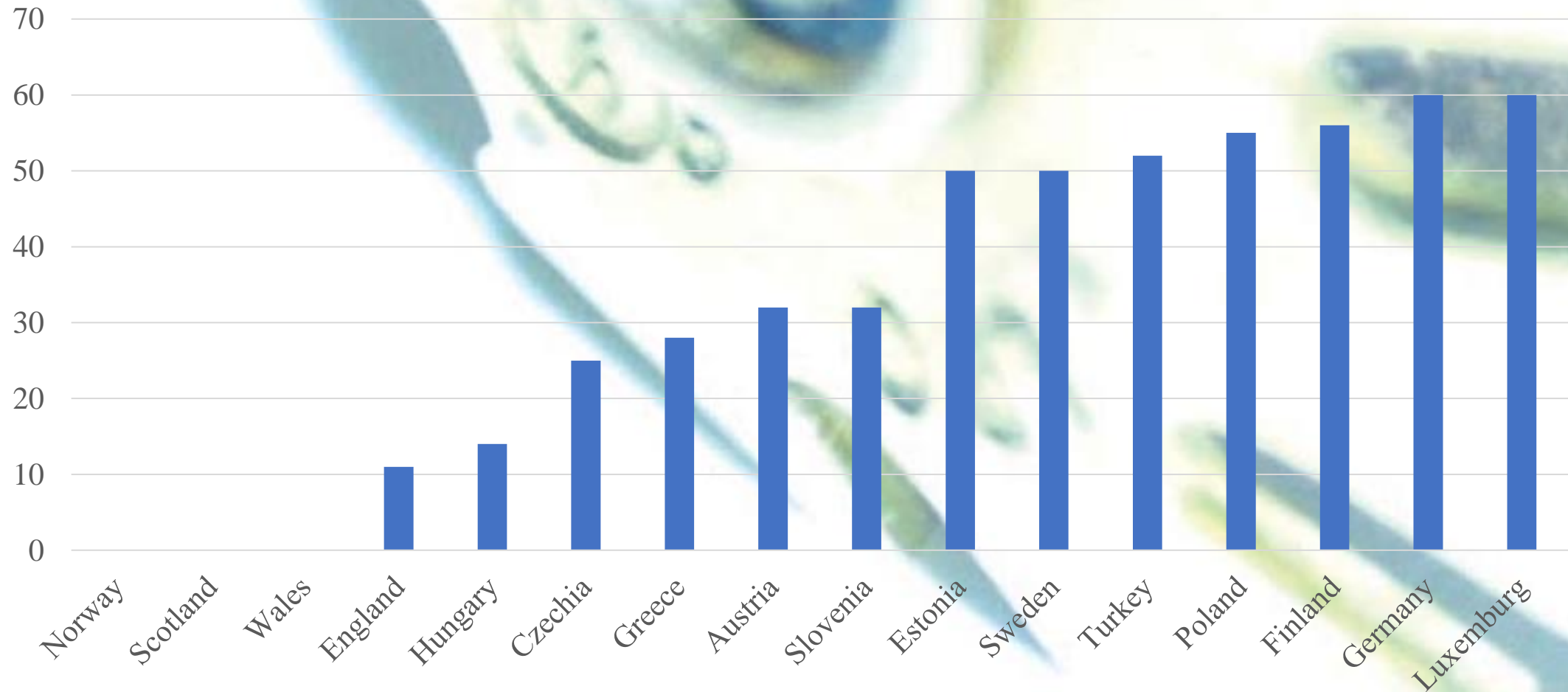


Code requirements (the EFSN focus) 😊

- ❖ As regulators learn more about the potential fire safety benefits of sprinklers they increasingly require them in:
 - High-rise buildings
 - Healthcare buildings
 - Public buildings (shopping centres, exhibition halls, transport hubs)
- ❖ They are also responding to changes in risk and new hazards:
 - Population is ageing and obesity increasing (cannot evacuate)
 - Pressure to build more with wood
 - Concerns about Li-ion battery fires

Insurers also concerned!

Height thresholds for apartments



Thresholds for offices or hotels are generally similar but can be higher or lower



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Sprinklers are required in care homes in :

Denmark

England (pending)

Finland

Ireland (pending)

Northern Ireland (pending)

Norway

Scotland

Sweden

Wales



Sprinklers have also recently been required or are under discussion in:

- ❖ Car parks (also to protect against electric vehicle fires)

- ❖ Energy storage systems

- ❖ Recycling centres

- ❖ Wooden construction

Insurers are particularly influencing uptake in these applications, as well as food and paper

Note that recent research from UL reported in Q4 2023 of the SFPE magazine claimed that residential sprinklers prevented fire spread from an e-scooter fire!





Relevance of European standards

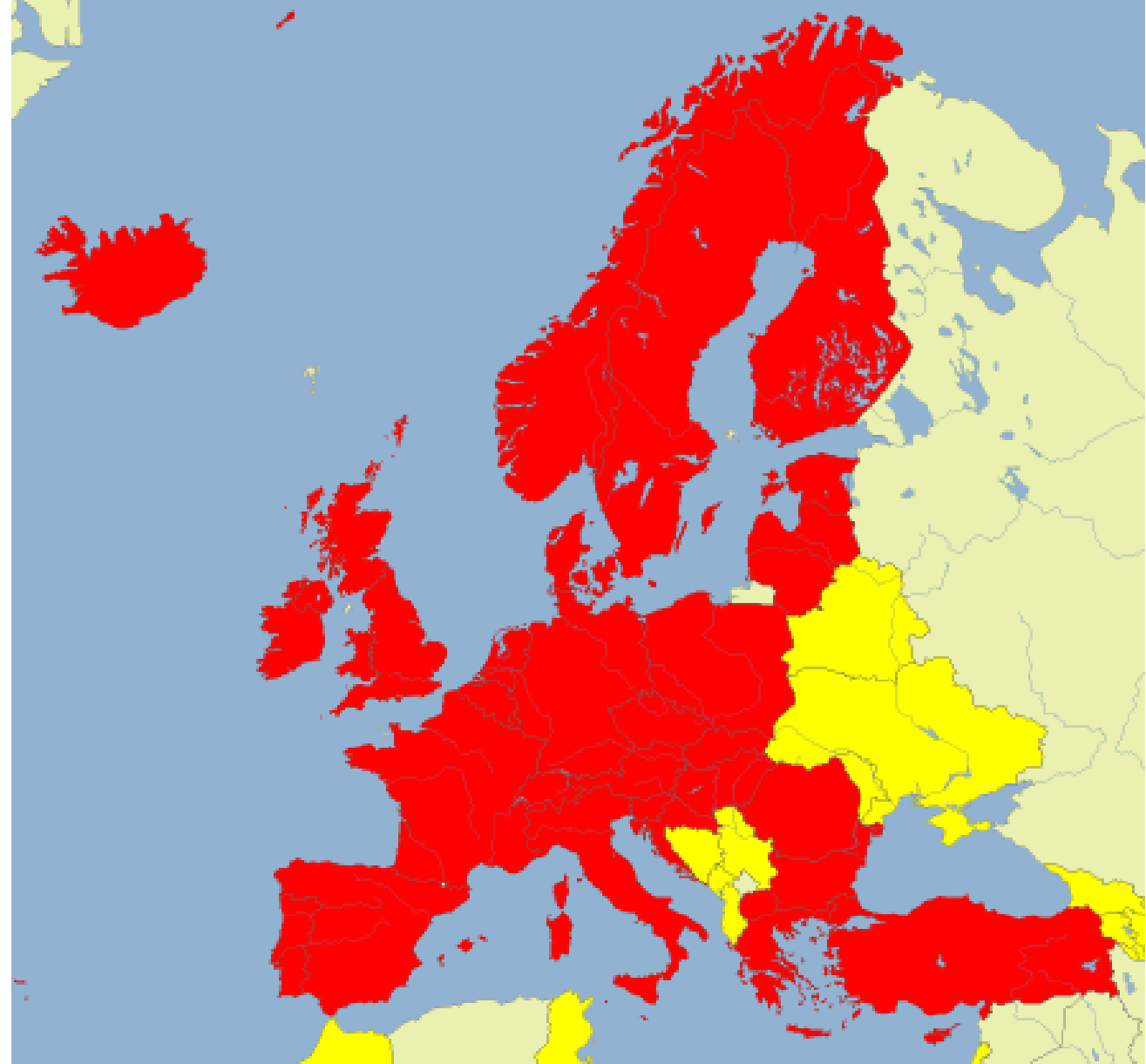


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CEN

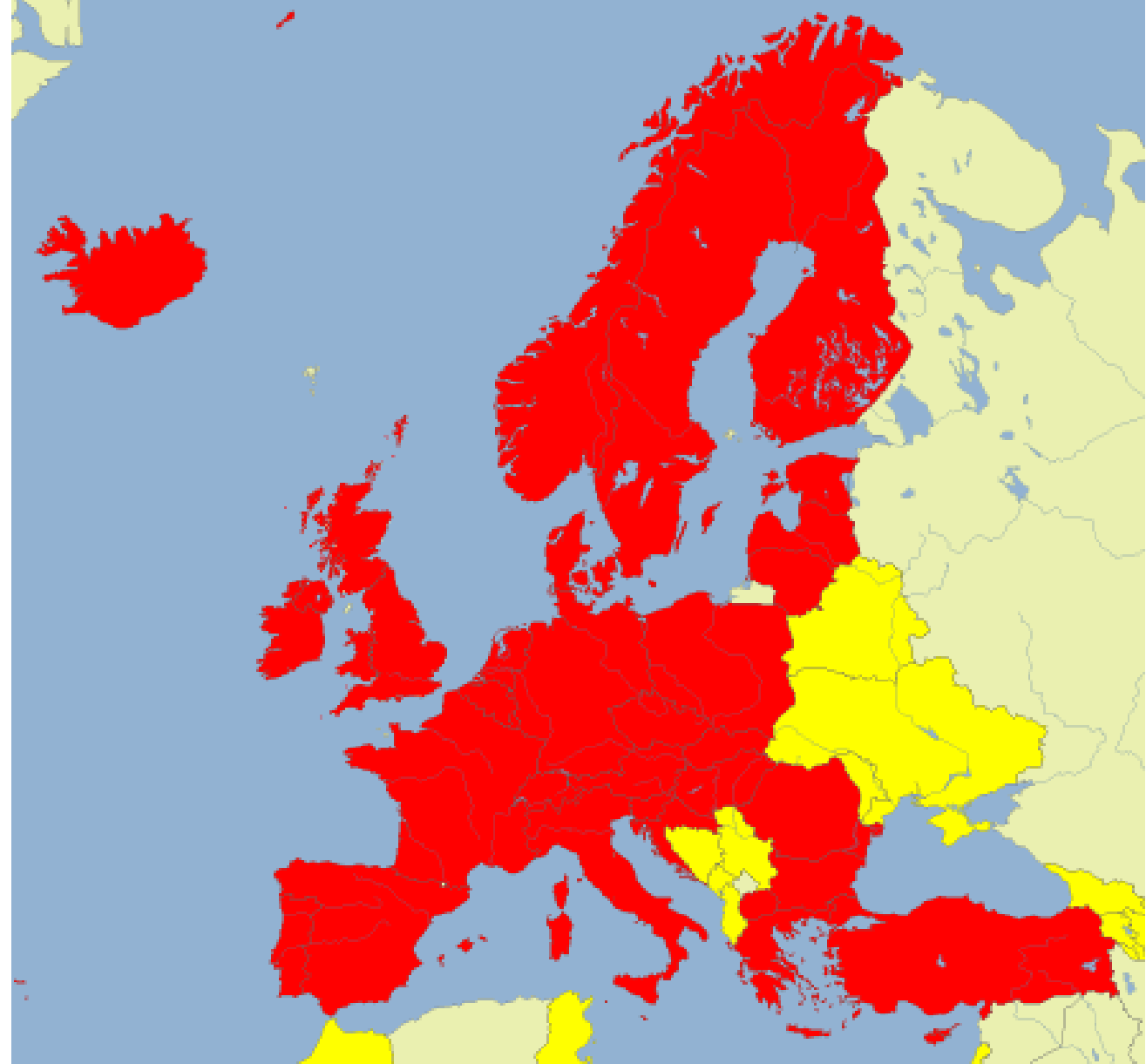
(Comité Européen de Normalisation)

- ❖ 34 countries (EU + Iceland, North Macedonia, Norway, Serbia, Switzerland, Turkey & UK)
- ❖ 625 million people
- ❖ Each country can send three delegates to each CEN technical committee – most send nobody
- ❖ Working language is English
- ❖ Comments on drafts from national mirror committees, not the public



CEN

- ❖ All CEN standards must be published as national standards
- ❖ National standards bodies may not publish competing standards
- ❖ But insurers can!
- ❖ No requirement to publish in national language – often no budget to do so
- ❖ MS do not have to use ENs but as there is usually nothing else...



Standards contribute to market growth

- ❖ Regulators refer to national standards to clarify code requirements for sprinklers – CEN standards are national standards (references might be in other documents than the building code)
- ❖ Huge progress with standards means we will soon have complete sets of state-of-the-art standards:
 - Design, installation and maintenance
 - Components
 - Fire test application protocols (water mist only)
- ❖ Including the latest technology in standards makes sprinklers more competitive with other technologies





- ❖ While products must sometimes be CE-marked under non-fire-related European legislation, it is only the Construction Products Regulation that offers CE-marking related to fire protection
- ❖ Only products, not systems, can be CE-marked under the CPR
- ❖ To be CE-marked a fire protection system product must be assessed against a harmonised standard or a European Assessment Document
- ❖ Neither exists for mist components and some sprinkler components
 - **They cannot be CE-marked for fire protection performance!**



The future



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Are there any threats?

- ❖ Alternative technologies – e.g. low oxygen or other gas
- ❖ Quality issues – need for tighter QA and more training
- ❖ Ageing workforce – who will install the systems?
- ❖ PFAS for foam systems, sprinkler seals and threaded connections
- ❖ Rising costs – but everything else has gone up too
- ❖ Environmental challenges – can we reduce the embodied carbon in the pipe or use less fuel for pump testing?
- ❖ AI – a trendy concern but fires are not artificial or virtual



Sprinklers have a solid future

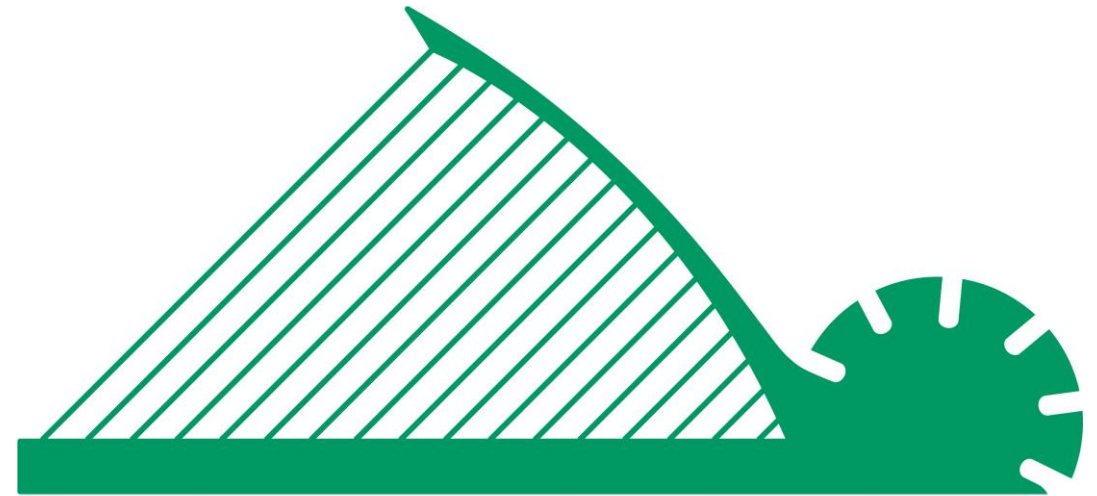
- ❖ We will still have fires
- ❖ Water remains the best fire-fighting agent:
 - High heat capacity
 - Widely available
 - Cheap.
- ❖ Getting it onto a fire early always a good idea
- ❖ May see some use of faster, electronic activation

Positive code development to continue

- ❖ EFSN expanding – someone in BE, DE, ES, FR, IT, NL, PL & UK, plus close links to groups in other countries, such as here
- ❖ Aim is to accelerate positive change
- ❖ Threshold heights and maximum compartment sizes will fall
- ❖ Sprinklers will be more widely required in healthcare buildings

Perhaps countries will join Wales and require sprinklers in houses!

Thank you!



**FIRE SPRINKLER
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