Draft general framework to ensure fire safety in high and mid-rise buildings

1st meeting of FIEP project team 2, 29 June 2018

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Modern Building Alliance : about us

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What is the Modern Building Alliance?

Alliance of trade associations and companies representing the plastics industry in the construction sector

- Founded by 9 members early 2018 (5 trade associations, 4 companies)
- Administratively hosted by PlasticsEurope
- Quentin de Hults (BASF) acting as Executive Chair

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What is the purpose of the Modern Building Alliance?

i. Ambition for greater fire safety across the construction industry

ii. Supporting the EU in ensuring safe and sustainable construction for people across Europe

iii. Engaging with policy makers and stakeholders

Why?

- Fire performance of plastics and fire safety in general has always been essential for our industry that has always been involved in various technical work, including the FIEP start.
- Recent tragic events have rightly triggered renewed attention on how to improve fire safety in Europe. The FIEP has been initiated to facilitate the exchange of best practices at EU level.
- All stakeholders must intensify their efforts to find and implement effective solutions and we are committed to playing our part, particularly to contribute to the FIEP work.

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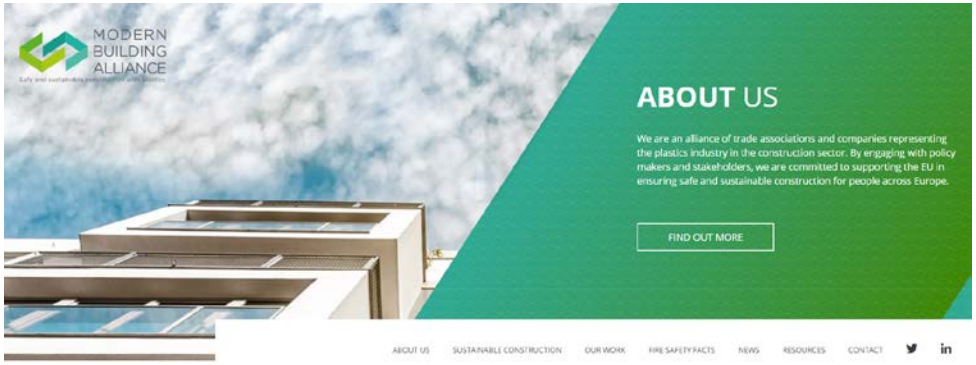
We support the European Fire Safety Alliance

a project within the Dutch Burns Foundation to reduce the risk from fire particularly in the home. It is an independent alliance of fire professionals that does not support any individual fire safety product, technology or commercial organization.

European Fire Safety Alliance

More info and news on our website :

www.modernbuildingalliance.eu



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IMPROVING FIRE SAFETY IN EUROPE

Draft general framework to ensure fire safety in high and mid-rise buildings

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About this framework

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Currently :

- A draft discussion paper developed by fire experts of the Modern Building Alliance, and discussed with some stakeholders.
- The elements that should in our opinion be considered in the regulatory fire safety approach for tall buildings (and NOT exact regulatory proposals).

Our suggestion to FIEP

- Encourage exchange of best practices from Member States on all these elements.
- Possibly complement or elaborate further this framework.

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What should be considered in the regulatory approach?

1. Regulation at Member State level, adequate compliance and enforcement

2. Adequate European harmonized standards to be used in Member States regulatory framework

3. Holistic approach "BIO"

- 3.1 **B**uilding
- 3.2 **I**nstallations
- 3.3 **O**rganisation

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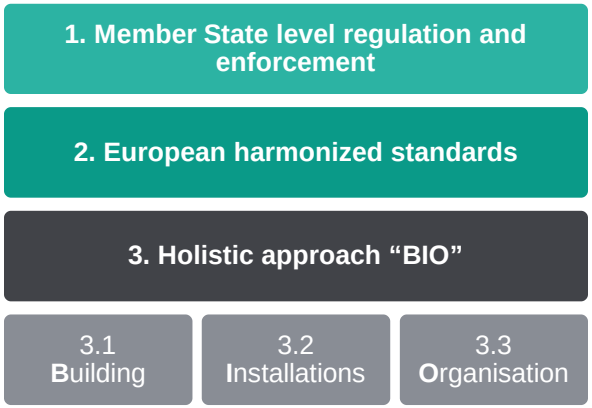
What should be considered in the regulatory approach?



1. Regulation at Member State level, adequate compliance and enforcement

- Ensure that the systems and products installed correspond to the systems designed (quality control, trained/accredited craftsmen, definition of responsibilities…)
- Market surveillance of products / appropriate AVCP (Attestation and Verification of Constancy of Performance)

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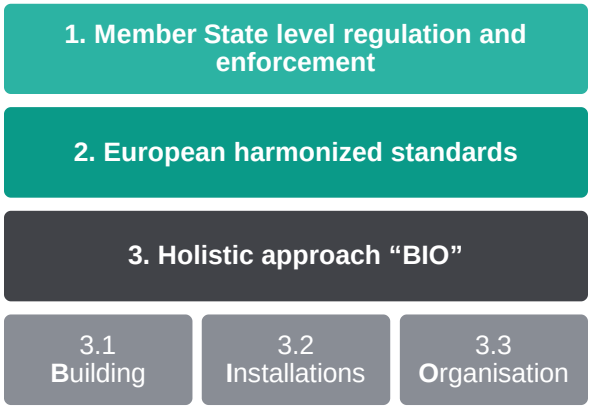
What should be considered in the regulatory approach?



2. Adequate European harmonized standards to be used in Member States regulatory framework, for:

- **large scale façade system testing**, e.g. EC facade study proposes to incorporate DIN 4102 - 20 and BS8414
- **all main components applied in facade systems**
- resistance to fire of construction elements
- sprinklers
- smoke alarm
- fire security systems
- …

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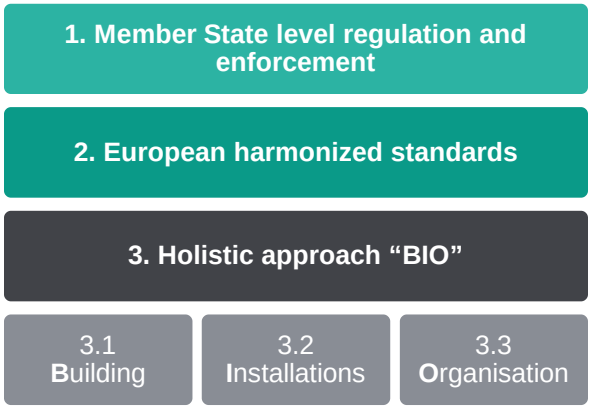

3.1 Building (in MS regulatory framework) 1/2

- Define different building categories based on their type of use and height so that the performance requirements can be adapted to the risk, e.g.:
  - different height : low, mid, high rise
  - different type of use : residential, office, schools, hospital
- Define performance based requirements per building category (e.g. time to escape, limitation of spread of fire and smoke, compartmentation and possibilities for fire fighters to extinguish…)
- Encourage the use of Fire Safety Engineering for complex buildings

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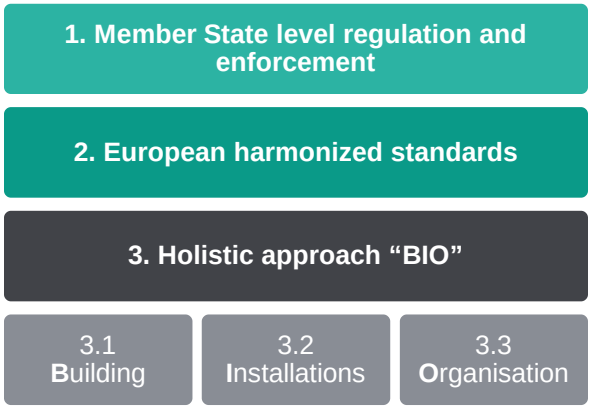
What should be considered in the regulatory approach?



3.1 Building (in MS regulatory framework) 2/2

- For façade systems of taller buildings:
  - Use large scale system testing as basis for all systems (regardless of combustibility of components)
  - Consider all elements of the system. Fire barriers in cavities are for example essential for ventilated facades
  - Ensure unambiguous description of system components via harmonized specifications
  - Define the extended application of large scale test results (allowed variations in the systems, eg. thickness)
- Include escape routes in building design
- Define performance requirement of compartmentation, e.g. fire doors, penetrations,…
- Design specific fire fighting facilities for the appropriate category of buildings (access to buildings, water supply, access to gas and electricity supply…)

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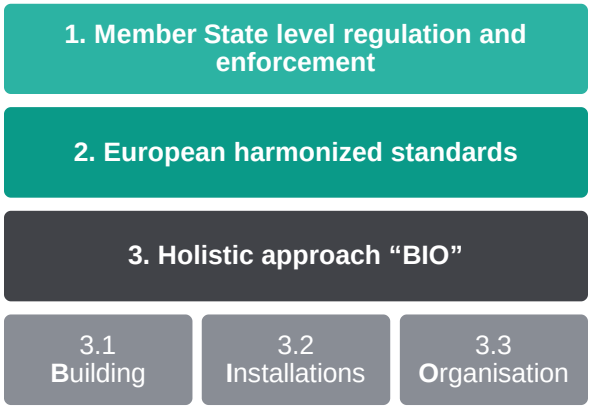
What should be considered in the regulatory approach?



3.2 Installations (in MS regulatory framework)

- Have installations in place adapted to the building category (detection, alarm and suppression), e.g.
  - Fire detection and alarms (smoke detectors) have an important effect on fire safety and are easy to introduce
  - Fire suppression incl. sprinklers can be very effective in certain situations, such as high rise, as they assure that starting fires grow slow or remain small and the consequences of fire are limited.
  - Smoke dampers and ventilation systems for smoke control in the building

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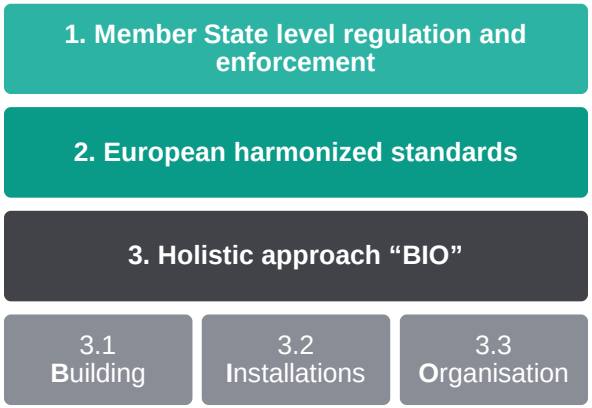

3.3 Organisation (in MS regulatory framework) 1/3

For the building and renovation process

- Ensure that the systems and products installed correspond to the systems designed (quality control, trained/accredited craftsmen, definition of responsibilities…)
- Ensure that the performance of all components applied in facade systems is declared according to the harmonized specification and corresponds to the system tested and approved
- Ensure appropriate AVCP (Attestation and Verification of Constancy of Performance)
- Ensure market surveillance of products

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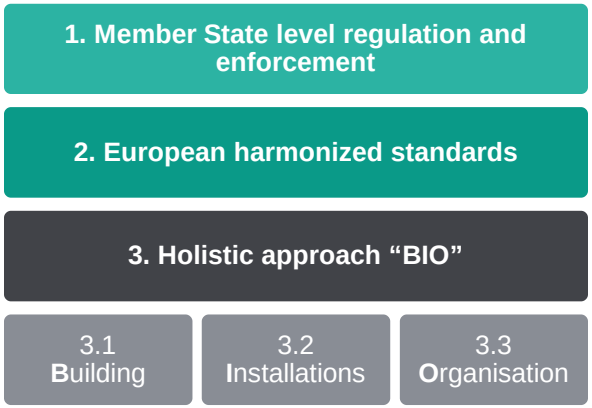
What should be considered in the regulatory approach?



3.3 Organisation (in MS regulatory framework) 2/3

Others

- Control that the fire safety design is maintained along the life cycle of the building, particularly related to compartmentation and escape routes
- Organize control of existing buildings (maintenance and modifications)
- Have accredited professionals performing the roles related to fire safety of the building (e.g. fire fighter, fire safety manager, maintenance)
- Mandate fire brigade to work on prevention (safety checks, awareness campaigns, evacuation plans)

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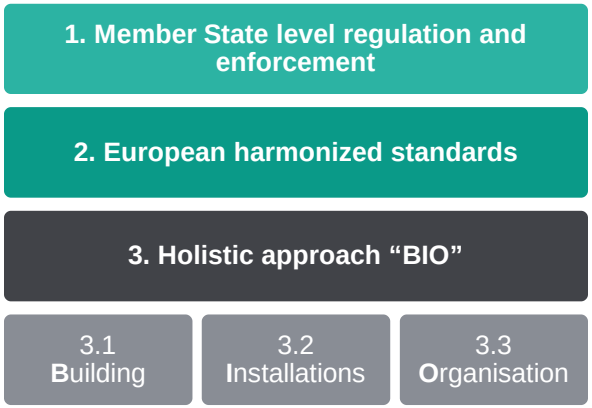

3.3 Organisation (in MS regulatory framework) 3/3

Others

- Define the quality and "state of the art" of fire fighters facilities you need for safe escape of people. This shall be adapted to the local conditions to ensure speed of reaction, speed and easiness of access to buildings and capacity adapted to the building typologies (eg. height of ladders, fire fighting elevators…)
- Consider the social factors by providing better public awareness (mainly the capacity to escape, blocked doors, or to understand instructions which may be impaired by age, language, disability, alcohol, drugs…)
- Define fire safety responsibility, emergency procedures and emergency training for buildings where appropriate (eg. Hospital, schools, large buildings).

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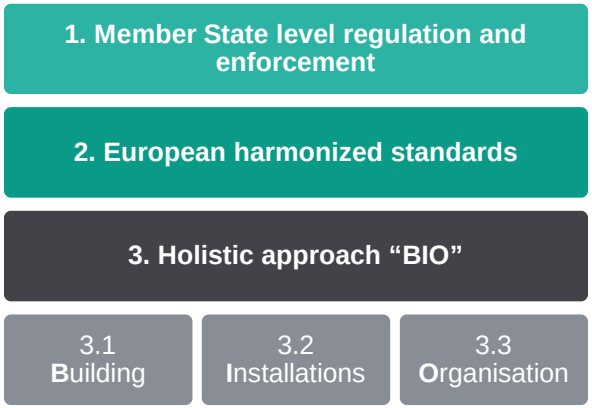
What is the role of product manufacturers?



Product manufacturers have direct roles:

- contribute to the development of robust product standards
- have their products classified and labeled according to these standards and to have adequate quality control
- present unambiguous and clear information about their product performance, installation and use guidelines
- for façade system components, apply large scale system testing and provide clear information about the systems and application in which their products may be used or not
- contribute to training of the planners and installers

Our industry stands ready to contribute to all aspects of this framework, in the FIEP and at national level.

Next steps

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Our suggestion to FIEP

- Encourage exchange of best practices from Member States on all these elements.
- Possibly complement or elaborate further this framework.

Thank you! Engage with us:

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