

Why a fire safety mission? Industry view on the need for fire safety science

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Safe and sustainable construction with plastics

Modern Building Alliance

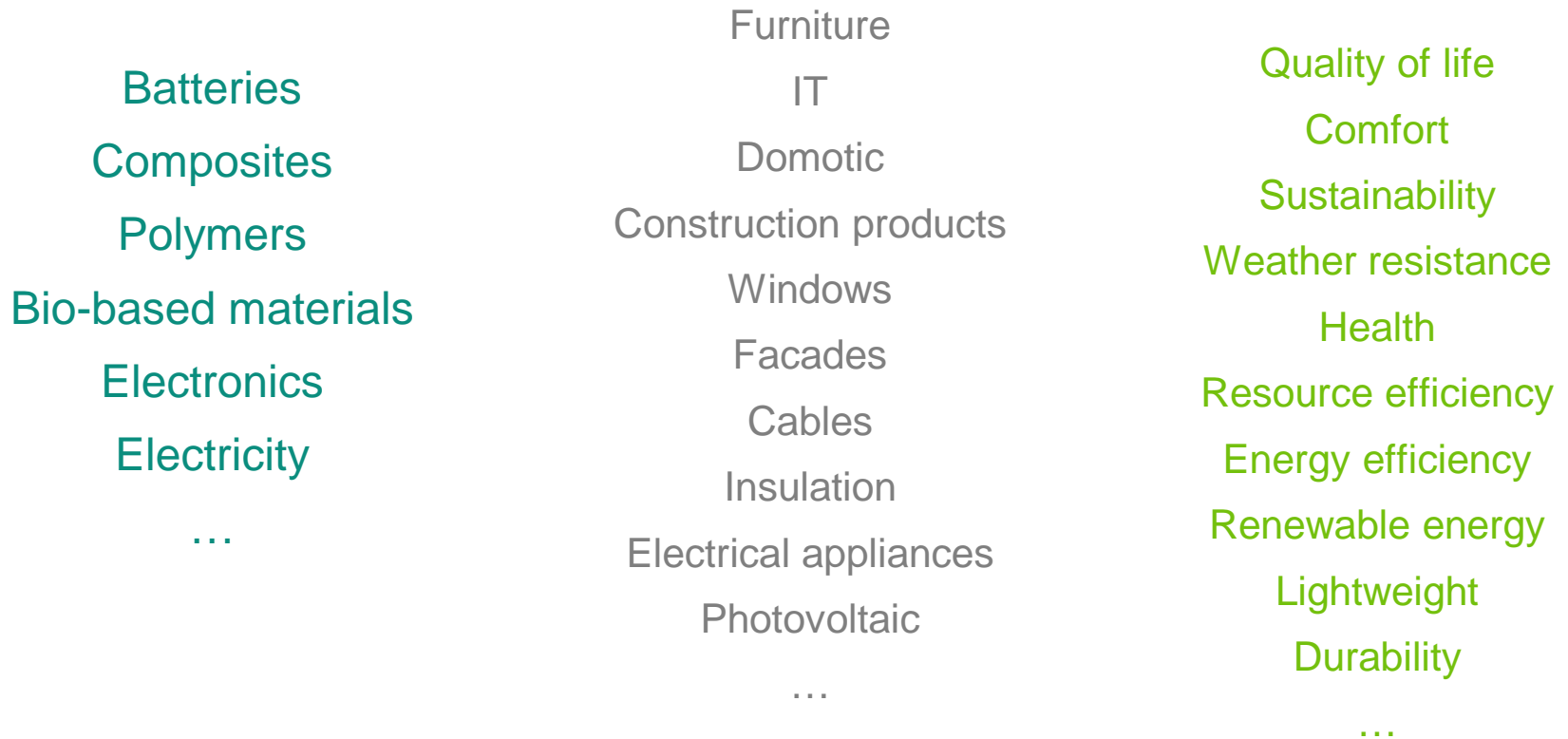
Alliance of trade associations and companies representing the plastics industry in the construction sector and aiming to support the EU in ensuring safe and sustainable construction

Pinfa

Association of producers and users of Non-halogen flame retardants solutions



Modern materials are used in many applications to bring performance and benefits



Modern materials and their benefits are fully compatible with fire safety, providing we consider it correctly.

Industry

- brings solutions for performance and benefits
- is deeply interested to maintain these performance and benefits in a safe way

➔ Fire Safety Science is essential for industry and for society,

- ✓ To allow adequate product development and innovations
- ✓ To guarantee safe performance and benefits (quality of life, environment...)
- ✓ To allow implementation of new technologies and new materials

➔ Fire Safety Science must also help inform policies (performance requirements) and prevention measures.

Science can also inform about the impact of policies and risk factors

Dwelling fires and fire-related fatalities, shown against regulations aimed to increase fire safety, IRS, England; 1981-82 to 2016-17



Source: [UK Home office report](#)

Upward pressure factors

- ➔ Ageing population
- ➔ Increasing fire load
- ➔ Urban density
- ➔ Overcrowding / rise in houses in multiple occupation

Downward pressure factors

- ➔ Changing cooking habits
- ➔ Increase in smoke alarm ownership
- ➔ Reduction in smoking
- ➔ Reduction in drug and alcohol use
- ➔ Reduced arson
- ➔ Improved safety standards (furniture and furnishings) and improved building regulations
- ➔ Preventative work and education

- What are the most effective solutions to further improve fire safety in buildings?
- Can we develop better ways to learn and apply the lessons of fire disasters?
- How to predict and efficiently limit fire and smoke spread in modern buildings?
- What's the impact of fire safety measures on the level of risk?
- What's the effectiveness of fire awareness campaign and how to encourage fire safe behaviour?
- How to predict and optimize the fire behaviour of complex façade systems?
- How can we safely use innovative technologies in modern building?
- How can fire safety engineering allow innovation in building and construction?
- How can numerical simulation complement fire safety tests?
- Do fire safety solutions take sufficient account of social context?
- What can be done to further promote best practices of fire safety engineering?
- How can fire behavior be better characterized?
- ...

- ❑ How to ensure fire safety in energy efficient buildings ?
- ❑ Integrating fire safety into intelligent building systems
- ❑ How can connected appliances be integrated into fire detection/protection, and become a fire safety advantage rather than an increase of risk sources?
- ❑ Integrating fire and smoke safety into modern materials and composites, whilst ensuring recyclability, performance, cost ...
- ❑ Chemical and materials innovation: simultaneous improvement both of chemical safety of new materials and of performance, durability, recyclability
- ❑ Making fire safety a circular economy.
- ❑ Making fire safety an integral part of new energy systems, energy storage
- ❑ Combining increasing use of polymers and composites in transport systems with fire safety, taking into account increased fire risk related to electromobility (high voltage/electrical power)
- ❑ ...

Thank you!

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