

International Fire Safety Standards

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Paper 1

The Challenge and Solution: An Overview

The Challenge

Construction and real estate is a large contributor to world GDP and is recognised to have a significant 'multiplier' effect on national economies. It is also an increasingly globally mobile industry, where investments in, and the implementation of, projects is carried out on an international basis.

At a macro level, there is no uniform way for governments and markets to calculate the importance of confidence and trust in construction and real estate safety. But they do understand the damage a loss of confidence can bring. Significant fires can damage a country's reputation, and lead to loss of inward investment from international investors.

Significant variations in the design, construction and management of buildings, leads to a lack of trust, a lack of confidence by the many & varied actors including the banks and the public, which leads to lower valuations and ultimately an impact on society through lack of investment.

The growth in global population is driving the need for more and more high rise living vertical village towers which are mixed use, as well as more urban buildings which may pose a life safety risk. Occupiers, insurers, governments and investors in these buildings need to be reassured the building complies with an international fire safety standard.

Fire safety has to be paramount in these and all other higher risk buildings. We are not so concerned by height but by risk - low level buildings could be high risk eg hospitals, care homes, student accommodation, hotels.

At present, the many contrasting standards across the world have contributed to uncertainty and confusion in the testing, and approval, of construction methods, products and operation of buildings. Research has shown that inconsistent approaches to the assessment and regulation of fire safety can lead to loss of life in extreme cases, through to a loss of confidence by governments, financiers, investors and the public in buildings.

Finally, feedback from professional organisations around the world has identified particular problems relating to different terminologies in use. This is particularly the case between US and Europe due to differing languages and between buildings and infrastructure.

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The Solution

Professional organisations should lead the development of common, internationally agreed fire safety standards. Working as a Coalition of equals, professional bodies have the authority and ability to drive forward common rules of engagement which practitioners will be responsible for delivering around the world.

Although the detailed solution cannot be determined until the Coalition is established, some principles have emerged through preliminary discussions. Key characteristics of the first set of fire safety standards to be published will be as follows:

High-level, over-arching and principles-based – a first and important step;

- Covering new buildings and infrastructure
- Covering management of existing buildings and infrastructure
- Connected to a framework of competencies.

The IFSS standard setting committee should be asked to *consider*;

(these are only suggestions for discussion at the first Coalition face to face meeting)

1. the desire for non combustibile external cladding & insulation on all high risk buildings - should this be mandatory, how do we define 'non combustibile'
2. the desire for sprinkler systems in all high risk buildings
3. the desire for fire and smoke detection central systems in all high risk buildings
4. the essential need for measures to deal adequately with smoke in all high risk buildings
5. the essential need for compartmentation to limit the spread of fire
6. the essential need for a fire strategy in all high risk buildings
7. the essential need for a fire risk inspection and assessment to be conducted at least annually on all high risk buildings and at least every five years on all other buildings
8. the essential need for fire engineers/professionals to be engaged early in the design of new high risk buildings and to ensure the final building delivered complies with the design
9. the essential need for inspection during construction and during the life of an existing building to ensure essential fire safety products and detailing is delivered and maintained as designed.
10. to consider the definition of *high risk buildings*
11. to consider extending the standards beyond life safety to building preservation in the interests of society (for certain buildings such as hospitals and historic buildings)
12. to consider fire risk management of buildings and structures post completion
12. to consider the different building codes and regulations that already exist and to recommend changes and/or alignment to these as necessary to ensure consistency globally
13. to consider the retrospective application of the standards to existing buildings and structures
14. to consider the different test standards for fire testing materials and combinations that already exist and to recommend changes and/or alignment to these as necessary to ensure consistency globally
15. to consider a framework of competencies
16. to consider the development of a certificate of compliance publicly displayed in all buildings which meet these standards.

In time, the scope of the project will be subject to further discussion. How far should IFSS seek to align individual bodies or countries codes/standards.