



Knowledge FOR Resilient soCiEtY

2ND INTERNATIONAL SYMPOSIUM K-FORCE 2019

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FIRE AND LIFE SAFETY IN HOTELS

Case study *COURTYARD* by Marriott, Banja Luka

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1. General introduction to hotel fire and life safety (FLS) in global and local context – why is it important?
2. Hotel – specific fire risks
3. Case study COURTYARD by Marriott – fire safety in corporate chains
4. Case study COURTYARD by Marriott – FLS standard and concept of its implementation
5. Conclusion – integrated FLS system and its management



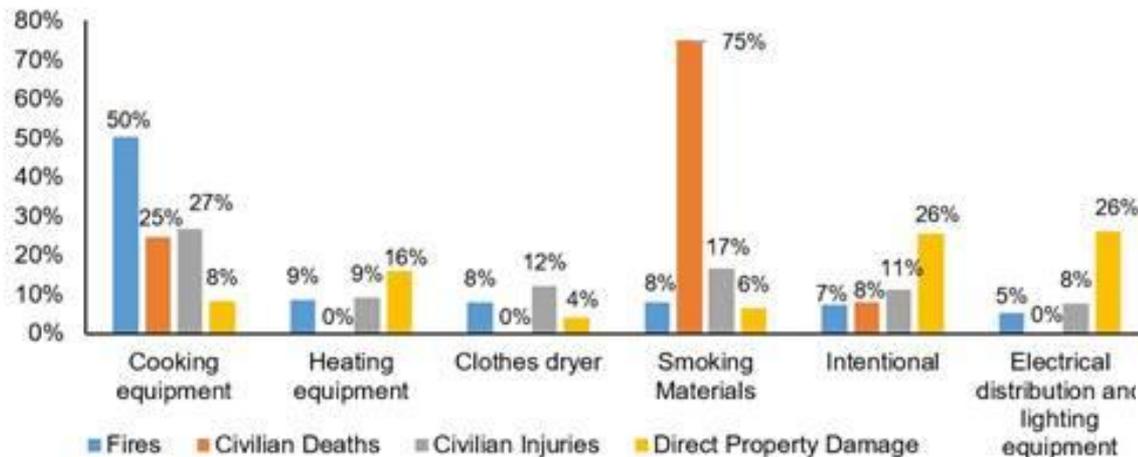
1. Why is FLS in hotels important?

Tourism is the world's third largest export category with total international tourist movement of 1,326 million for 2018, with yearly growth of 7%.

Hotels – important subjects of research and innovation in design, applied technology, management and overall safety

Fire safety as factor of competitiveness on this rapidly growing market
Fire – still a biggest risk (*chart: NFPA, 2015*)

Structure Fires in Hotels and Motels by Leading Cause, 2009-2013



2. Hotel – specific fire risks

...residential occupancies that are primarily transient in nature

2.1. Confusion and panic:

- little or no familiarity with the building
- sleeping guests unaware of fire
- prone to panic when alerted to the emergency

2.2. Long paths of evacuation:

- suffocation due to smoke exposures in corridors (biggest % of deaths)

2.3. Room equipment:

- unattended cooking process
- smoking or candles
- malfunction in electrical appliances (heaters, kettlers, hairdryers)

2.4. Hotel facilities

- kitchens
- laundry *factory-like* large electrical and mechanical installations
- technical rooms (server, electrical, boilers, heat pumps, etc)

2.5. Mass events

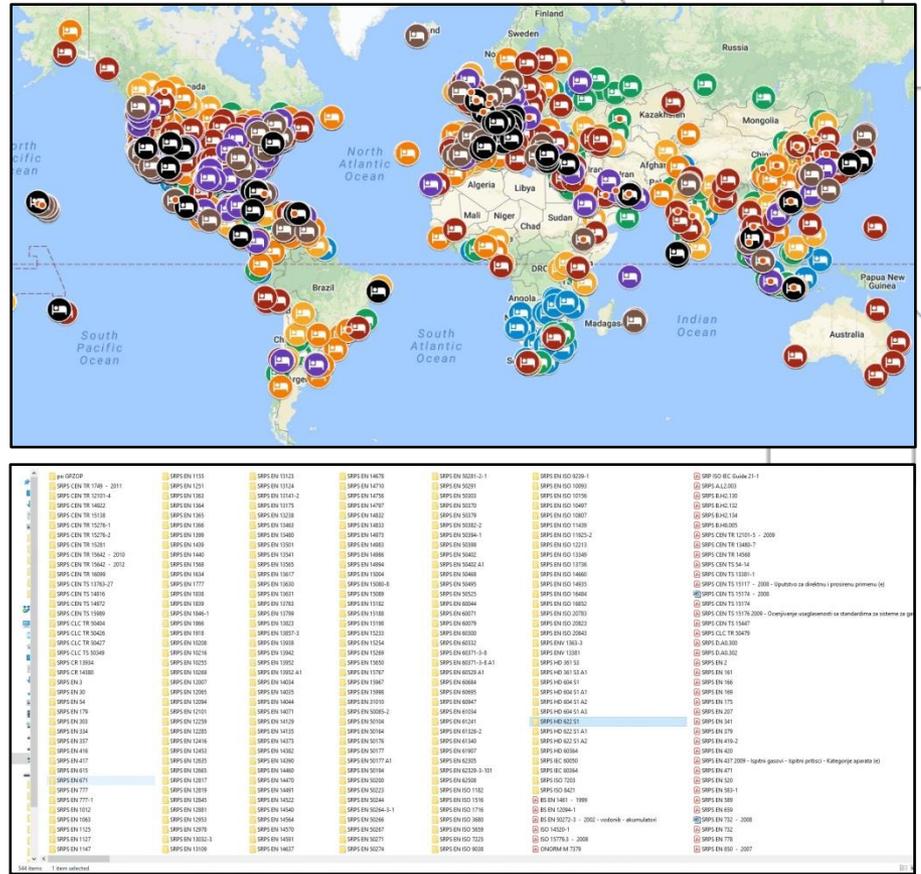
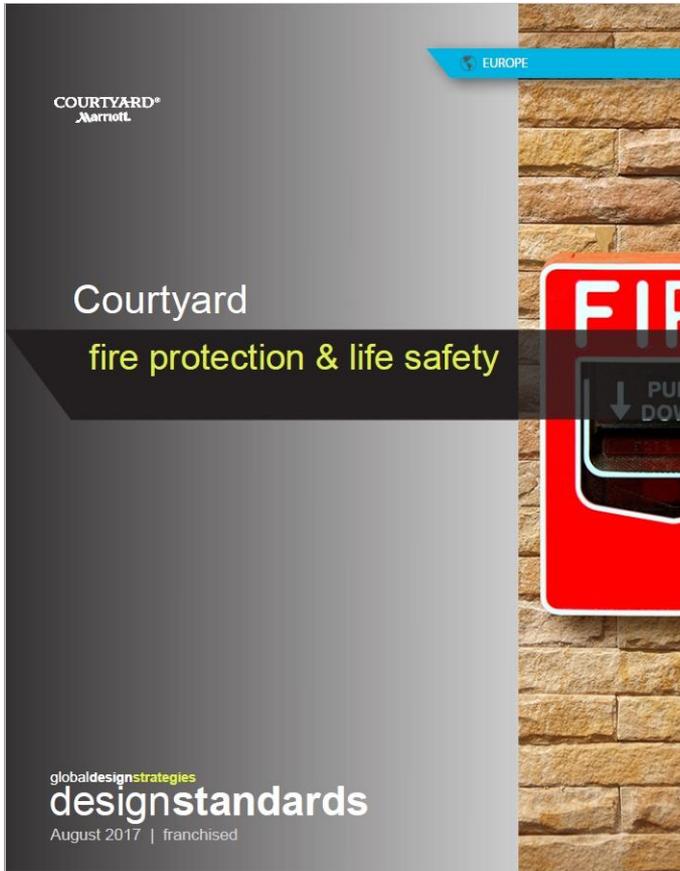
- evacuation of mass event without efficient crowd control can lead to non-fire related injuries



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3. Case study COURTYARD by Marriott – fire safety in corporate chains

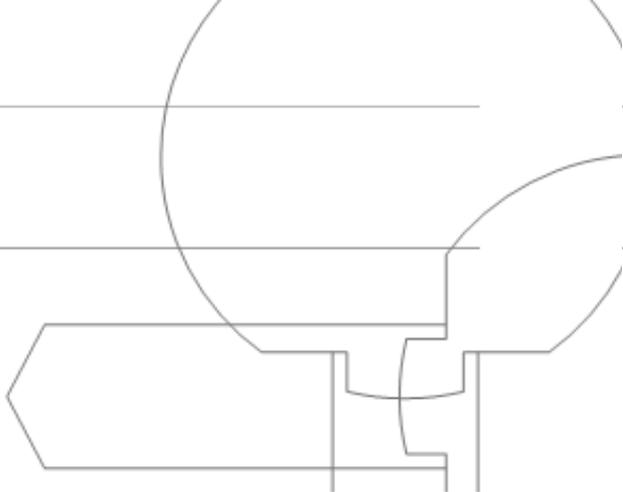


- In case of collision – the more strict request is to be applied



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understanding FLS
Module 14 standard

understanding
national FLS legislative

CROSSREFERENCE

must have's
request collisions
devising the
tailored solutions

Analysis of
the object

Survey on limited
applications of
Module 14 in
object

Applicable
FLS concept

IMPLEMENTED
STANDARD
MODULE 14

INTEGRATED
FLS STRATEGY

brand
standard
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national
legislat
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already existing
construction



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4. Case study COURTYARD by Marriott – FLS standard and concept of its implementation



4.1. Prevention:

- Inforcing occupancy loads
- Compartmentation (high risk areas, each occupancy type, staircases, utility shafts, etc)
- Choice of inflammable interior finishes
- Sealing of openings

4.2. FLS Instalations

- Automatic fire detection
- Back up power resource
- Smoke control system
- Stairs pressurization system
- Emergency signange
- Fire supression

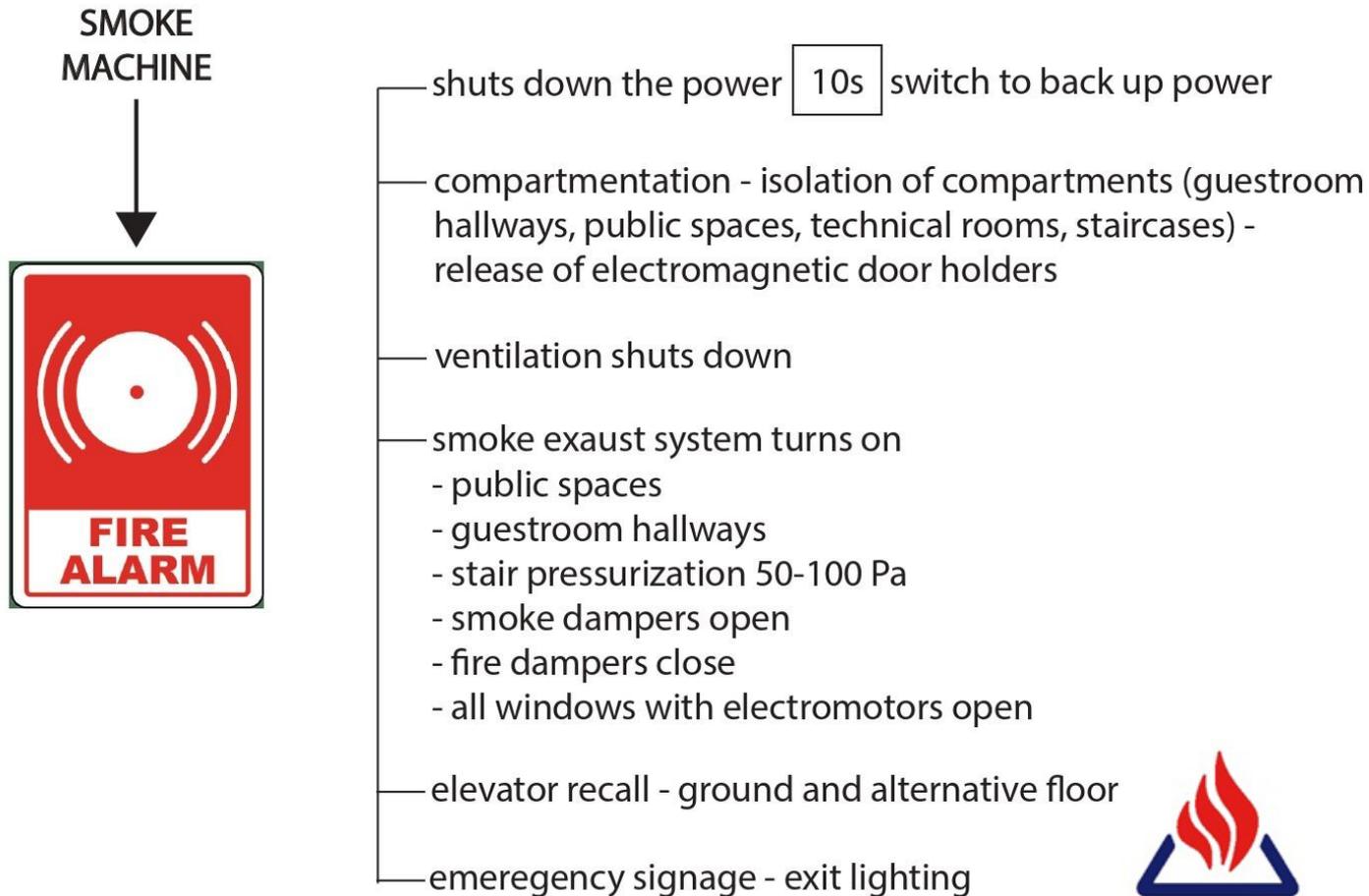


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4.3. FLS Marriott consultants – First punch / Integrated Testing

4.3.1. Sequencing – all systems work like one organism



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5. Conclusion

It is becoming progressively more frequent for fire detection systems to be integrated with emergency lighting, voice alarm and mass notification systems along with the building management systems - to control smoke extraction, fire doors and lifts in development of any potentially dangerous occasion.

Integrated systems are programmed to automatically deliver clear, **step-by-step instructions** for what to do in case of an emergency: with whom to make contact, where to seek escape and where to assemble.

The rise of technology has made possible to integrate all traditional FLS systems into **one smart, automated and sequenced system** that connects and networks all tools necessary for ensuring safety.



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Thank you
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