



# 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

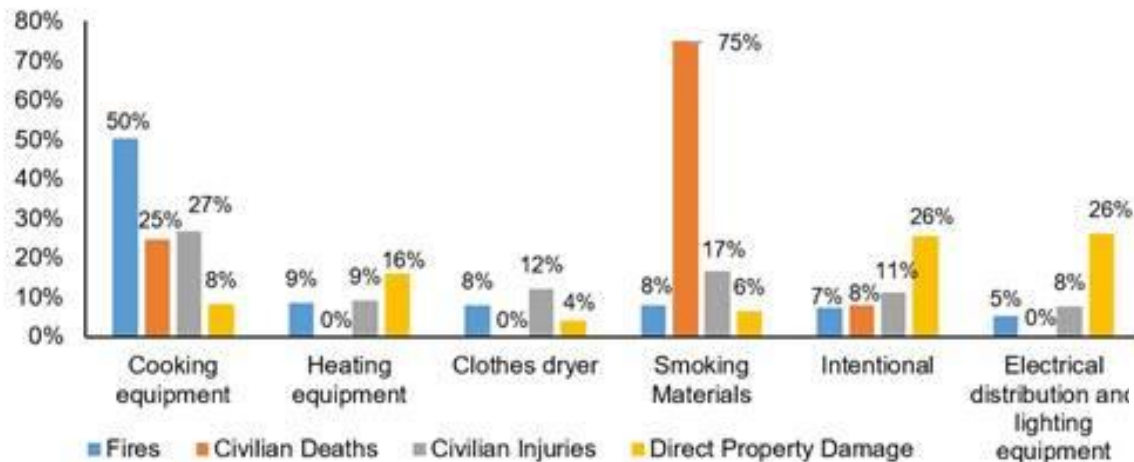
## 1. Why is FLS in hotels important?

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

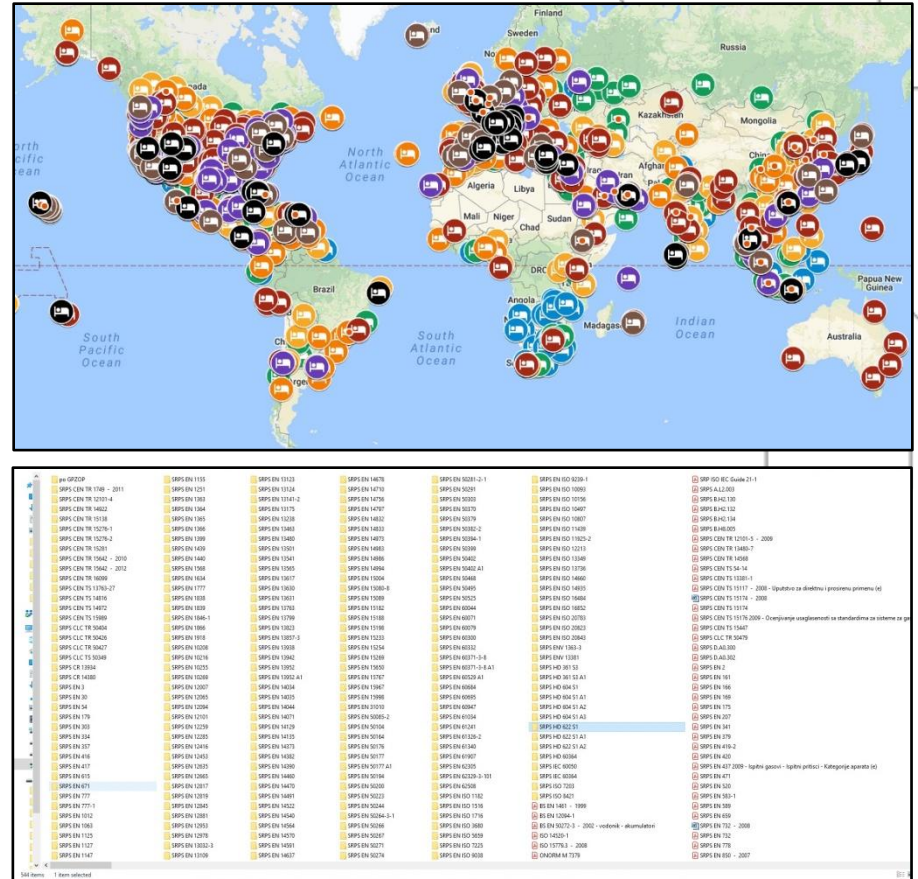
- evacuation of mass event without efficient crowd control can lead to non-fire related injuries



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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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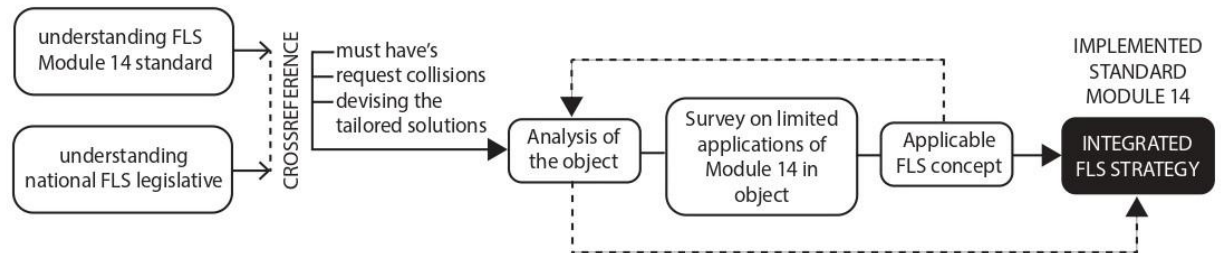




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brand  
standards

national  
legislative

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



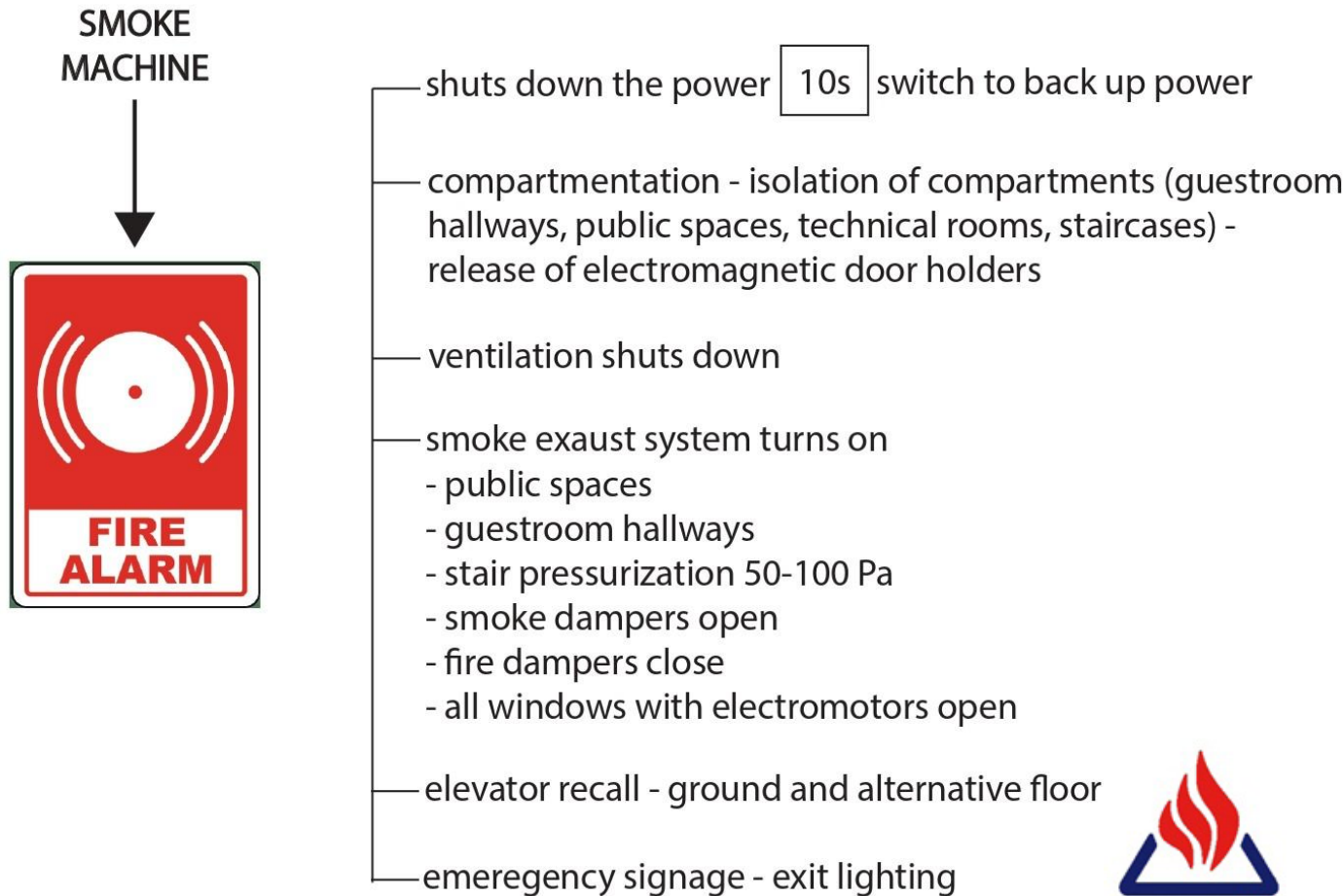
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## 4.3. FLS Marriott consultants – First punch / Integrated Testing

### 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.

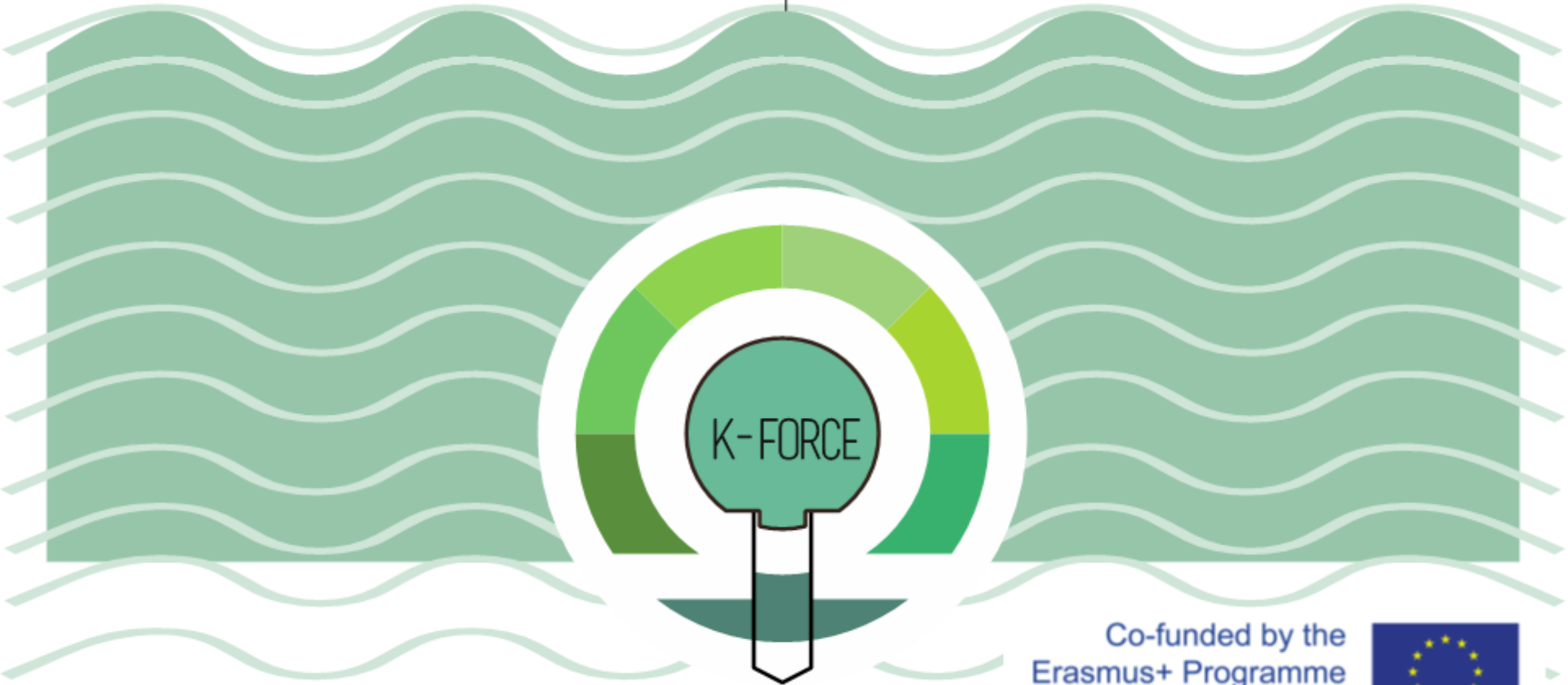
Integrated systems are programmed to automatically deliver clear, **step-by-step instructions** for what to do in case of an emergency: with whom to make contact, where to seek escape and where to assemble.

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  
for your attention  
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