



**NFCC**

National Fire  
Chiefs Council

# Fires in Tall Buildings: The Window of Opportunity

8<sup>th</sup> International Tall Building Fire Safety Conference

London 2024

Ben Levy

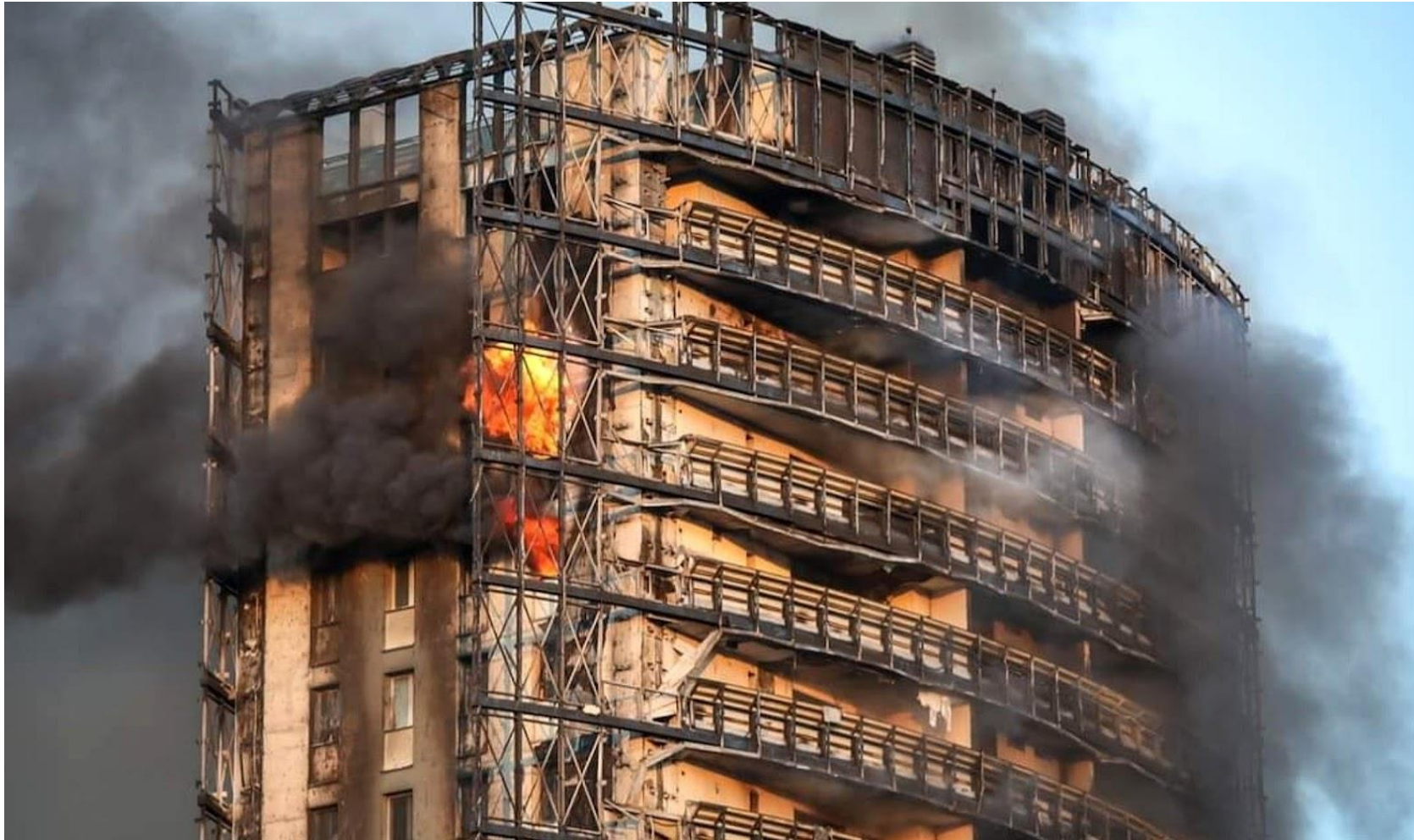
# Introduction

## Ben Levy

- NFCC Lead: Fires in Tall Buildings
- Firefighter: 28 years
- Greater Manchester Fire and Rescue Service  
Head of Service Delivery



# Introduction



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# Not Every Fire in a Tall Building is a Tall Building Fire



- Smoke from toaster?
- Fire isolated to a compartment / flat / apartment.
- Fire has breached the flat: Corridor contaminated. Stairwell clear of smoke.
- Fire / smoke has breached the Corridor. Stairwell contaminated.

# Foreseeable Risk



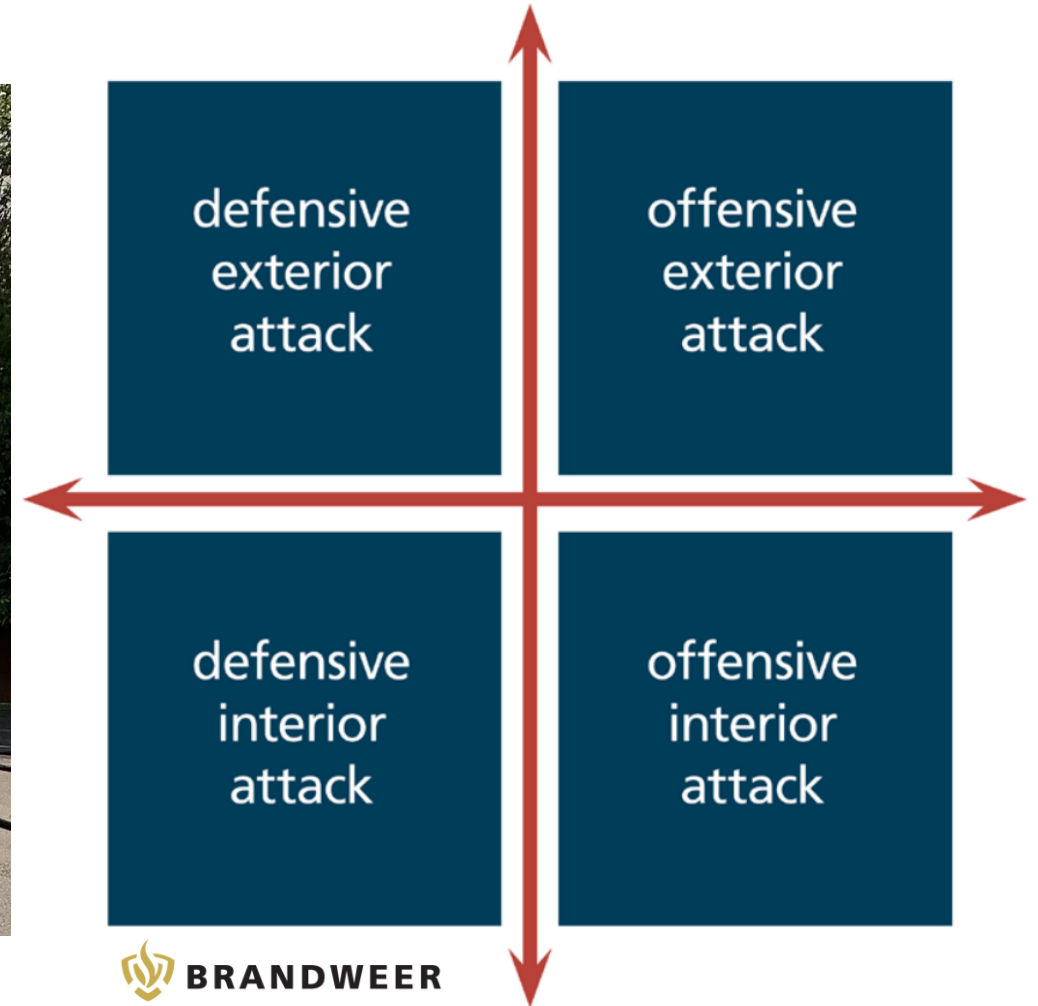
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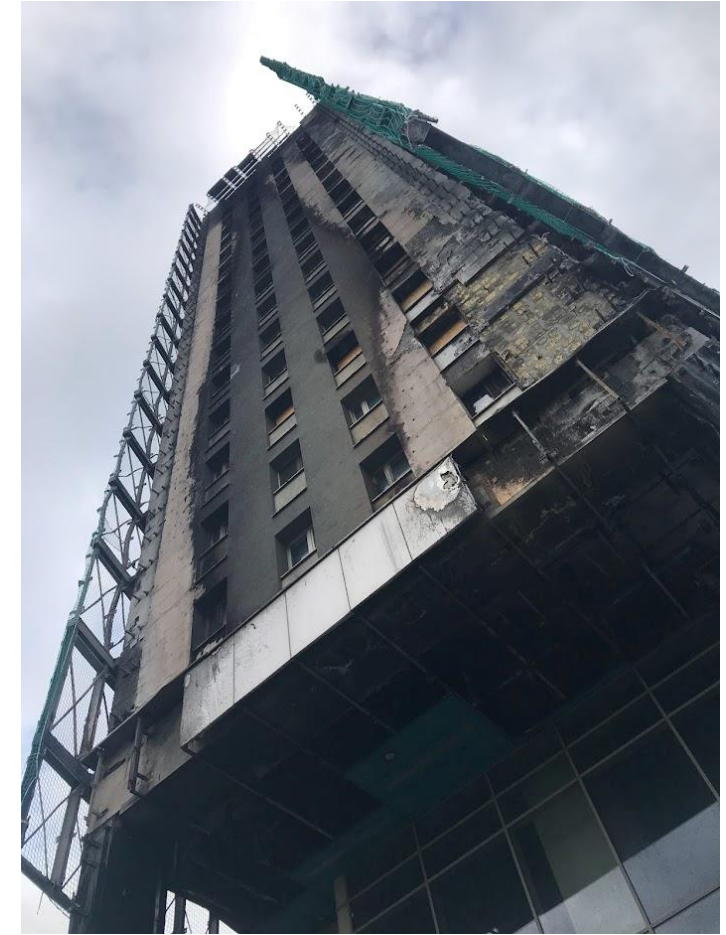


# Are We Training our Firefighters Effectively?



# The Assumptions We Make

- The original construction and any renovations / remedial work conform to acceptable standards.
- The building is occupied and used as designed in the fire strategy.
- The building is well managed, and all systems are working correctly in line with the fire strategy.
- Occupants can evacuate if they choose to do so.
- Any fires that do occur, conform to foreseeable 'common' (traditional) scenarios and heat release rates.
- Arson, terrorism and deliberate fire raising is managed out.
- There will be a FRS response within agreed timeframes, with adequate resources.
- Sufficient firefighting water is available at required pressures and flowrates.
- Our Policies and Procedures are fit for purpose.



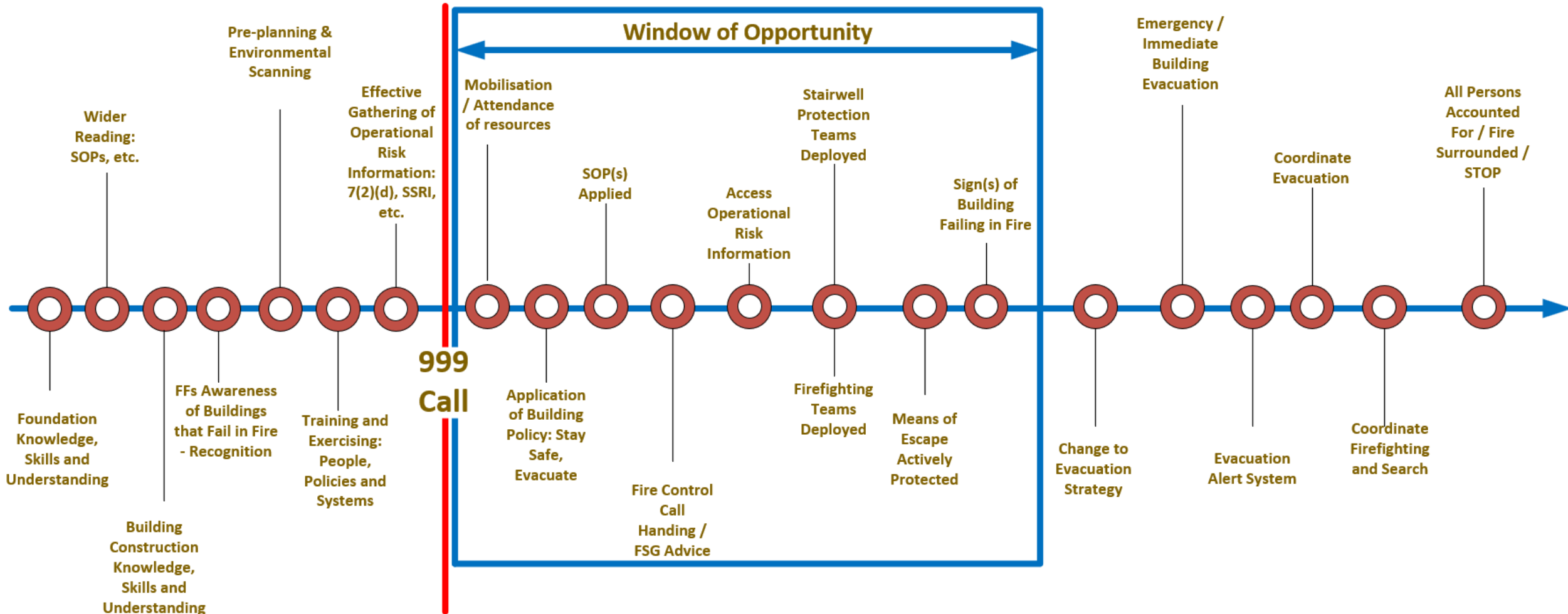
# When Those Assumptions Fail



- Wind impacted fire event.
- Failure of external wall systems.
- The fire gets 'out of the box'.
- Ineffective water.
- Prolonged tactical ineffectiveness / interference.
- Extended burn time without intervention (>18mins?).
- Smoke domination.
- The fire is well beyond suppression capabilities.
- Fire will require a tactical change (Plan B, C....).



# Buildings that Fail: Window of Opportunity

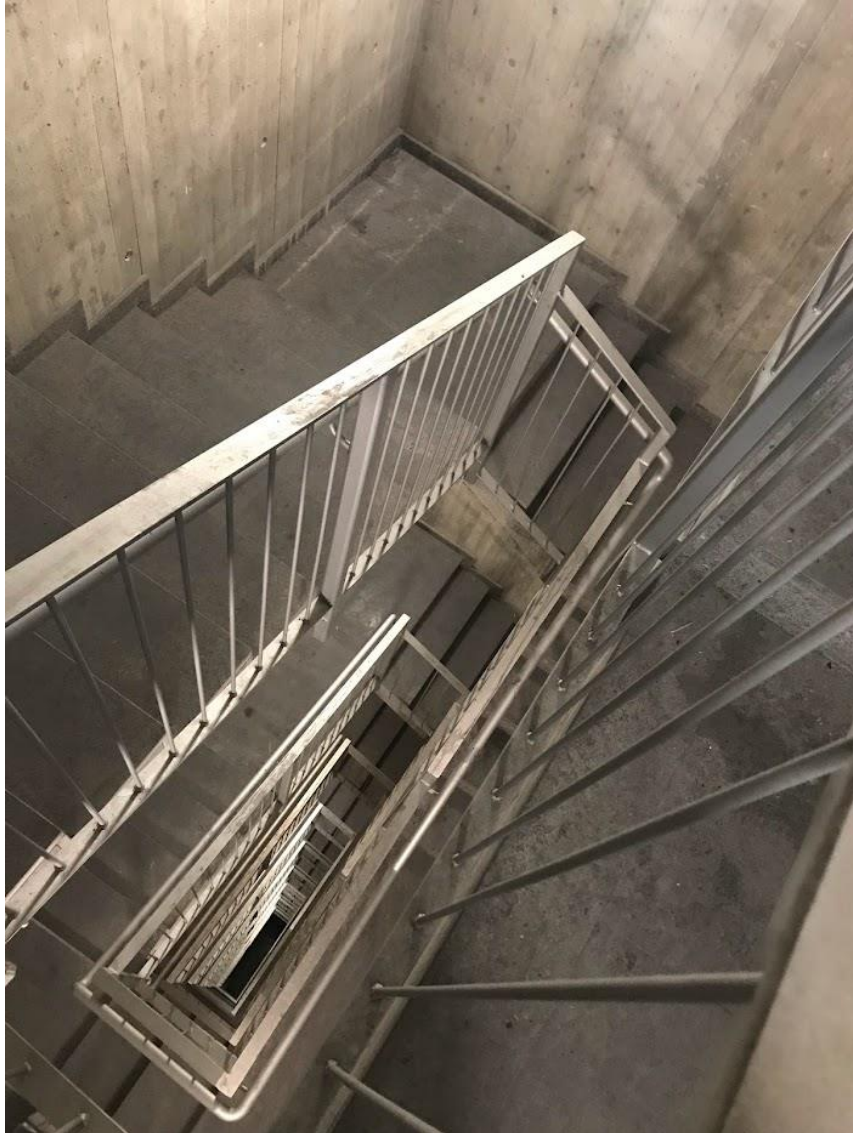


# Stairwell Protection: A Proactive Strategy



- A **reactive approach**, where the integrity of the building is considered compromised or is in danger of becoming so, and any ‘stay put’ arrangements have been revoked; or
- A **proactive approach**, where smoke spread has not occurred and in advance of the potential for conditions in the stairwell and means of escape to deteriorate.

# Stairwell Protection: A Proactive Strategy



- **Prepare and maintain stairwells**, to ensure they remain clear of smoke, obstructions and other hazards.
- **Provide advice to occupants**, including information about the evacuation strategy and the current state of the incident and operational activity.
- **Monitor and report on conditions** in corridors or lobbies off the stairwell.
- **Monitor people evacuating** and communicate information to the relevant sector.



# The Weak Link



You can add all the hardware, equipment, technology and money into your tall building firefighting plans, but your weakest link may be the physiology of firefighters and occupants.



# RICE

## RESCUE

Life Safety Intervention

## INTERVENTION

Firefighting:  
Compartment Entry

## CONTAINMENT

Actions to Limit  
Internal & External Fire  
Development & Spread

## EVACUATION

Part or Total

**It is entirely foreseeable that an intervention focussed approach to a tall building catastrophically failing in fire is beyond the physiological limitations of a firefighter and may be beyond the physical and technological limitations of a fire and rescue service.**



# Cultural Impacts and Opportunities

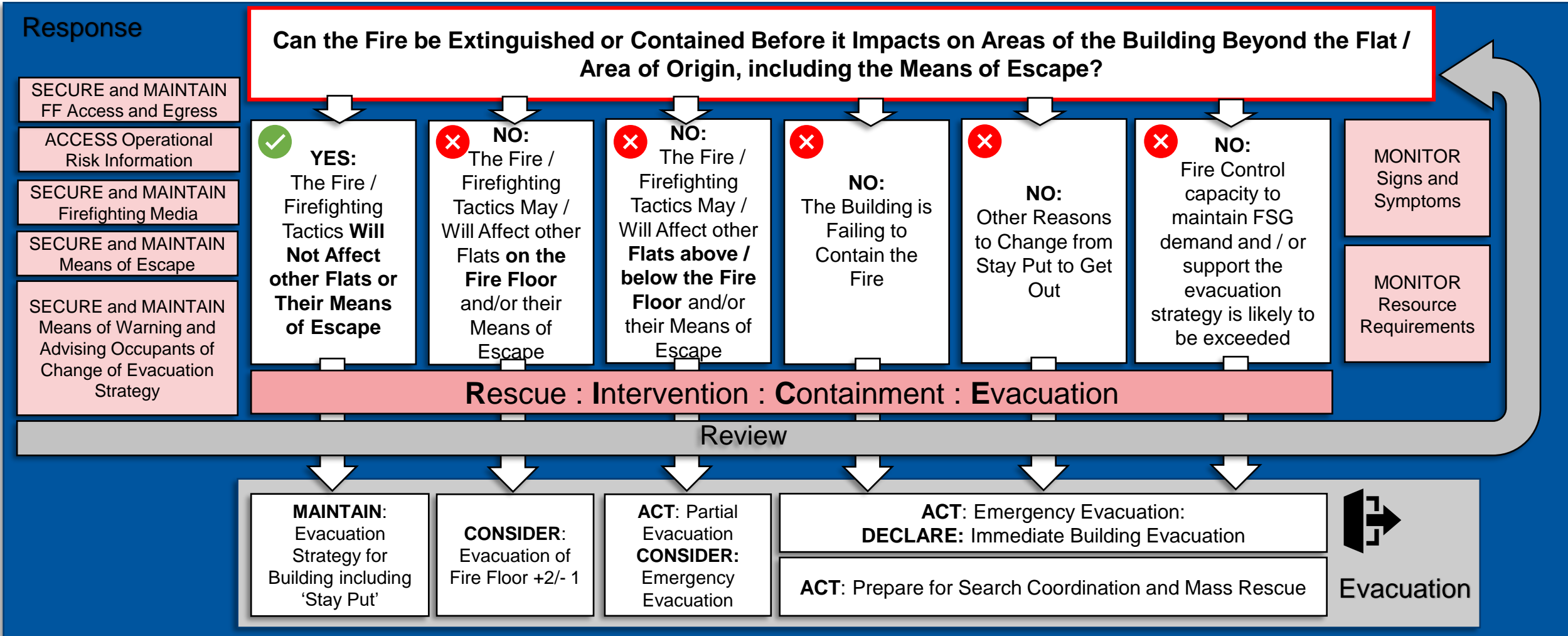


**GET OUT  
STAY OUT  
AND CALL  
999**





# NFCC Evacuation Decision Making Model



# 'Buildings Are Safe Until Occupants Move In...'



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# Thank You



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