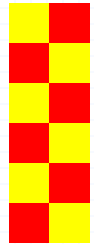




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Fire Statistics of 2020 and Case Studies on Fire Incidents

MAJ Md Faizal bin Mazlan
Senior Fire Investigator
Fire Investigation Unit





Scope

- Fire Statistics & Trends
- Common Causes of Fires
- Case Studies of Fire Incidents
- Learning Points





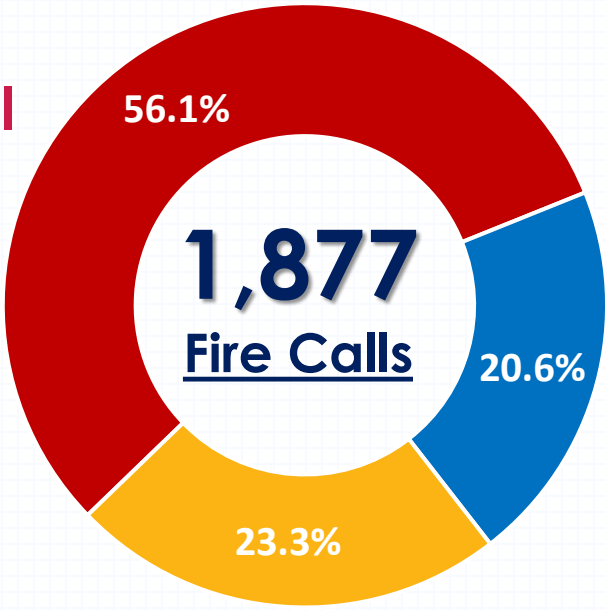
FIRE STATISTICS & TRENDS



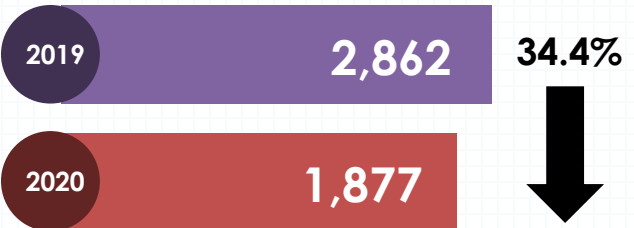
Total Fire Calls



Residential premises
(1,054)



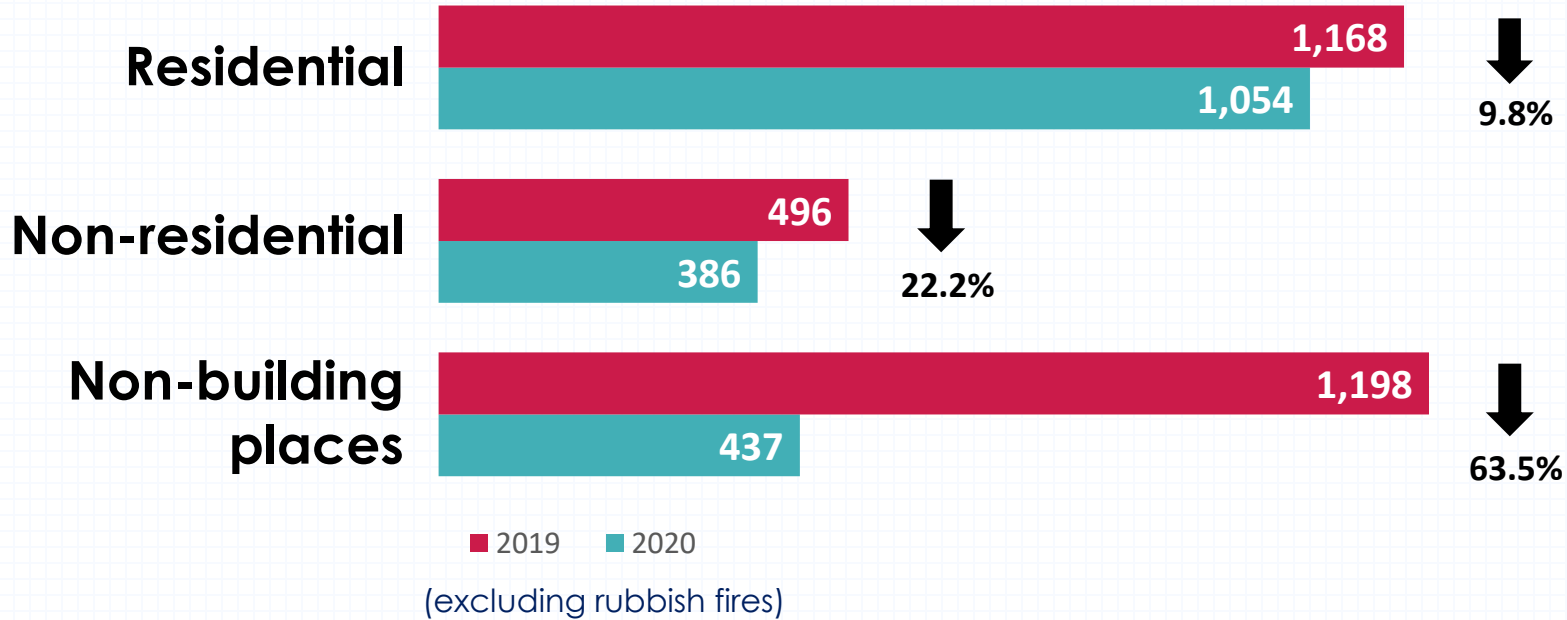
Non-residential premises
(386)



(excluding rubbish fires)

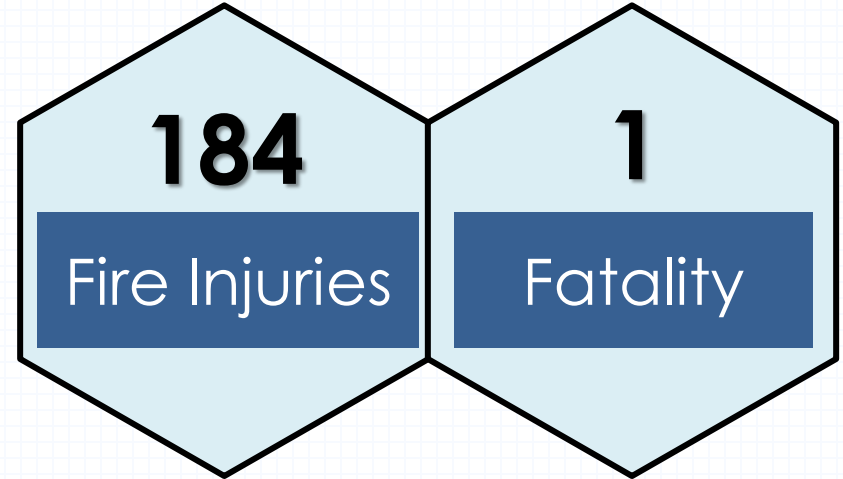
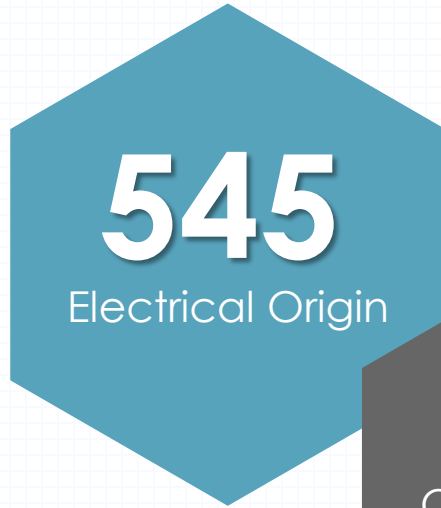
Non-building places
(437)

Breakdown of Fire Calls

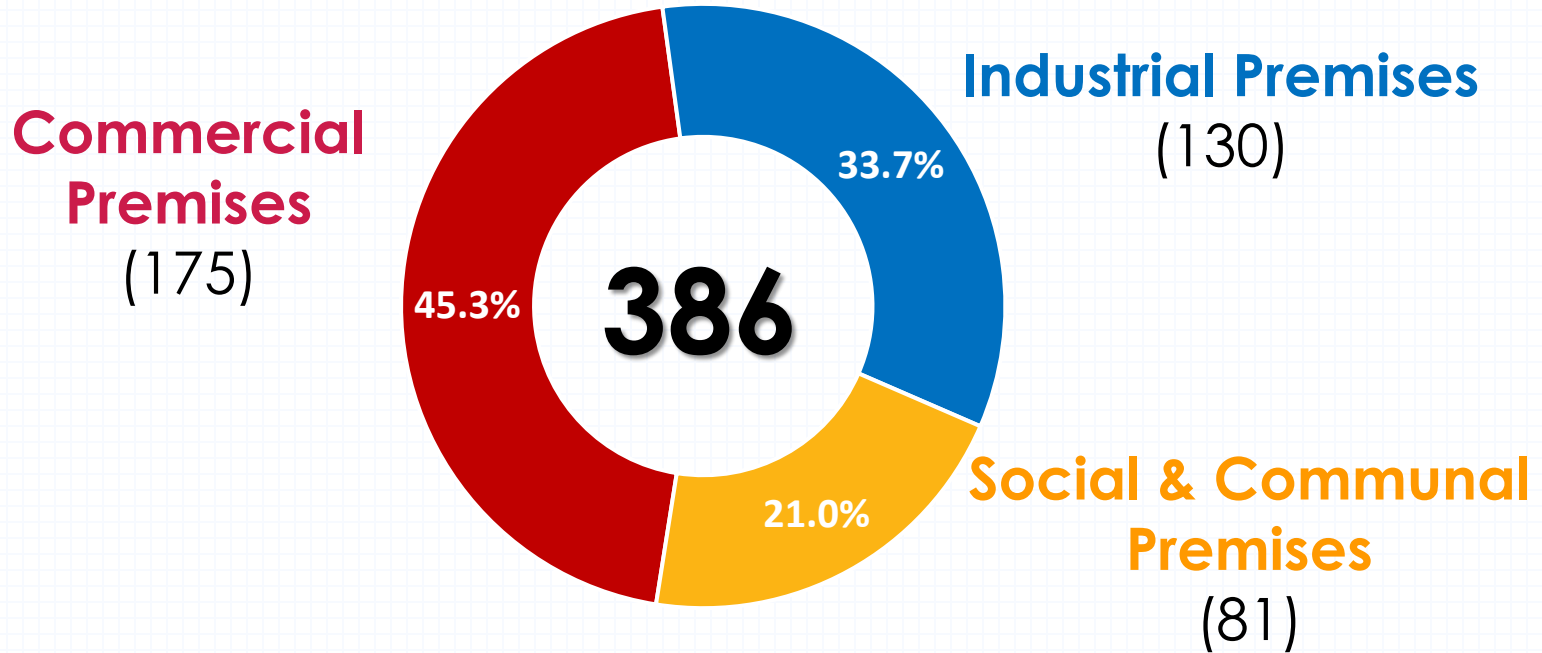




Cause of fires

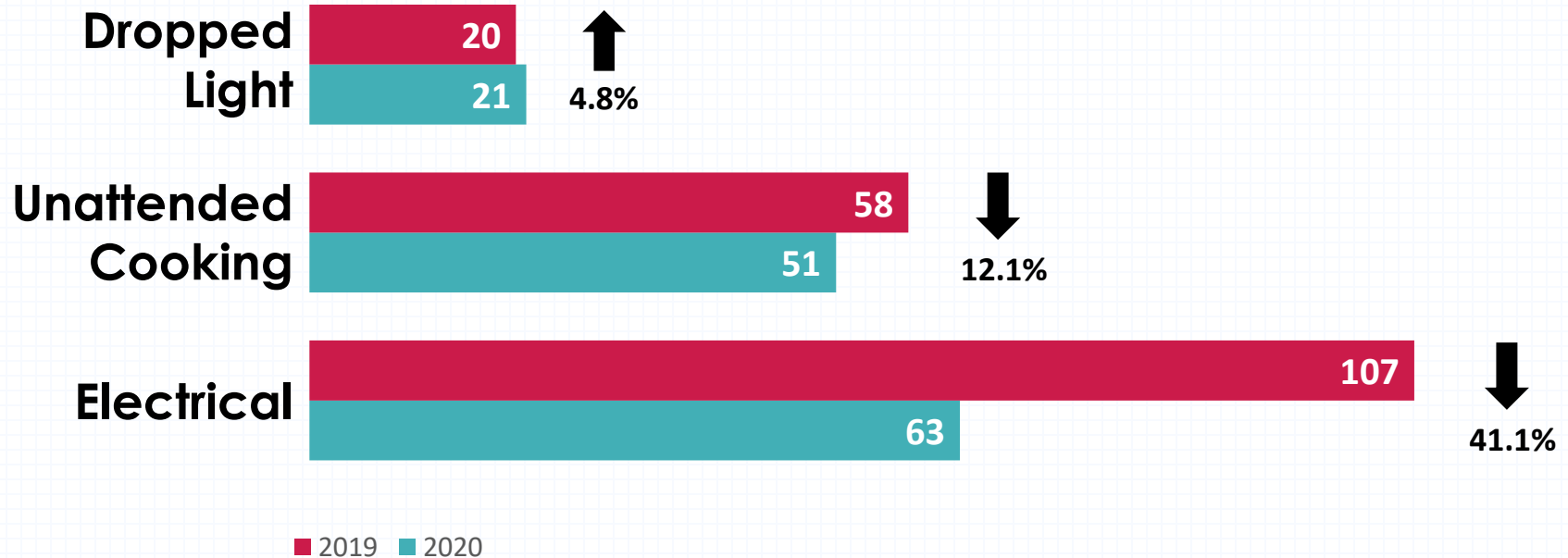


Breakdown of Fires At Non-Residential Premises



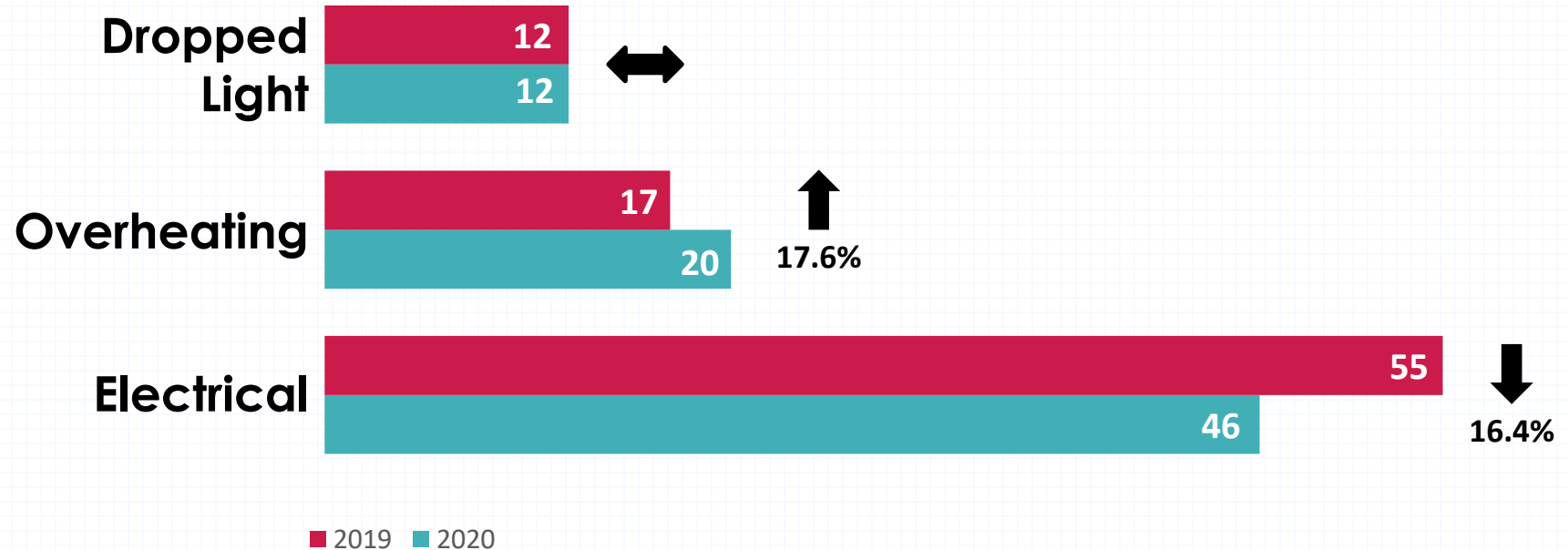


Top 3 Types of Fires in Commercial Premises



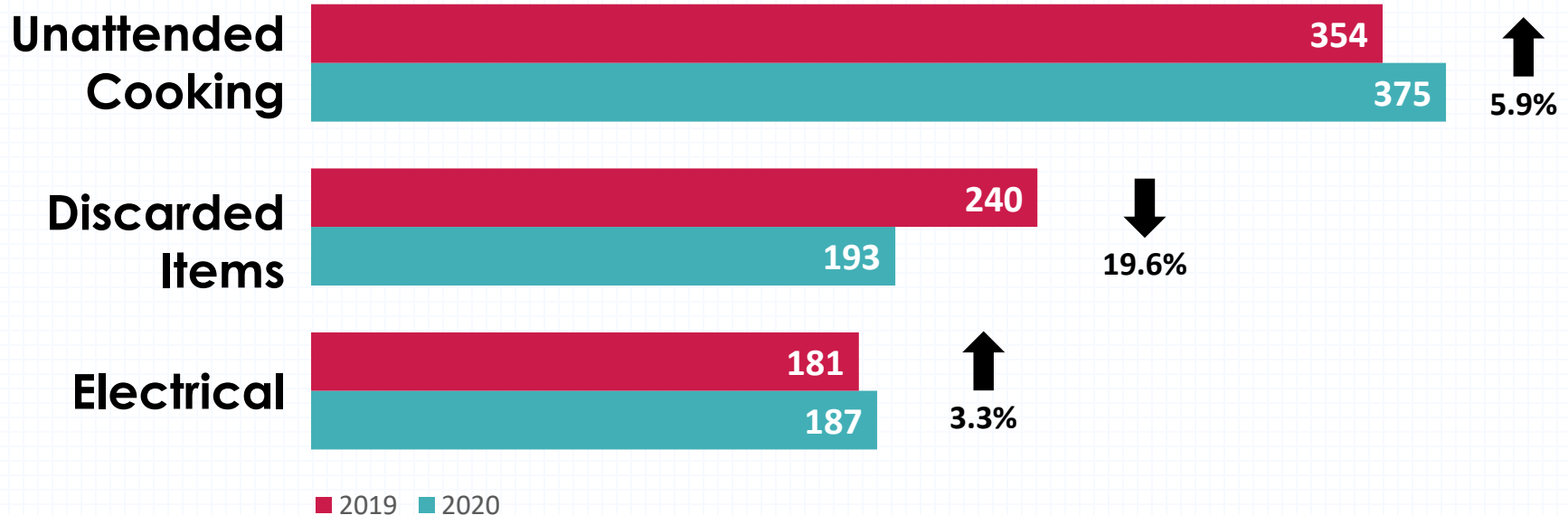


Top 3 Types of Fires in Industrial Premises



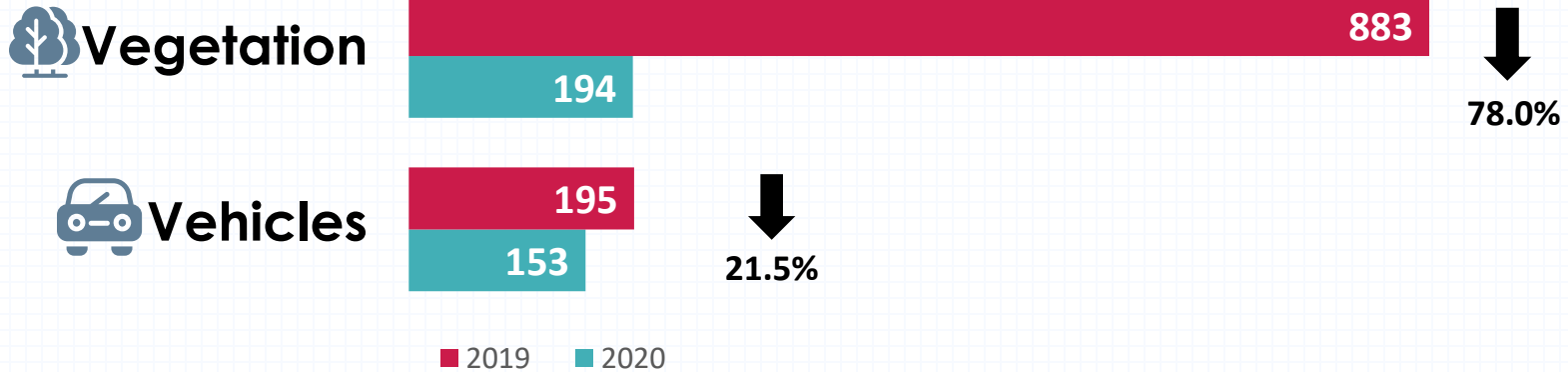


Top 3 Types of Fires in Residential Premises





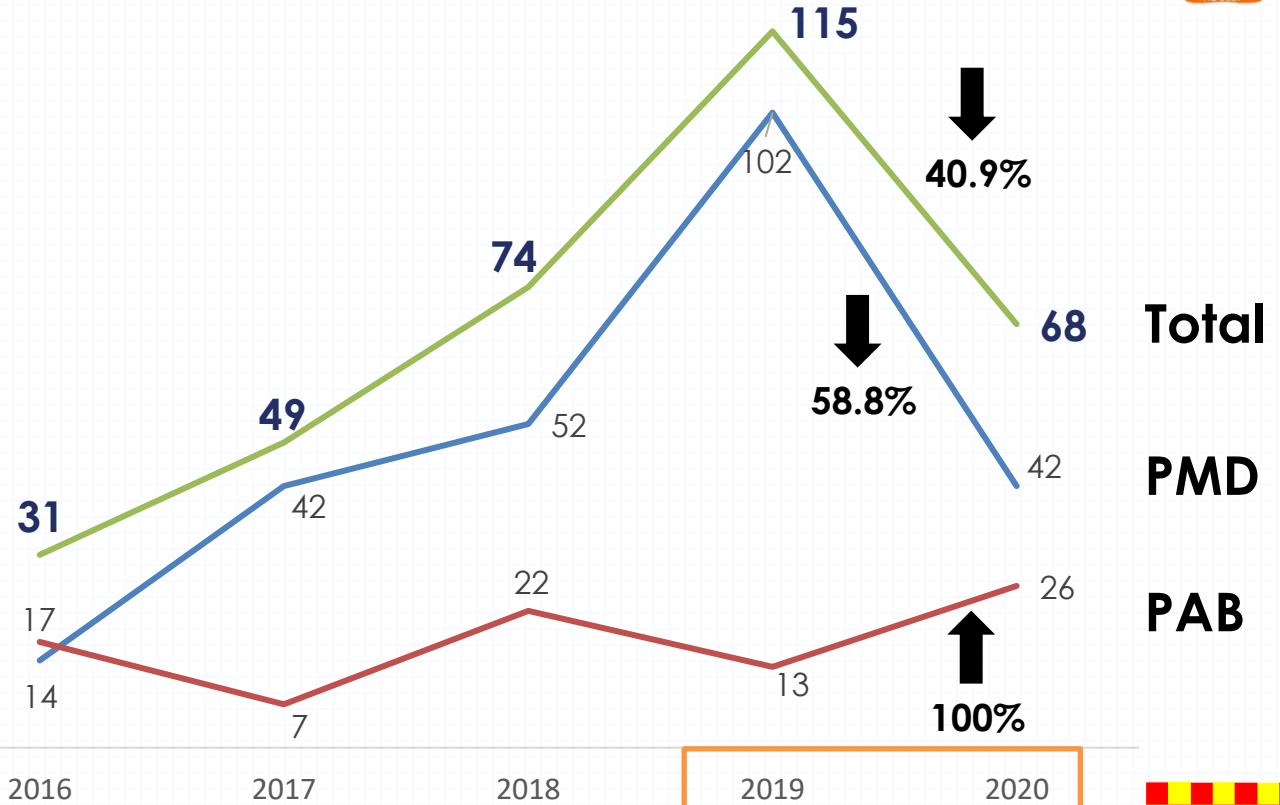
Fires at Non-Building Places



Active Mobility Fires (2016-2020)



Fire injuries from PMD & PAB fires

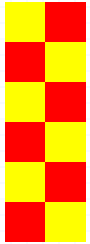




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Case Studies



Case Study #1

Office fire at Tai Seng

- Entire office as well as neighbouring offices sustained heat, smoke and water damage
- Fire originated from an office cubicle
 - ❖ Common **electrical devices** e.g. Workstations, laptops, chargers, fans, power banks all found plugged in / energized in nearby desks



Fire from a laptop



Source : YouTube



Case Study #2

Factory Fire at Defu Lane

- Entire factory at lvl 1 & 2 sustained heat, smoke and water damage.
- Fire originated from the **fluorescent wall light**.
 - ❖ Worker switched off all lights but kept 1 light 'on'



Fire from a ceiling light



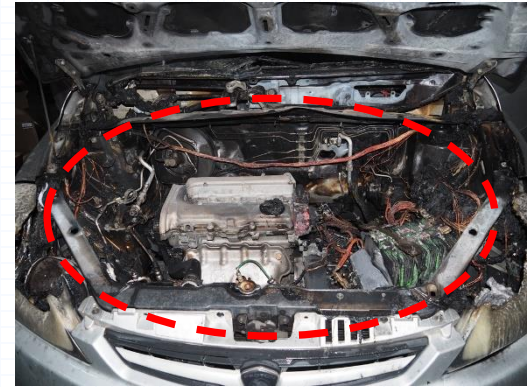
Source : YouTube



Case Study #3

Vehicle fire at Kaki Bukit

- Fire damage was limited mainly to the car
- Premise including the office sustained heat, smoke and water damage
- Fire originated from a car which had been faulty



Fire from a faulty vehicle



Case Study #4

Kitchen Stall fire at a Atrium Fair

- The entire mall of shoppers and tenants were evacuated
- Although fire damage confined to the deep fryer but smoke and water damage was extensive
- ❖ Fire involved **overheating** of the contents in a deep fryer at the atrium fair
- ✓ Fire was extinguished by members of public using hose reel and fire extinguishers

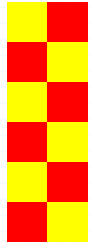




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Safety Prevention Tips



1 2 3 4 5 6 - 0 0



ELECTRICAL FIRES - CAUSES

Overloading

Never overload electrical outlets with electrical appliances

- Excessive current causes heating, melting and insulation damage to the wires/cables, possibly starting a fire.
- May ignite the conductors or nearby combustibles.

This "OCTUPUS" can kill !



ELECTRICAL FIRES - CAUSES

Check the condition of wires regularly. Frayed wires or cracked cords should be replaced or repaired immediately

Insulation Failure

- Degrade with age, degraded by heat/chemicals
- Failure of these insulation can lead to short circuit or overheating resulting in fire
- Common causes of insulation failure includes:
 - Poor contact wire or equipment
 - Electrical stress (high current and voltage stress)
 - Physical stress (bending of wires and cables)



ELECTRICAL FIRES - CAUSES

Loose / Improper Connection

Have a Licensed Electrical Worker to Perform Regular Checks / Servicing

- Increase resistance in the circuit.
- High resistance causes overheating.
- Arcing may occur with frequent making / breaking of contacts.
- May ignite the conductors or nearby combustibles.

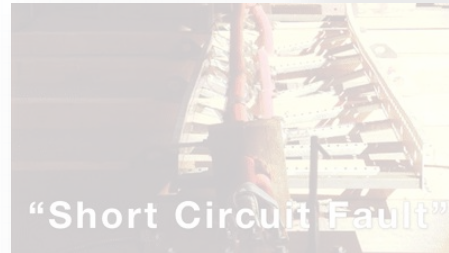
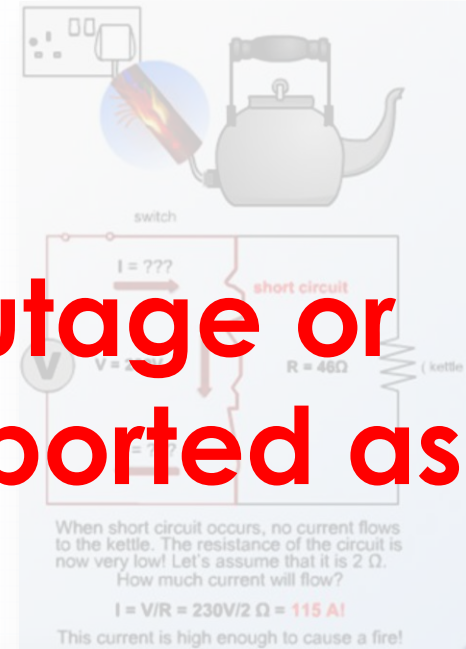


ELECTRICAL FIRES - CAUSES

Short Circuit

Do not ignore a power outage or items which have been reported as faulty

- Results in overheating, damage to insulation and ignition of nearby combustibles.
- Common causes
 - Wrong connection
 - Bypass safety system



Unattending Cooking Fires

Overheating of the contents

Do not leave cooking unattended; extinguish all naked flames or off the electric appliance when not in use.



Devastating Consequences

Grenfell Tower Fire

On 14 June 2017, a fire started out due to a **malfunction fridge-freezer** on the **4th floor**. The fire **spread rapidly** up the building's exterior bringing fire and smoke to the higher floors.

It caused **72 deaths** and more than 70 other were injured and evacuation of over 223 residents.

This was the deadliest structure fire in the UK since 1988.



Source : The Telegraph UK



Thank You

