

Please exit before taking a selfie

# CONCEPTS OF FIRE SAFETY

**1 EVACUATION**

**2 PASSIVE CONTAINMENT**

**3 ACTIVE INTERVENTION**

**4 ACCESS FOR FIRE FIGHTING  
AND RESCUE**



Specific prescriptions  
with reference to  
Purpose Group and  
occupancy, type, size  
and height of  
building  
**UBBL Schedules  
5,6,7,8,9,10**



Prescriptions with  
reference to building  
Height and Volume, for  
**ALL** building types.

- **EVACUATION**

- Detection
- Alarm
- Exits
- Travel distance
- Components
- Capacity of exits





Accepted assumption in designing for safe evacuation:

**“Only one fire at one location at a time”**

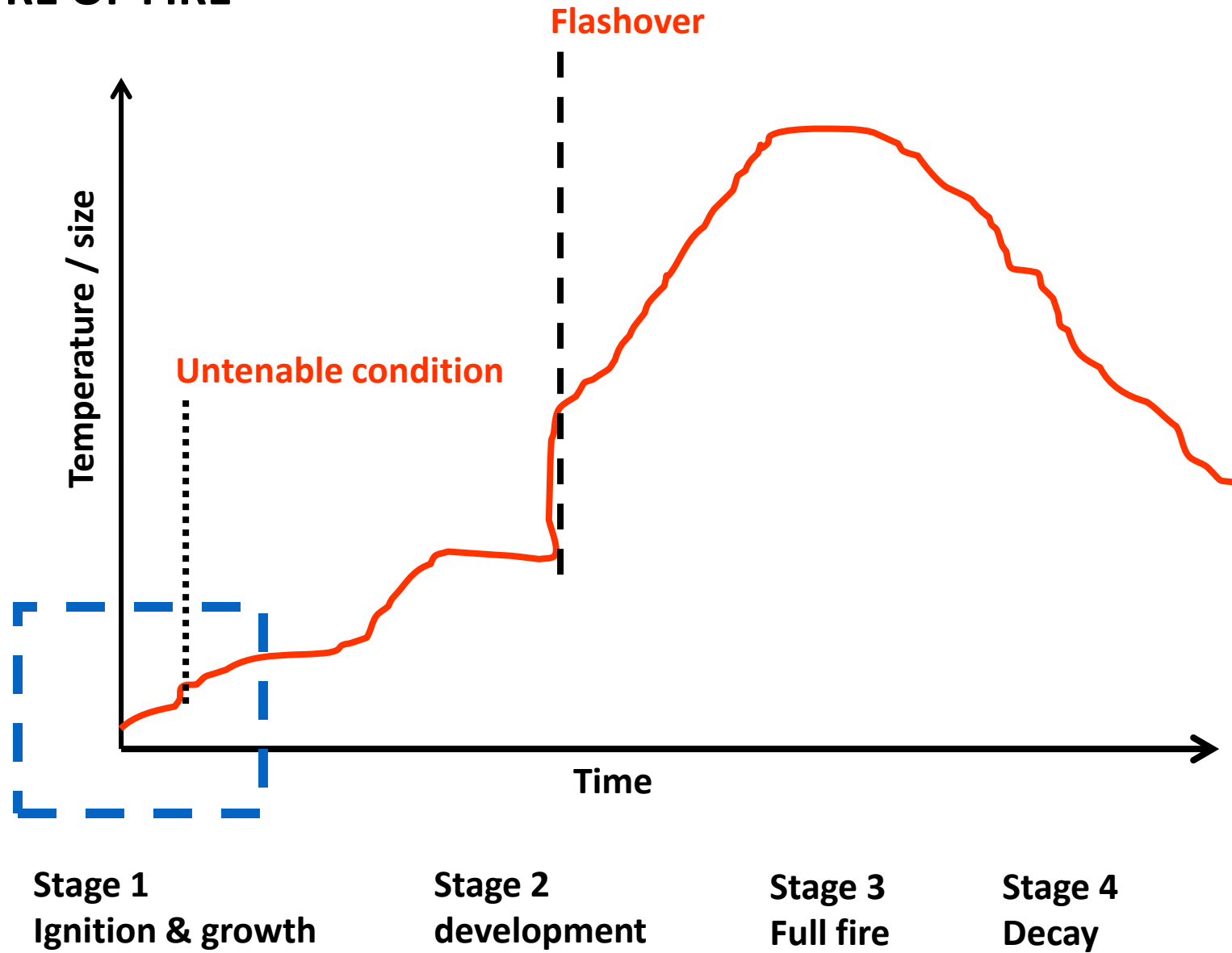
Time from 17:31:37 to 17:31:53      time from the first spark to explosion : 16 seconds

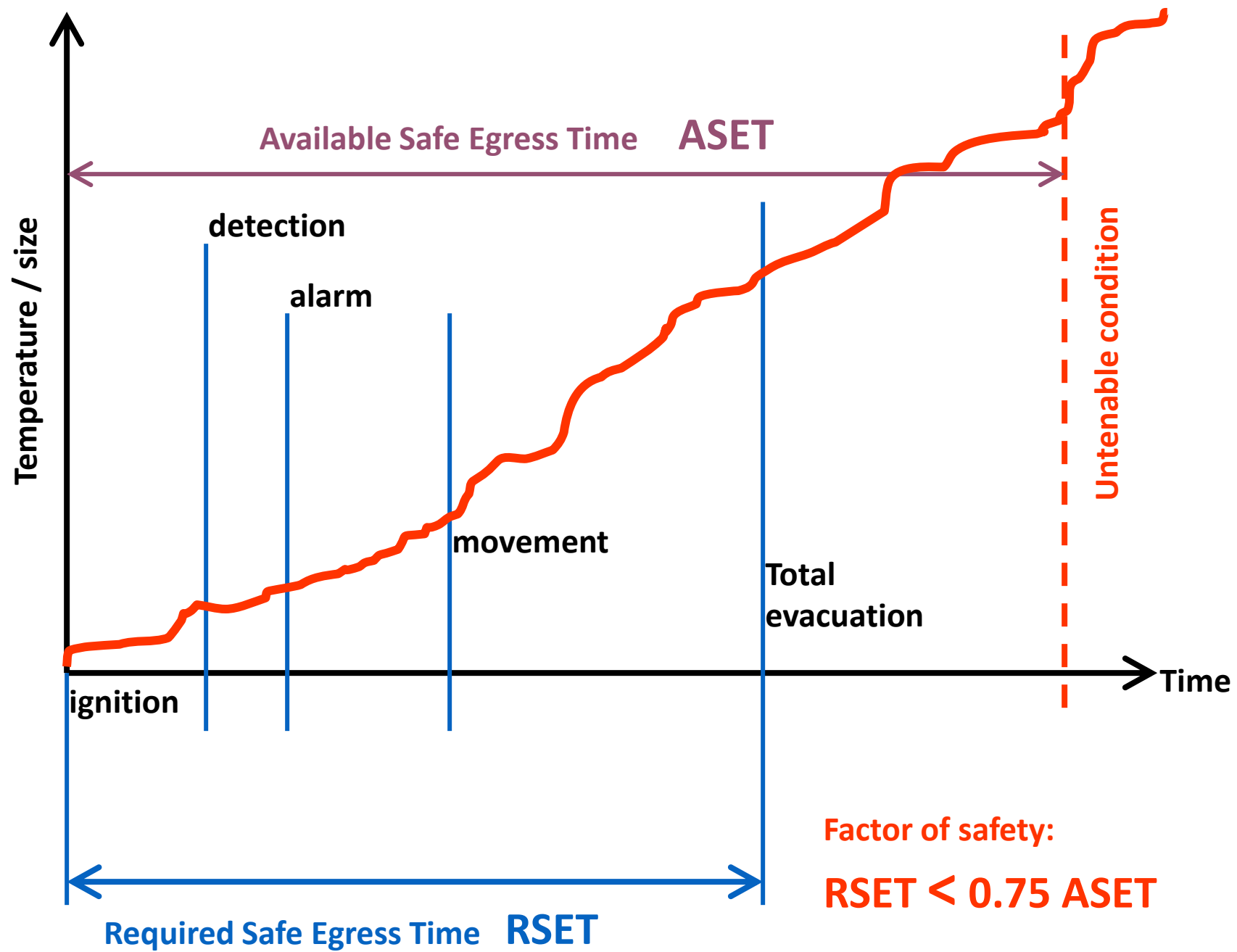


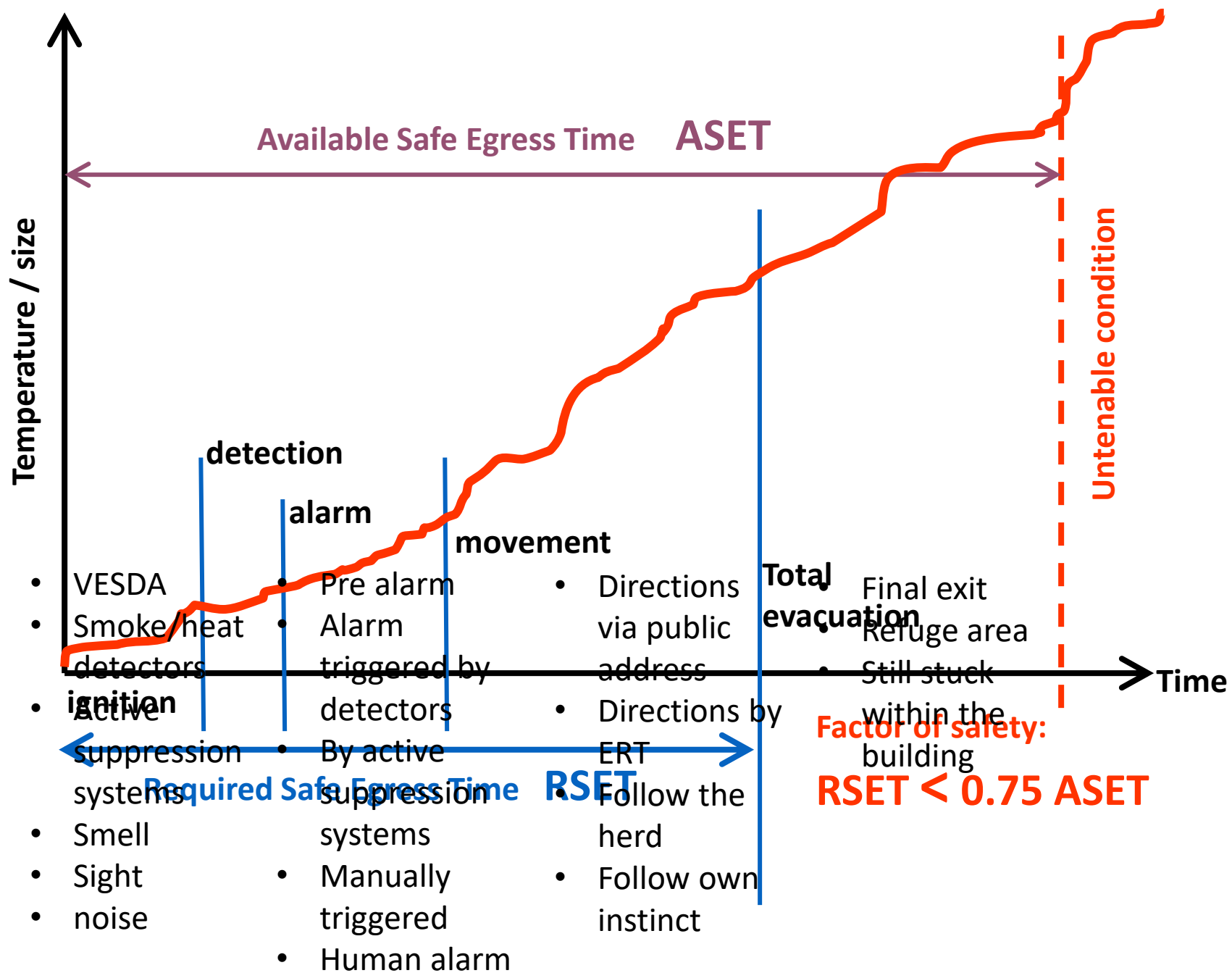
## MS 1183:2015 : Occupancy characteristics

	 FAMILIAR	UNFAMILIAR 
AWAKE 	<b>Office</b>  <b>Warehouse</b>  <b>School</b>  <b>Factory</b>	<b>Carpark</b>  <b>Bus station</b>  <b>Hospital outpatient</b>
ASLEEP  Long term  Short term  Medical 	<b>Private house</b>  <b>Condominium</b>	<b>Hotel</b>  <b>Hospital inpatient</b>

# NATURE OF FIRE









## UBBL 2012 : 7<sup>th</sup> Schedule : Maximum Travel Distance

Purpose Group	Limit when alternative exits are available		
	(1) *Dead-End Limit (metre)	(2) Unsprinklered	(3) (metre) Sprinklered
<b>I. Small Residential</b> .....	NR	NR	NR
<b>II. Institutional</b>			
Hospitals, Nursing Homes, etc .....	9 15	30	45
School .....	6 15	45	60 75
Open Plan .....	NR	30	45
Flexible Plan .....	NR	45	60
<b>III. Kediamaan lain</b>			
Hotels .....	10 15	30	45
Flats .....	10 20	30	45 75
Dormitories .....	0 15	30 45	45 75
<b>IV. Office</b> .....	15	45	60 75
<b>V. Shops</b> .....	15	30 45	45 60
<b>VI. Factory</b> .....			
General and Special Purpose .....	15	30	45 60
High Hazard .....	0	22	22.5 35
Open structures .....	NR	NR	NR
<b>VII. Place of Assembly</b> .....	0 15	45	61 60
<b>VIII. Storage and general</b>			
Low and Ordinary hazard .....	NR 15	NR 30	NR 60
High Hazard .....	NR 10	22.5 20	30 35
Parking Garages .....	15	30 45	45 60
Aircraft Hangars (Ground Floor) .....	NR 15	30+	45+
Aircraft Hangars (Mezzanine Floor) .....	NR 15	22.5 20	22.5 20

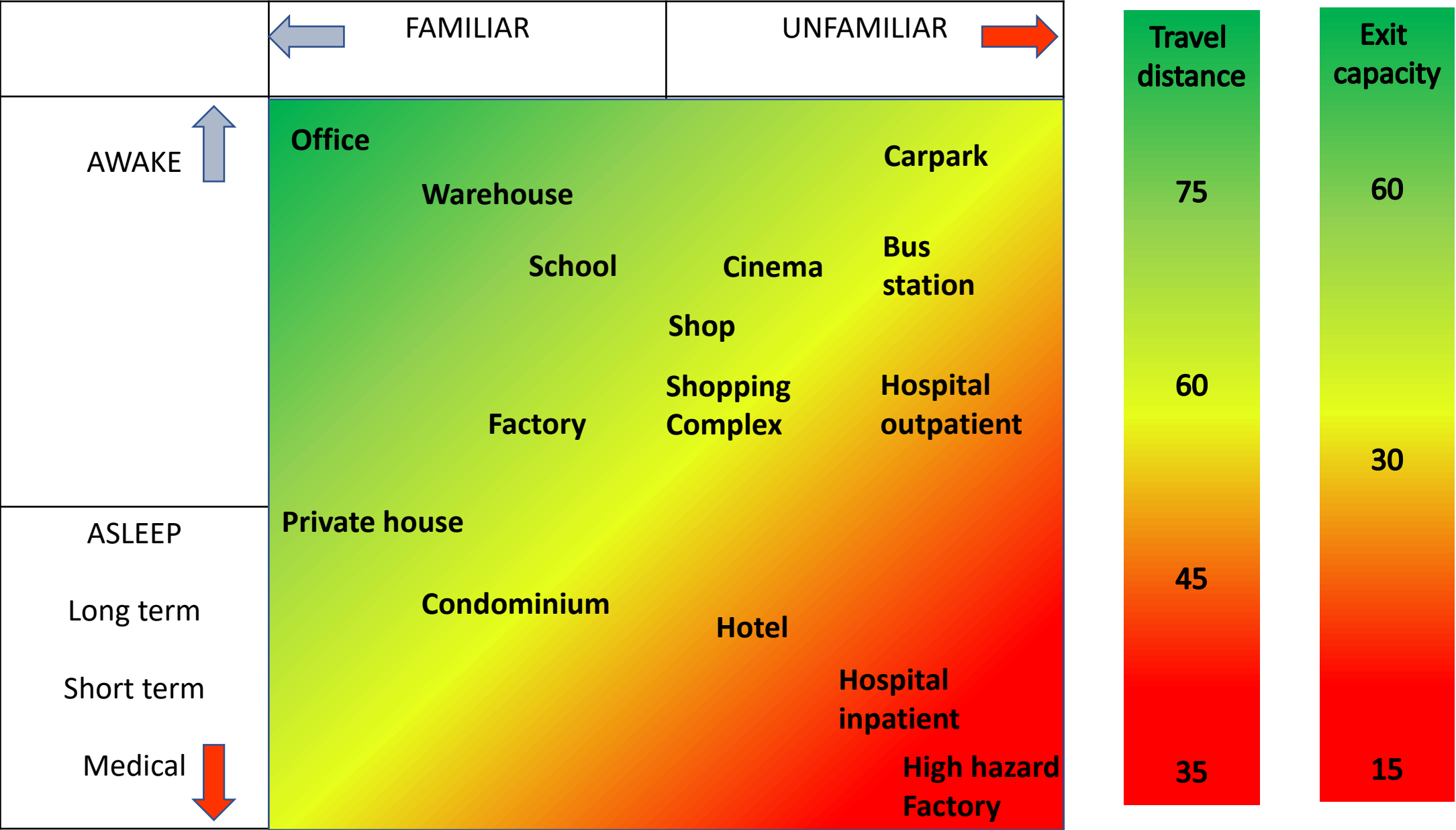
UBBL 1984  
provisions  
shown in **RED**

## UBBL 2012: 7<sup>th</sup> Schedule : Occupant Load and capacity of exits

Purpose Group	Occupant load square metre per	CAPACITY EXITS No. of persons per unit-Exit Width					
		Doors outside	Horizon toal Exit	Ramp Main Exit	Ramps Sec. Exit	Escalator	Stairs
I. Small Residential	NR	NR	NR	NR	NR	NR	NR
II. Institutional		100	100	100	60	-	60
Class-room Area	2 net						
Workshop and Vocational areas	4.5 net						
Day Nurseries with sleeping facilities	3.5 net						
Hospital	-	30	30	30	30	-	22 15
Sleeping Department	12 gross						15
In-patient Department	24 gross						
III. Other Residential	20 gross	100 50	60 50	60 50	60 50	45 45	30
Flat	24 gross	50	50	50	50	45	30
General public area in Hotels (Bedroom in hotels at 2 persons per room)	24 gross						
IV. Shops OFFICE	10 gross (4)	100	100	100	60	60	60
V. Kettai SHOP	-	100	100	100	60	60	60
Street floor and sale basement	3 gross (4)						
Other floors	6 gross (4)						
Storage and shipping	10 gross						
VI. Factory	10 gross	100	100	100	60	60	60

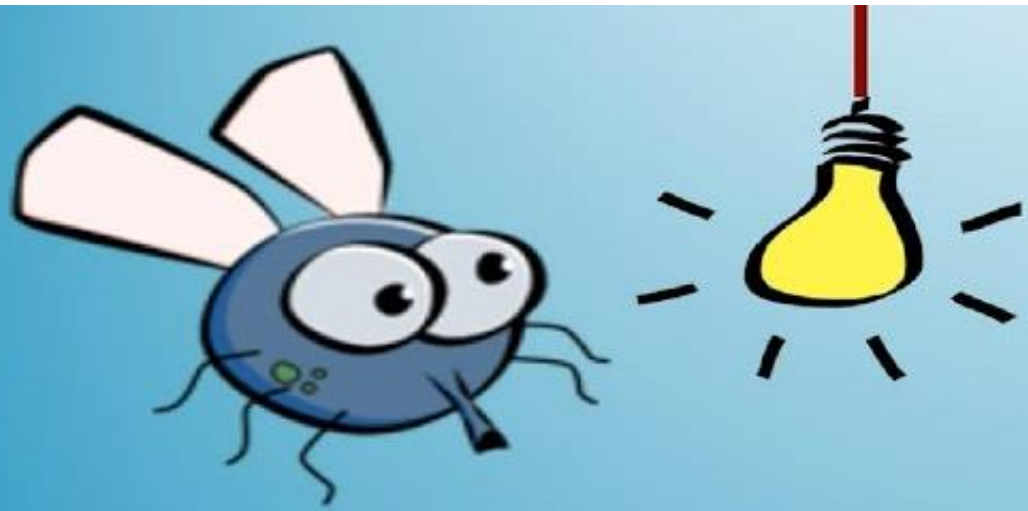
UBBL 1984 provisions shown in RED

MS 1183:2015 : Occupancy characteristics





**FIGHT.....** *or flight?*



# Why do bugs fly into lights?

*When in flight (from an indoor fire.....)*

*we choose.....*

*to retrace the route from which we enter the building*

*brightness over darkness*

*open air over enclosed areas*

*open doorways over closed doorways*

*see through doors over solid doors*

*the light at the end of the tunnel*















Pintu 2 Keluar  
Door Exit

KELUAR

KELUAR

KELUAR

Level 3  
Level 2M  
Level 2  
Level 1

Level 3  
Level 2M  
Level 2  
Level 1





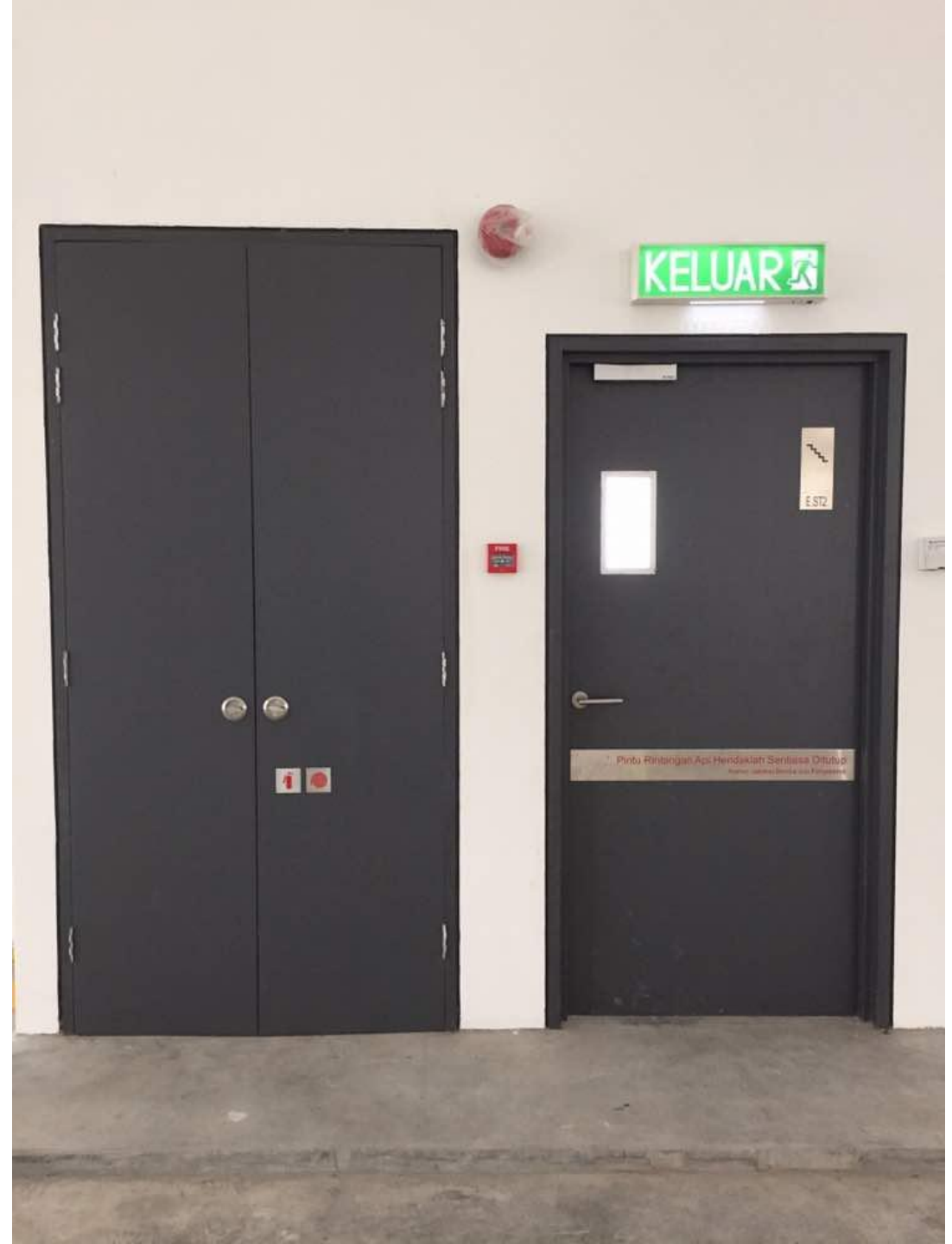


















PINTU RINTANGAN API  
HENDAKLAH SENTIASA DITUTUP  
(LALUAN KECEMASAN SAHAJA)

PINTU RINTANGAN API  
HENDAKLAH SENTIASA DITUTUP  
(LALUAN KECEMASAN SAHAJA)

KELUAR





KELUAR





Before

Window treatment  
adequate vision





















# Final exit



**IN CASE OF FIRE**



**EXIT BUILDING  
BEFORE POSTING ON  
SOCIAL MEDIA**

*Thank you!*