



SCDF
The Life Saving Force

FSM Performance & Case Studies

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2. Case Studies
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5. FSM handbook



FSM Duties

<https://www.scdf.gov.sg/>

=> Fire Safety

=> Permits and Certifications

=> Fire Safety Manager

=> Duties of FSM

FIRE SAFETY ACT
(CHAPTER 109A, SECTION 61(1))

FIRE SAFETY (FIRE SAFETY MANAGERS) REGULATIONS

ARRANGEMENT OF REGULATIONS

PART I
PRELIMINARY

Regulation

1. Citation
2. Definitions

PART II

DUTIES OF OWNER OR OCCUPIER OF SPECIFIED PREMISES

3. Duties of owner or occupier of specified premises
4. Submission of report to Commissioner
5. Owner or occupier to ensure compliance by fire safety manager
6. Duty of occupier or owner to appoint another person to act in absence of fire safety manager

PART III

DUTIES OF FIRE SAFETY MANAGERS

7. General duties of fire safety manager
8. Fire safety report

Commonly Neglected FSM Duties

- **ERP** – Reviewed/Endorsed yearly and communicated to the occupants
- **Evacuation Drills** – Conducted 2x a year
- **TTX** – Conducted 2x a year
- **CERT** – Trained* and Equipped*
- **Daily Checks** – Remove the fire hazard

Table of Records of Emergency EXERCISES CONDUCTED

S/N	Date of Exercise	Name and Appointment of Conducting Personnel	Signature of Conducting Personnel	Comments

NATIONAL CERT STANDARD

	CLASSIFICATION OF CERT PREMISES	MINIMUM TRAINING	MINIMUM EQUIPPING				BASIC TASKING
			PPE ¹	MITIGATION	FIRST AID	COMMUNICATION	
P&FM Premises Tier 1 P&FM	Premises storing more than 5 metric tons of Petroleum & Flammable Material ¹	WSQ Respond to Fire & Hazmat Emergency (3 days) CERT First Aider Course (1 day)	<ul style="list-style-type: none"> • Chemical suits² • Rubber gloves² • Rubber boots² • Firefighting suits • Firefighting helmets • Goggles / Face shields • Firefighting gloves • Firefighting boots • Breathing apparatus 	<ul style="list-style-type: none"> • HazMat absorbents² • Leak sealing devices² • Overpack drums² • Fire extinguishers (appropriate class) • Firefighting nozzles & hoses 			<ul style="list-style-type: none"> • Contain HazMat leaks² • Prevent spread of HazMat² & fires • Activate HazMat² & fire protection systems • Contain and mitigate incipient stages of HazMat² & fire incidents • Perform first aid, CPR & use AED • Implement In-Place Protection • Conduct mass evacuation • Assist emergency responders



Commonly Neglected FSM Duties

- **Maintenance of fire safety works**
– Fire Certificate
- **Occupant Load – Building Plans**
- **Fire Safety Report – Submitted annually to building owner**
- **Notify SCDF – Occurrence of any fire incident in the premises**

Annex A

FIRE SAFETY MANAGER (FSM) ANNUAL REPORT TO OWNER

INFORMATION

Building Name		No. of Storeys	
Owner's Name		Tel. No.	
FSM's Name		Tel. No.	
Building Address		Occupant Load	
Correspondence Address (if different from above)		Gross Floor Area	

PERIOD OF REPORT

Date	Month	Year	TO	Date	Month	Year



Anything I can do better to assist my Building Owner?

Fire Drill

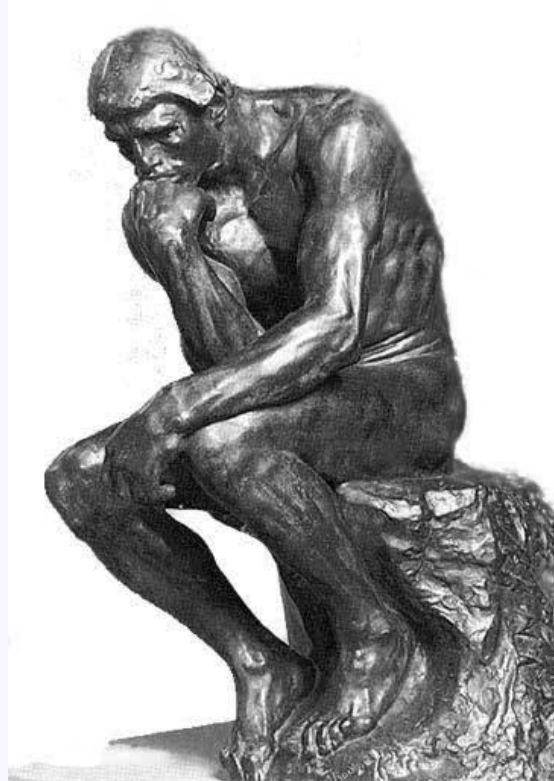
CERT

Daily Checks

ERP

TTX

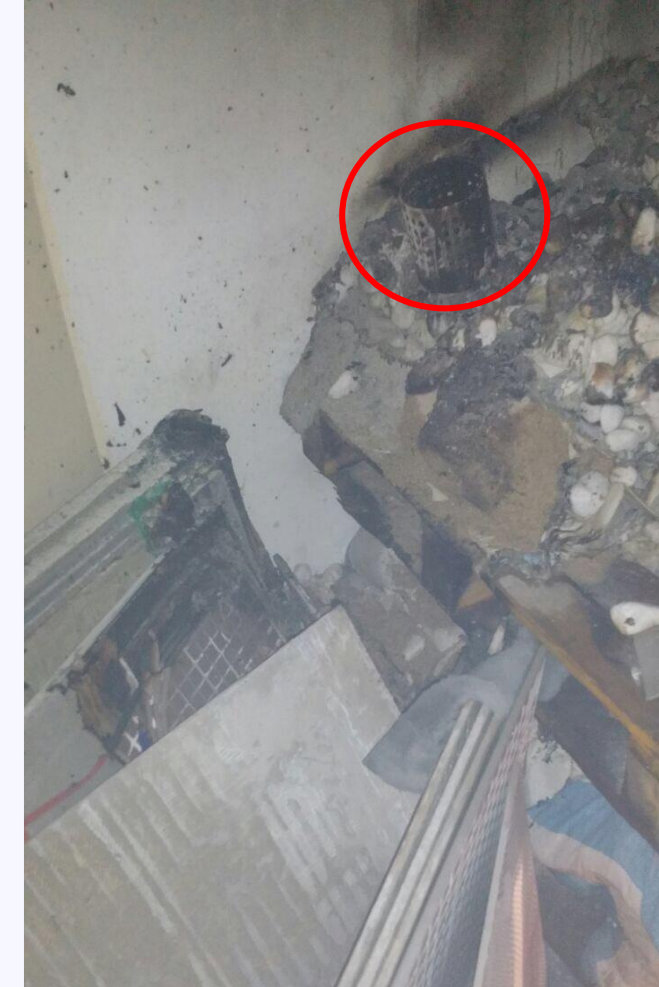
Fire Safety Report



How many of the duties have I performed to satisfaction?

Case Study – Daily Checks

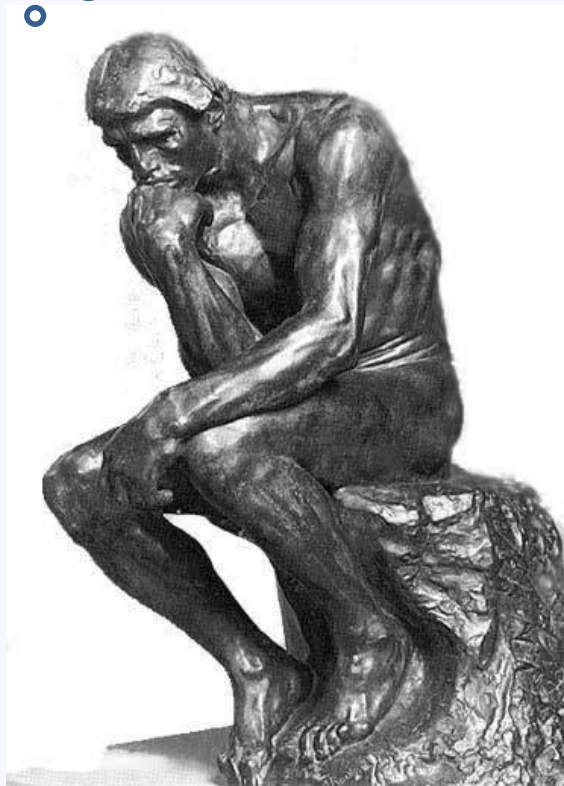
- **Date & Time:** 28 March 2018 at 2120hrs
- **Venue:** Commercial Shopping Centre
- **What Happened:** Smoke emerged from staircase at basement 1. The fire was extinguished quickly but smoke filled up the common areas at basement 1 & 2 and evacuation was conducted.
- Construction material left unchecked under the staircase increased the risk of fire.
- Smoke created from the discarded material would have endangered occupants using the affected staircase.



Have I done my
Daily Checks?

Lessons Learnt

- ✓ Daily checks conducted should have identified the fire hazard.
- ✓ Identified fire hazards should be removed swiftly.
- ✓ Discarded material under staircases, would compromise the safety of the smoke stop staircases.
- ✓ Improper storage of material will invite more accumulated trash.
- ✓ There must be a system in place to report fire hazards and swift alleviation of the hazards.



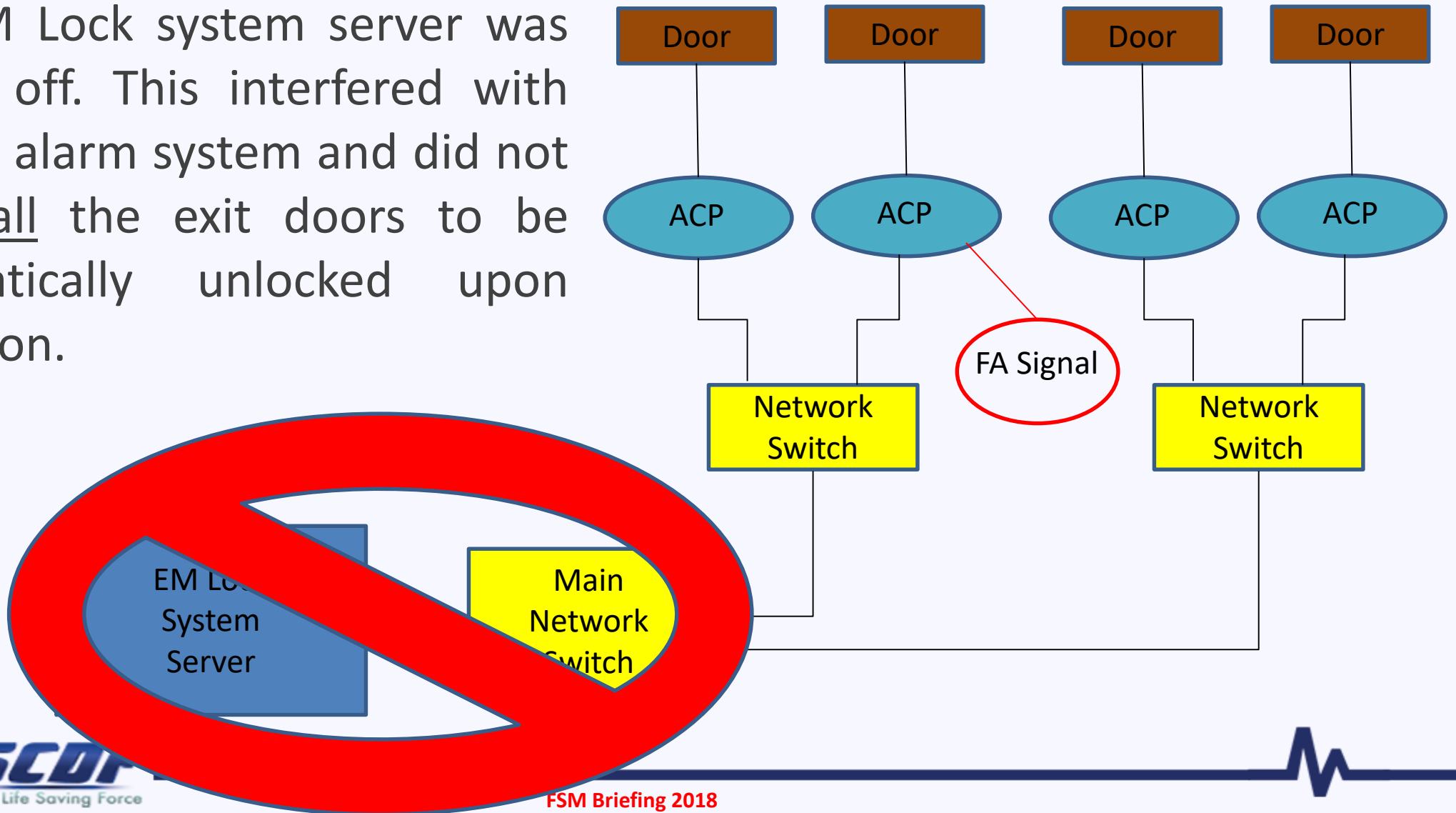
Case Study – Locked Exit Doors

- **Date & Time:** 24 June 2018 at 1604 hrs
- **Venue:** Commercial Shopping Centre
- **What Happened:** Fire Alarm was triggered. Occupants escaping via EM exit doors found that the doors were not released automatically by the fire alarm. It was found to be a false alarm and the situation reverted back to normal.
- Investigation showed that the EM Lock system server was logged off, thus preventing the doors from unlocking automatically.
- Had it been an actual fire incident, there would be people trapped and consequences would be more severe.



Case Study – Locked Exit Doors

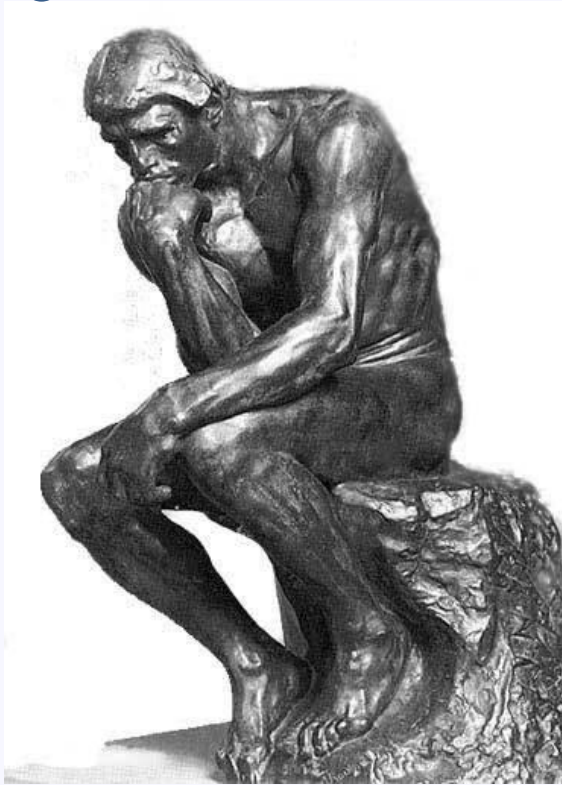
- The EM Lock system server was logged off. This interfered with the fire alarm system and did not allow all the exit doors to be automatically unlocked upon activation.



Is the fire safety works
maintained and in
order?

Lessons Learnt

- ✓ Access to the EM lock system should have been restricted.
- ✓ Regular maintenance and testing must be done on the fire safety systems.
- ✓ FSMs must ensure that the fire alarm or sprinkler activation will automatically unlock all exit doors.
- ✓ There should not be any software or wiring that impedes this process.
- ✓ The doors shall remain unlocked until the investigation to the alarm has been completed and the building fire alarm system has been manually reset.
- ✓ A manual release device also has to be provided within 1.5m of the exit door.



Case Study – Isolation of EVCS

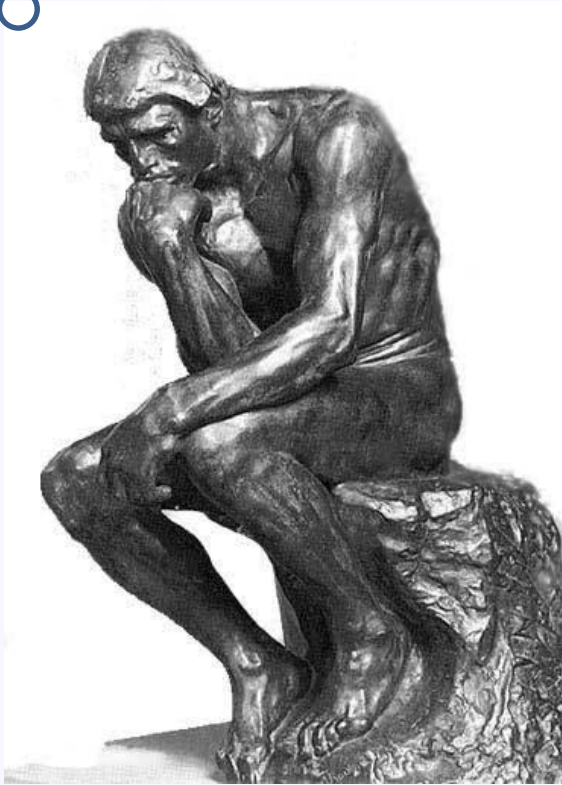
- **Date & Time:** 2 Jan 2018 at 0945hrs
- **Venue:** Hotel
- **What Happened:** False ceiling had collapsed during renovation works and fire alarm was triggered.
- As the EVCS was isolated, no announcement was broadcasted.
- The occupants were not informed promptly of the collapsed ceiling.
- The affected occupants were subsequently evacuated to the floor above.
- The delay in notifying the occupants can lead to delayed evacuation that may result in casualties during an actual fire.



Is the premises
Fire Safety Requirement
in place?

Lessons Learnt

- ✓ There should not be continuous isolation of EVCS.
- ✓ Any isolation should be re-instated at the end of the day.
- ✓ Temporary fire precautionary measures should be in place i.e. such as extra fire extinguishers, appointing fire watch personnel, emergency responders and communication aids.
- ✓ Designated alternate assembly area must be identified.
- ✓ A Fire Plan submission is required for any works done on the fire protection system.



Case Study – ERP/Notify SCDF

- **Date & Time:** 22 June 2017 at 2156hrs and 2353hrs.
- **Venue:** Light Industrial premises
- **What Happened:** Alarm activated twice in the middle of the night, and was reported as false alarm. FSM was not informed of the alarm activation and the sprinkler was found to have been activated.
- Sprinkler activation caused water damage to property and no fire report was available for insurance claim.
- Case of confirmed fire incident was not reported to SCDF.

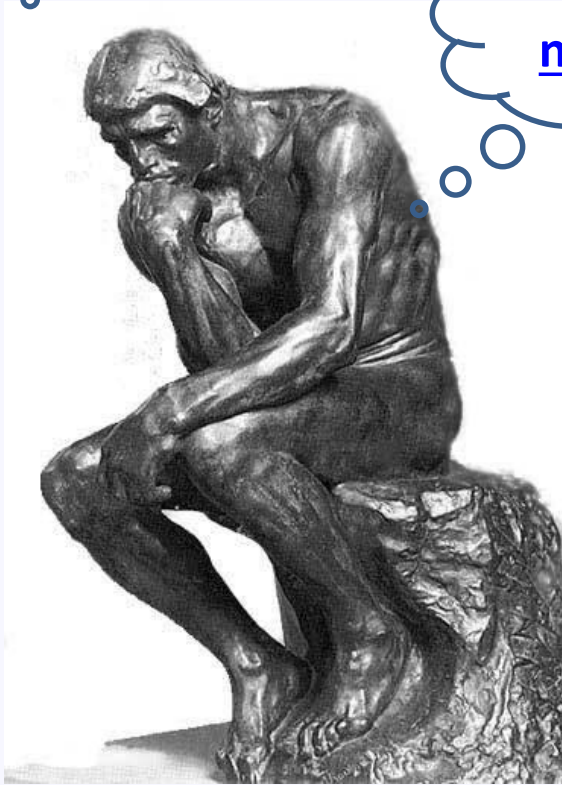


Lessons Learnt

Is my ERP robust
& adequate?

Should I
notify SCDF?

- ✓ There was no proper investigation on fire alarm activation.
- ✓ There should be a proper reporting process to the FSM and FCC for alarm activation after hours.
- ✓ This must be incorporated into the ERP and communicated to the related parties.
- ✓ Any occurrence of fire incident should be reported to SCDF.



Records of Non-performance

- We keep records of such lapses or failures of FSM in discharging their duties.
- Actions such as Letter of Warning (LOW) and Notice of Fire Safety Offence (NFSO) are included and will be considered for the next offence. Repeated similar offence will warrant a higher penalty.
- In the extreme cases it can lead to removal from the FSM appointment or even temporary suspension or de-registration.

SCDF Officer - Disciplinary Record (Search Page)

LOGIN ID :

Disciplinary Search Criteria

FSM NRIC No. :

Issued Date (DD/MM/YYYY) :

[Retrieve](#) [Create](#)

List of Disciplinary Action(s) that matches search criteria (Click to view details)

1 matching record(s)

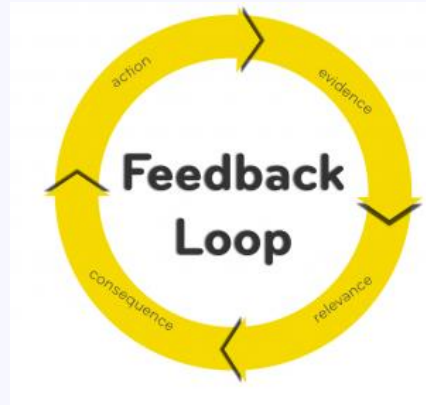
Page 1 [\[First\]](#) [\[Previous\]](#) [\[Next\]](#) [\[Last\]](#)

S/No	Name	NRIC	Date Issued	Description	Attachment
1.			11/01/2018	FSM Regulations(7)(1)(d) Failure to Conduct daily checks within the premises and remove or cause to be removed any fire hazard that is found within the premises	.pdf



Enhancement to the Scheme

- Fire Safety Feedback Management System

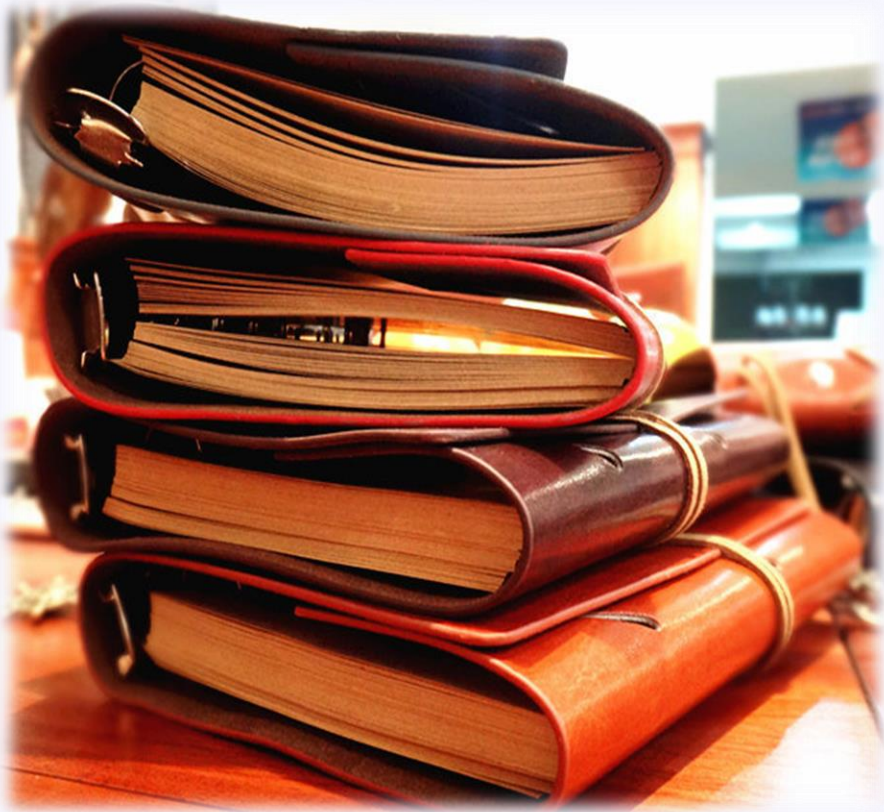


- SCDF_FSM@scdf.gov.sg



- ✓ Allow FSMs to aid building owners to alleviate non-compliances before commencing any enforcement action
- ✓ Hazard Mitigation Plan substantiated with pictures
- ✓ Raise the standard of fire safety in the premises
- ✓ Avenue for feedback
- ✓ Report non-compliances to Fire Safety

Proposed FSM Handbook



- Convenient guide for quick reference
- Working booklet to aid in FSM duties
- Sample content
 - ✓ Duties of FSM and building owner/occupier
 - ✓ Common non-compliances and examples
 - ✓ Important CPs and SSs key content
 - ✓ Report/Form templates



Thank You

