



FSD Connects with the Construction Industry

Experience Sharing on Acceptance Inspection,
Maintenance, Modification and
Product Approval of FSI



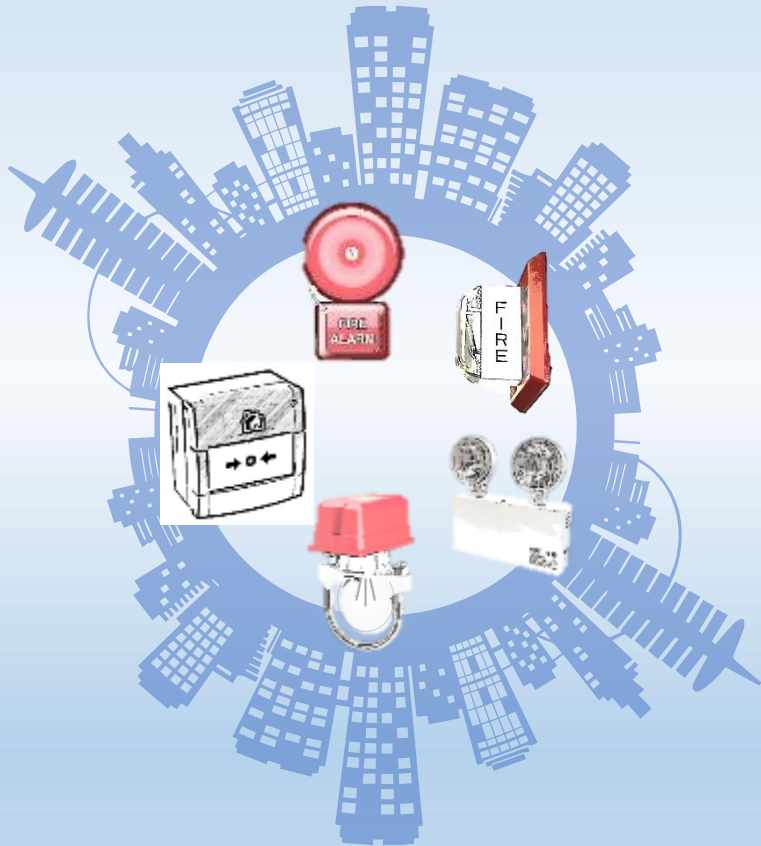
19 December 2019

WELCOMING ADDRESS



Assistant Director
(Licensing and Certification)
Ir LEUNG Kwun-hong, FSDSM

OBJECTIVES



- Facilitate the trade in meeting the standards of fire safety design and FSI in buildings
- Foster swift processing of GBP and efficient acceptance inspection of FSI
- Strengthen connectivity, collaboration and partnership with the trade



Efficiency



Compliance



Partnership

SUMMARY OF PAST SEMINARS

24.11.2017

25.6.2018

23.11.2018

11.6.2019

Processing of Building Plans



Submission of FSI/501 and FSI/314



Experience Sharing on FSI Acceptance Inspection



Material Acceptance



Facilitation Measures for FSI Acceptance Inspection



Open Kitchen Unit and Window-less Kitchen/Toilet



Maintenance of FSI



Efficient Design of Staircase Pressurization System

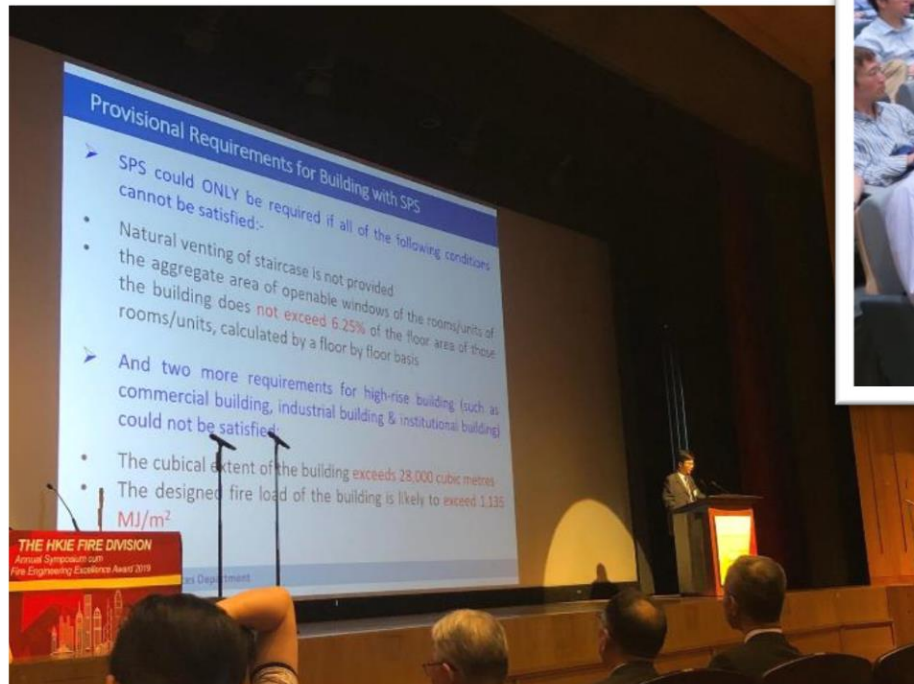


FSD
Connects

SUMMARY OF PAST SEMINARS

Efficient Design of Staircase Pressurization System

2019



AGENDA

- Analysis of FSI Acceptance Inspection
- Cases Sharing on Irregularities and Observations

Promulgation of revised
Fire Protection Notice No.15

Fire Safety Management Plan

01

02

03

04

05

06

Revamped Application
Procedures for Inspection
and Testing of FSI

Implementation of Annual
Inspection Checklists for
FH/HR System

Fire Safety in Smart City

FACILITATION MEASURES

Pre-inspection
meeting



Document
Checklist



Videos and
PowerPoints

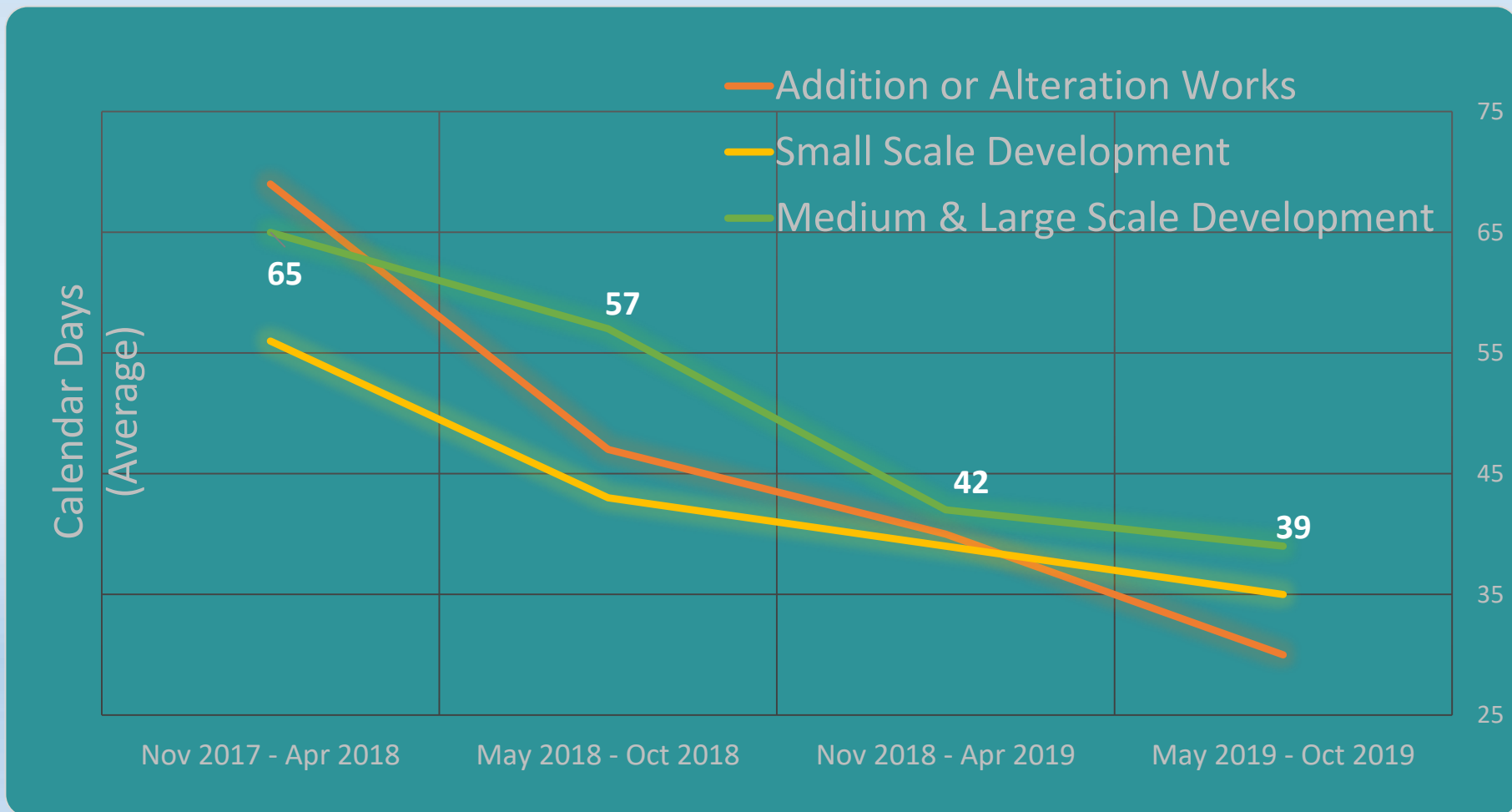


Technical
Seminars



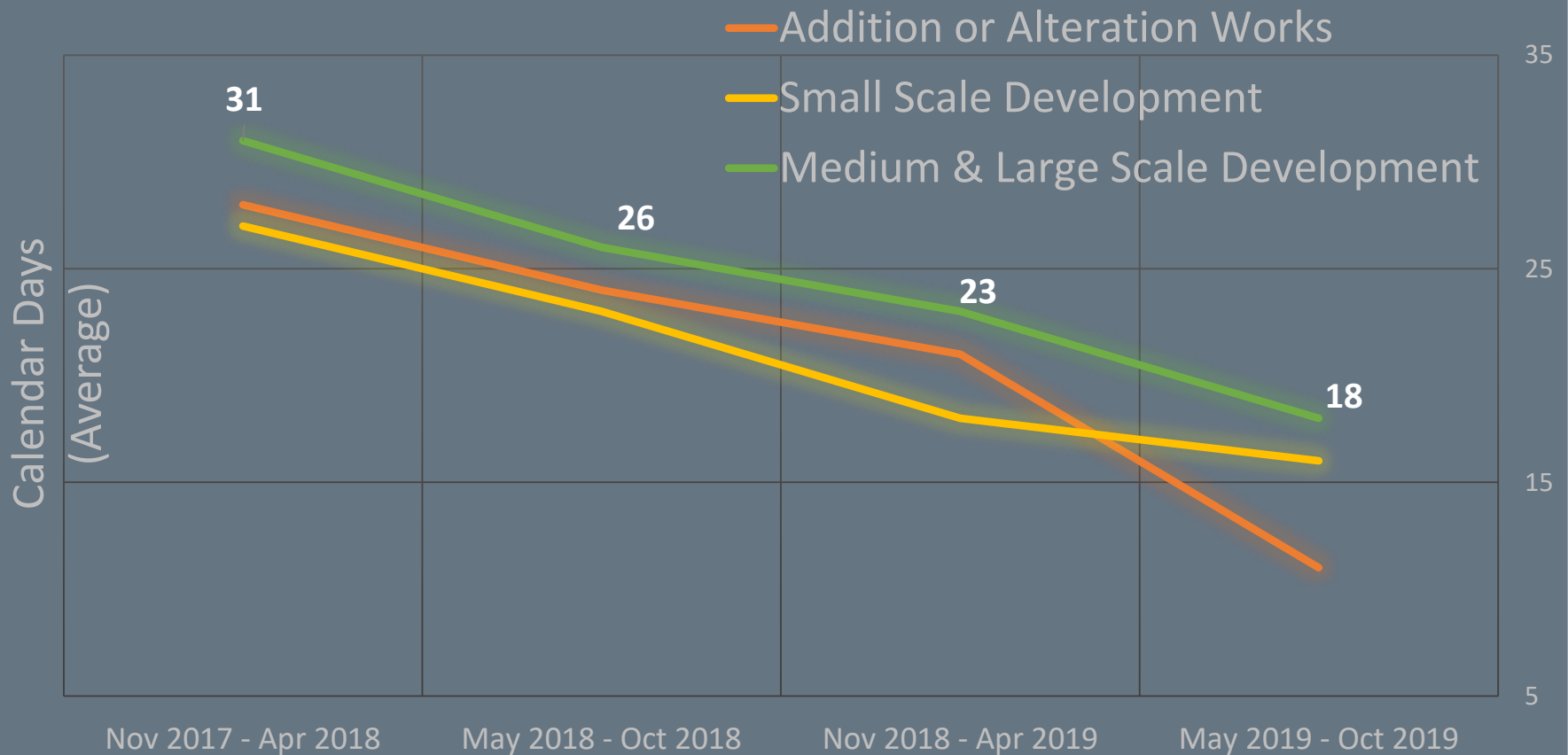
OUTCOME of Facilitation Measures

Duration between Receipt of FSI/501 and Issue of FS172



*Cases **without** re-inspection

OUTCOME of Document Checking



*Cases **without** re-inspection

ECOSYSTEM



Components of the NFPA Fire & Life Safety Ecosystem

Government Responsibility:

Maintaining an effective policy and regulatory environment supporting fire, electrical, building, and life safety.

Development and Use of Current Codes:

Using the latest codes and standards developed by experts from across the world.

Referenced Standards:

Applying all standards referenced within the primary fire, life safety, building, and electrical codes and standards.

Investment in Safety:

Prioritizing safety across the board.

Skilled Workforce:

Promoting the development of skilled professionals to apply the codes and standards.

Code Compliance:

Supporting effective code enforcement.

Preparedness and Emergency Response:

Providing effective preparedness and response capabilities to deal with fire, electrical, and related hazards.

Informed Public:

Educating the public about the dangers posed by fire, electrical, and related hazards.

Learn more at www.nfpa.org/ecosystem

SYNERGY ROADMAP

1

Annual Inspection Checklists for FH/HR
FSD Circular Letter No. 4/2019

2

Revised
FSI/501

+

FSI/501a
(New Form)

Annual Inspection Checklist for Fire Detection/Alarm Bell System

Section A

Inspector Name and Qualification: _____
Building/Person Address: _____

The annual inspection is conducted in accordance with the operation version of Code of Practice for Minimum Fire Service Installation and Equipment (Appendix A, Tables and Notes) of the Buildings Ordinance (Cap. 123B) published by the Director of the Service.

The basis is on the Building Fire Basic Form for Alarm.

1. **Applicability**
The result of the annual inspection of applicable fire detection/alarms and fire alarm systems will be recorded in the Annual Inspection Checklist for Alarm Bell System.

2. **Fire Detection**

Sl	Fire Detection System/Alarm Apparatus	Yes	No	NA	Remarks
1	The installation is suitable for the purpose for which it is intended.				
2	The installation is installed in a suitable location.				
3	The installation is installed in a suitable location.				
4	The installation is installed in a suitable location.				
5	The installation is installed in a suitable location.				
6	The installation is installed in a suitable location.				
7	The installation is installed in a suitable location.				
8	The installation is installed in a suitable location.				
9	The installation is installed in a suitable location.				
10	The installation is installed in a suitable location.				
11	The installation is installed in a suitable location.				
12	The installation is installed in a suitable location.				
13	The installation is installed in a suitable location.				
14	The installation is installed in a suitable location.				
15	The installation is installed in a suitable location.				
16	The installation is installed in a suitable location.				
17	The installation is installed in a suitable location.				
18	The installation is installed in a suitable location.				
19	The installation is installed in a suitable location.				
20	The installation is installed in a suitable location.				

3. **Fire Alarm**

4. The fire alarm system is installed in a suitable location.

5. The fire alarm system is installed in a suitable location.

6. The fire alarm system is installed in a suitable location.

7. The fire alarm system is installed in a suitable location.

8. The fire alarm system is installed in a suitable location.

9. The fire alarm system is installed in a suitable location.

10. The fire alarm system is installed in a suitable location.

11. The fire alarm system is installed in a suitable location.

12. The fire alarm system is installed in a suitable location.

13. The fire alarm system is installed in a suitable location.

14. The fire alarm system is installed in a suitable location.

15. The fire alarm system is installed in a suitable location.

16. The fire alarm system is installed in a suitable location.

17. The fire alarm system is installed in a suitable location.

18. The fire alarm system is installed in a suitable location.

19. The fire alarm system is installed in a suitable location.

20. The fire alarm system is installed in a suitable location.

Section B

Signature of FSI/501a: _____
Date: _____

Signature of Building Owner: _____
Date: _____

Signature of Fire Service Inspector: _____
Date: _____

Section B

Section 12(1)(b) of Buildings Ordinance
Application for Inspection and Testing of
Fire Service Installations and Equipment.

To: Director of Fire Services
Date: _____
IP Ref. No. / FSI/501a: _____

Destination of Fire Service Installation/Equipment: _____

Part A
The above installations / equipment have been installed at (address of premises) _____ and the installation work was completed on _____. I hereby certify that such installations / equipment is in accordance with the FSI plans submitted under the cover of FSI/501a (Rev. 08) dated _____. _____ have been inspected and are in efficient working order. * Copies of completed checklist, equipment test reports and other data sheets are attached herewith for your information.

Signature of FSI/501a: _____
Name in Full: _____
Registration no.: _____
Class: _____ Date: _____

Office/Shop: _____
Tel: _____
Fax: _____

Part B
I, _____ Authorized Person, certify that the above installations have been installed in accordance with the approved building plans marked by FSD on _____ and, in my opinion they are ready for inspection.

The Fire Service Complete Advice from Minor Supplies Department in respect of Fire Service Installations (Form attached) requiring Government water mains connection has been issued / applied for.

*As undertaking letter / notice from building owner for providing 24-hour attendance service with normal telephone provision pending the connection of above telephone line for the fire service installation(s) is attached herewith.

I request that a "Certificate FS 172, required under S2(1)(b) of the Buildings Ordinance" acceptance memo / letter be issued to me. I can be contacted on telephone no. _____ for submission.

I also certify that the building gross floor area as defined under the Buildings Ordinance is _____ m² and the type of building is domestic / non-domestic."

Signature of Authorized Person: _____
Full Name of Authorized Person: _____
Date: _____
Tel: _____
Fax: _____

Section B

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Signature of FSI/501a: _____
Name in Full: _____
Registration no.: _____
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Signature of Authorized Person: _____
Full Name of Authorized Person: _____
Date: _____
Tel: _____
Fax: _____

SYNERGY ROADMAP

3

**LPC Rules for Automatic
Sprinkler Installations 2015**
Incorporating BS EN 12845



RISCAuthority

FPA Fire Protection Association



Major Changes (for examples)

Concealed space at ceiling/floor of not more than 300mm

OH3 protection for high rise sprinkler

Updated TB210.T5 for pre-calculated LH and OH systems

Conceptual Schematic for calculation of distribution pipework

Annual Inspection and checking for sprinkler installation

Access of Pump Room

SYNERGY ROADMAP

5

BS 5839-1:2017

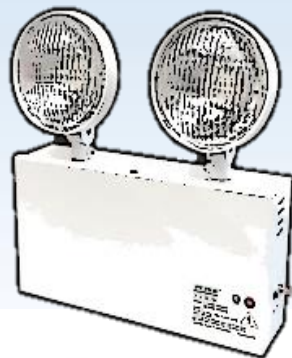


BSI Standards Publication

Fire detection and fire alarm systems for buildings

Part 1: Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises

© Fire Services Department, V...



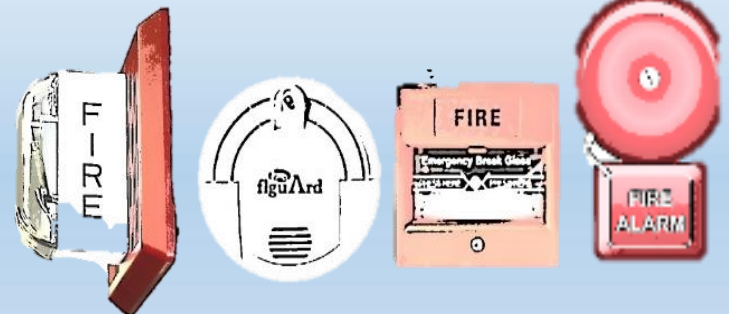
BS 5266-1:2016



BSI Standards Publication

Emergency lighting – Part 1: Code of practice for the emergency lighting of premises

4

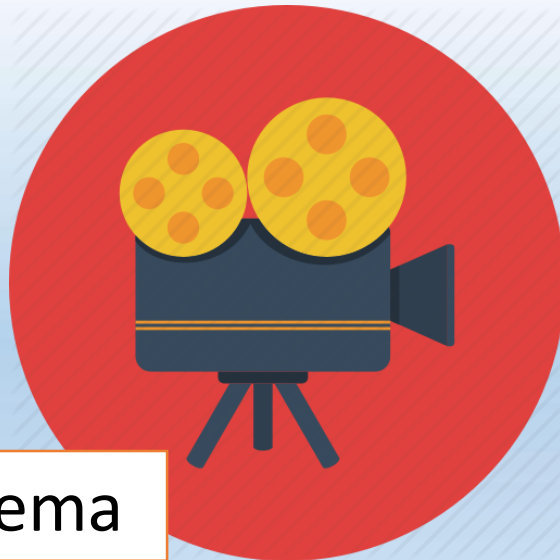


SYNERGY ROADMAP

6

Facilitation Measures

- Purpose built buildings where required licensing requirements



Cinema



Theatre

ANALYSIS OF FSI ACCEPTANCE INSPECTION

Engineer(FSI)

Ir Peter LAW

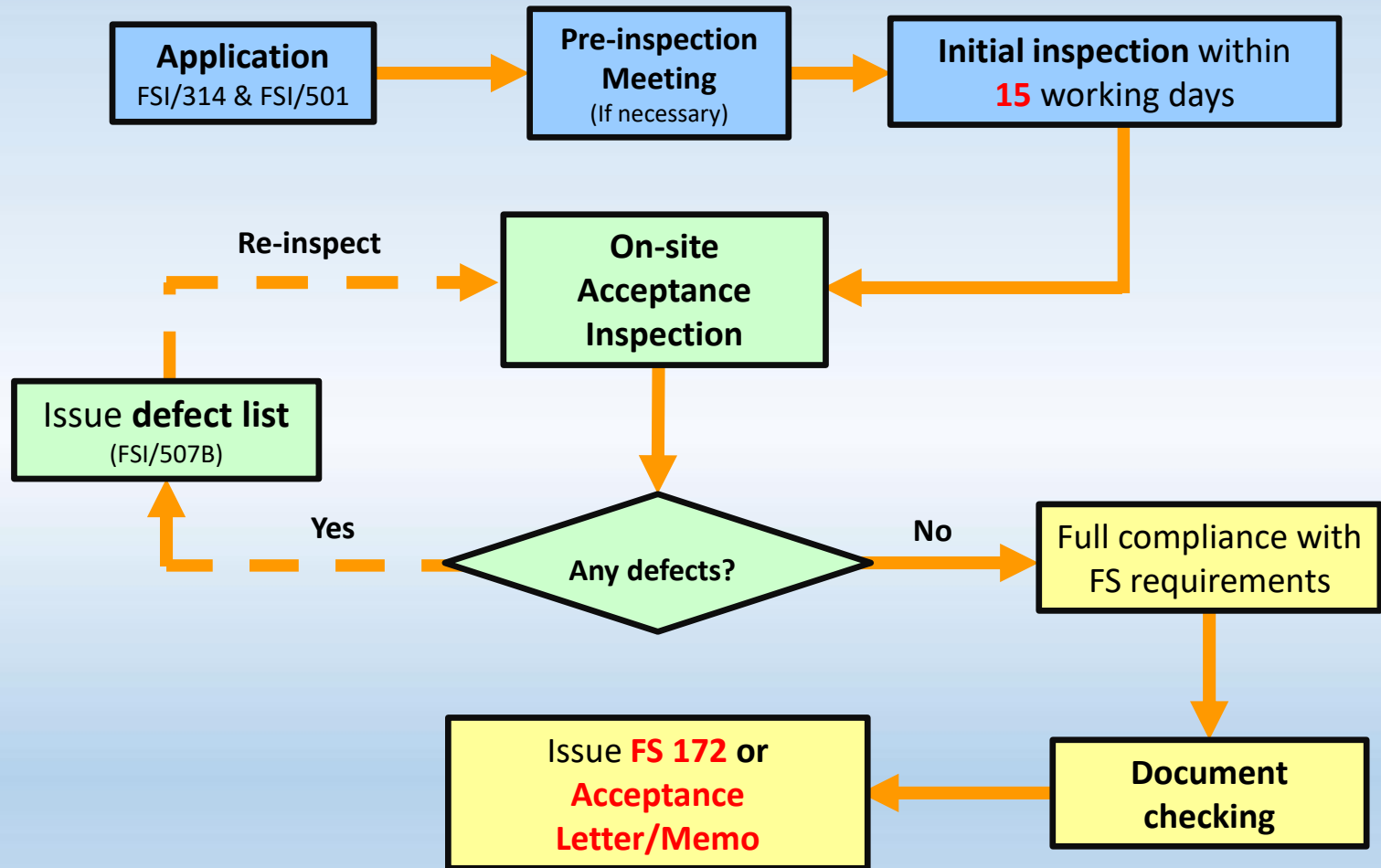


FSD Circular Letter No. 1/2015

- ❑ Form FSI/501 : Application Form
- ❑ Form FSI/314 with two sets of as-fitted FSI layout plans*
- ❑ Testing and Commissioning (T&C) Checklists
- ❑ FSIs Equipment List & relevant supporting documents
- ❑ Document submission for FSI Equipment

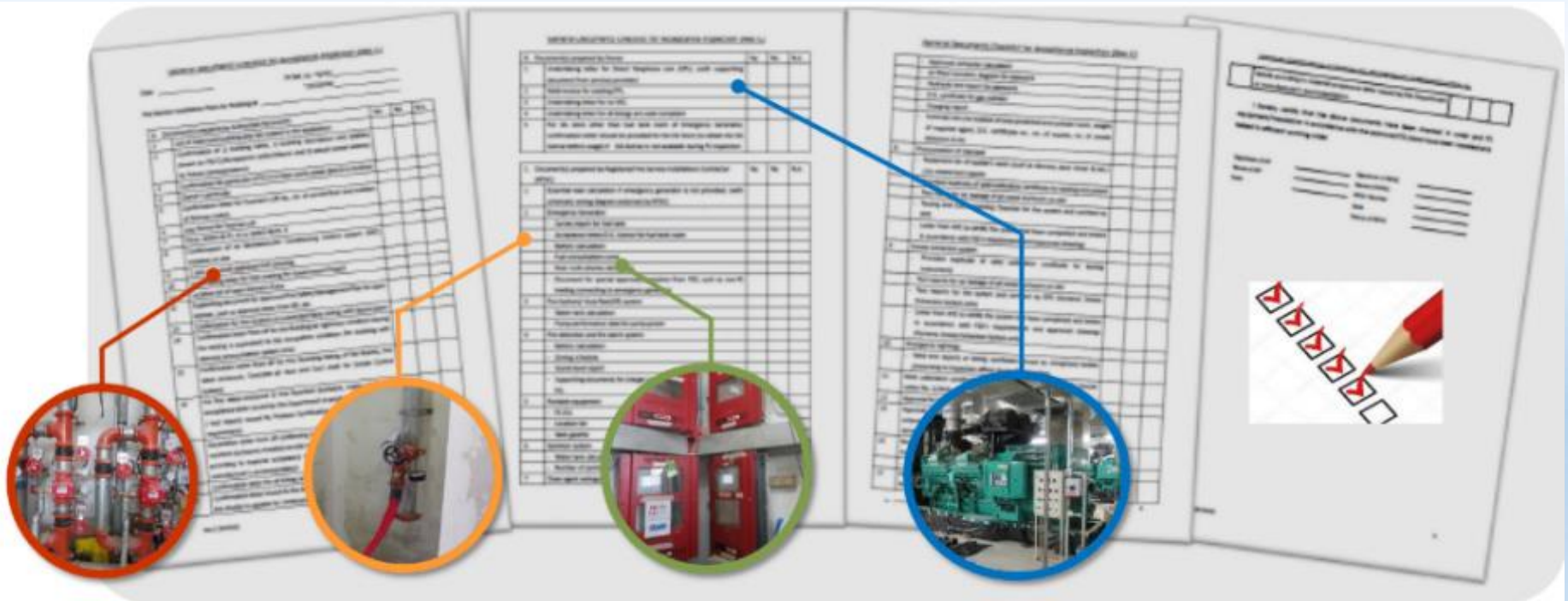
*Remarks: FSI/314 drawings for Smoke Control Systems required prior approval

Workflow for FSI Acceptance Inspections



Critical Tasks in the Process of Acceptance Inspection of FSI

- ✓ Document checking
- ✓ On-site inspection for **installations**, **functionality** and **performance**



Document Checking

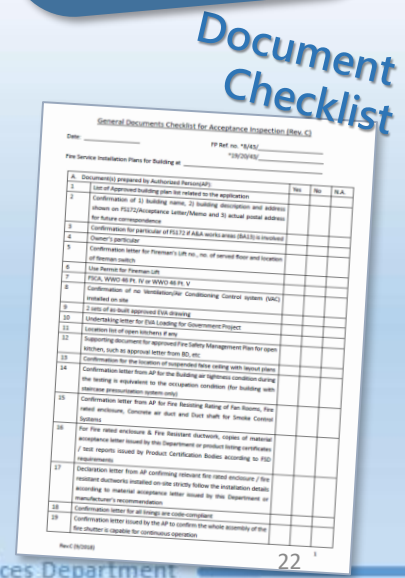
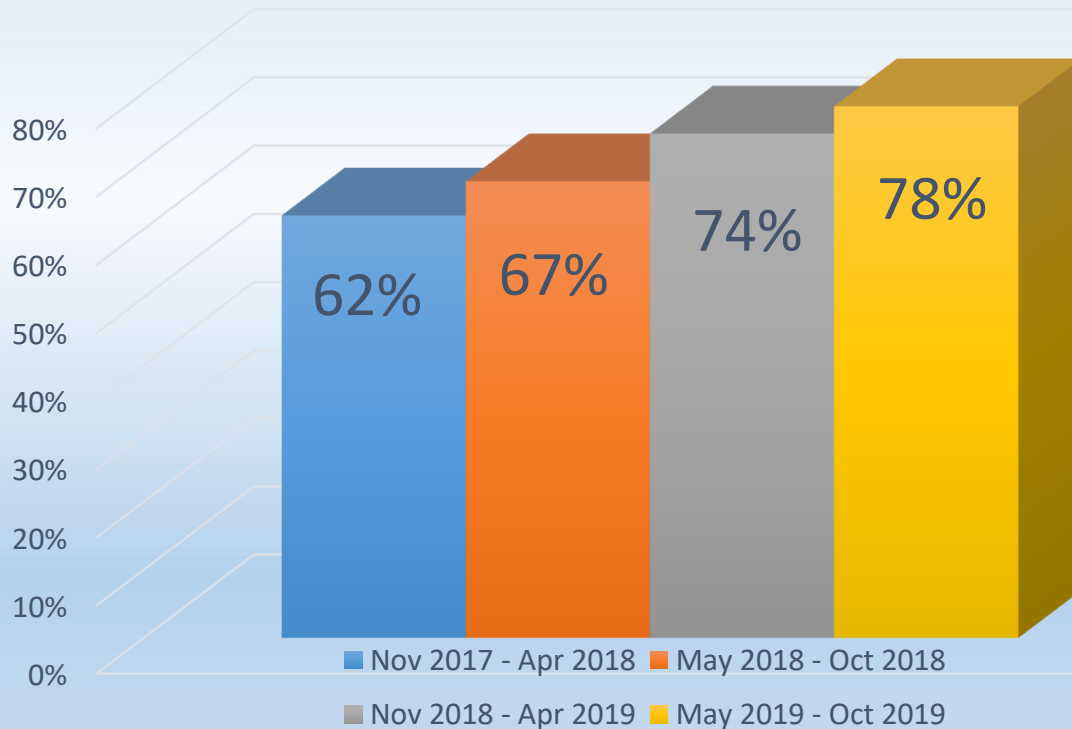
- ✓ **Testing & Commissioning (T&C) Checklist**
- ✓ **Testing & Commissioning (T&C) Reports**
- ✓ **Equipment list & Validity of Products Certificates**



Statistic of FSI/501 Application

- Facilitation measures implemented since Nov 2017
- Successful application increased from 62% to 78%

Application Successful Rate



Analysis of FSI Acceptance Inspection

Summary of Analysis of 147 Cases of Addition or Alteration Works

(e.g. BA13)

Item	Descriptions (Nos./%)	Duration between Receipt of FSI/501 and Issue of FS172	Distribution of time		Data of Last Seminar
			FSD	AP/RFSIC	
			Average Calendar day	Average Calendar day (%)	
1	Cases WITHOUT Re- inspection [106 Cases (72%)]	50	23 (46%)	27 (54%) ↓	30 (58%)
2	Cases With 1 Re- inspection [35 Cases (24%)]	97	30 (31%)	67 (69%) ↓	82 (75%)
3	Cases With 2 Re- inspection [6 Cases (4%)]	115	25 (22%)	90 (78%) —	97 (78%)

* **Blue colour** – Time taken by FSD

* **Red colour** – Time taken by AP/RFSIC

Analysis of FSI Acceptance Inspection

Summary of Analysis of 215 Cases of Small Scale Development

(Single building no more than 6 storey)

Item	Descriptions (Nos./%)	Duration between Receipt of FSI/501 and Issue of FS172	Distribution of time		Data of Last Seminar
			FSD	AP/RFSIC	
			Average Calendar day	Average Calendar day (%)	Average Calendar day (%)
1	Cases WITHOUT Re- inspection [131 Cases (61%)]	44	23 (52%)	21 (48%) ↓	24 (50%)
2	Cases With 1 Re- inspection [65 Cases (30%)]	85	24 (28%)	61 (72%) ↓	63 (72%)
3	Cases With 2 Re- inspection [18 Cases (8%)]	129	23 (18%)	106 (82%) ↑	105 (81%)
4	Cases With 3 Re- inspection [1 Cases (1%)]	120	18 (15%)	102 (85%)	-

* Blue colour – Time taken by FSD

* Red colour – Time taken by AP/RFSIC

Analysis of FSI Acceptance Inspection

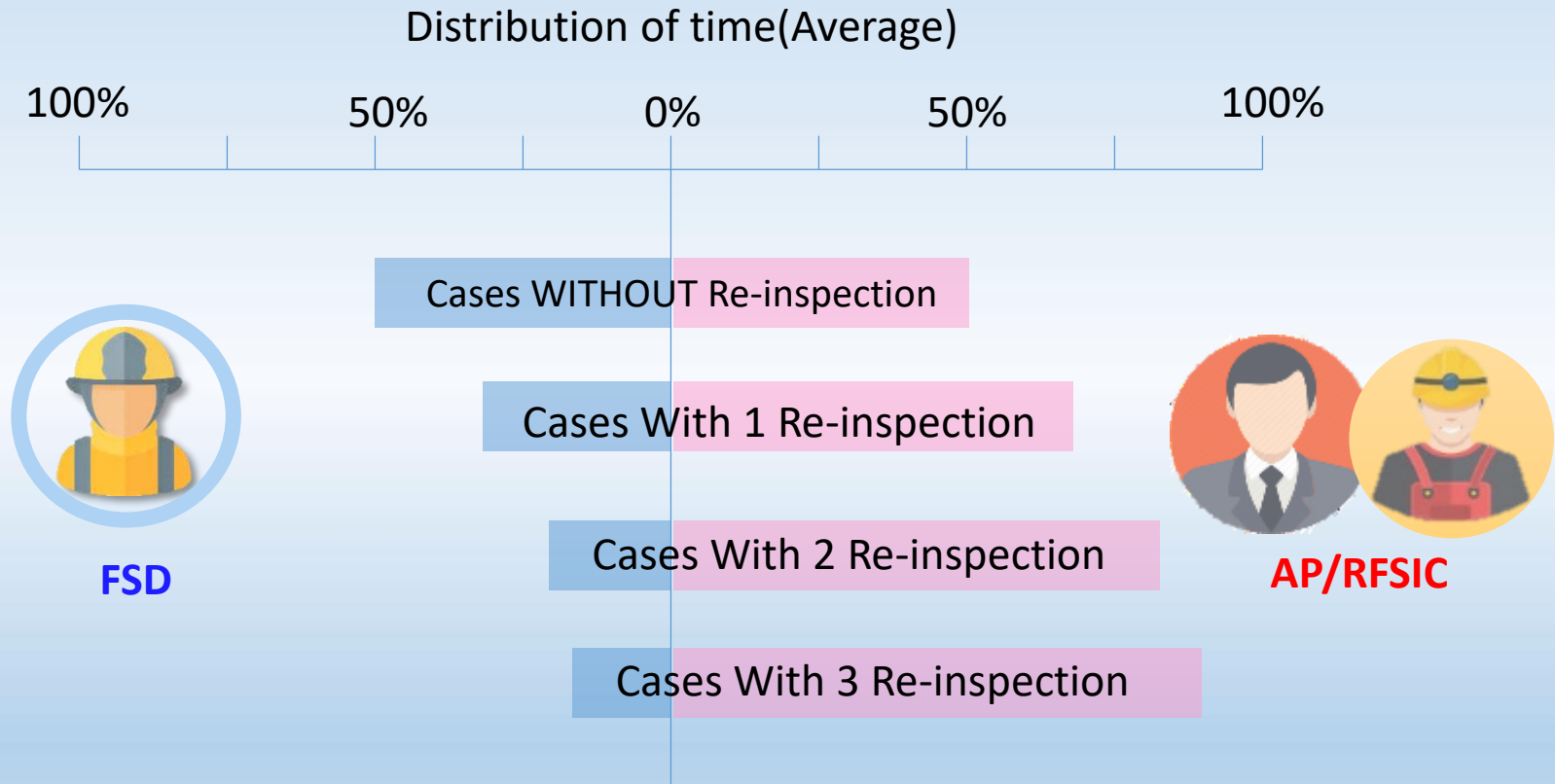
Summary of Analysis of 271 Cases of **Medium & Large Scale Development**
(Single building more than 6 storey or multiple buildings)

Item	Descriptions (Nos./%)	Duration between Receipt of FSI/501 and Issue of FS172 Average Calendar day	Distribution of time			Data of Last Seminar
			FSD	AP/RFSIC		
			Average Calendar day (%)	Average Calendar day (%)		
1	Cases WITHOUT Re-inspection [129 Cases (48%)]	50	25 (49%)	26 (51%) ↓	28 (52%)	
2	Cases With 1 Re-inspection [110 Cases (40%)]	81	26 (30%)	57 (70%) ↑	57 (68%)	
3	Cases With 2 Re-inspection [24 Cases (9%)]	104	27 (25%)	78 (75%) ↑	77 (73%)	
4	Cases With 3 Re-inspection [8 Cases (3%)]	180	28 (16%)	151 (84%) ↑	150 (83%)	

* Blue colour – Time taken by FSD

* Red colour – Time taken by AP/RFSIC

Analysis of FSI Acceptance Inspection



Undesirable Testing and Commissioning

Poor Testing and Commissioning may result in :

- **Re-inspection on FSI**
- **Prolonged duration of FSI Acceptance Inspection**
- **Investigation of any unscrupulous practice**

CASE SHARING ON IRREGULARITIES AND OBSERVATIONS

Engineer(FSI)

Ir Peter LAW



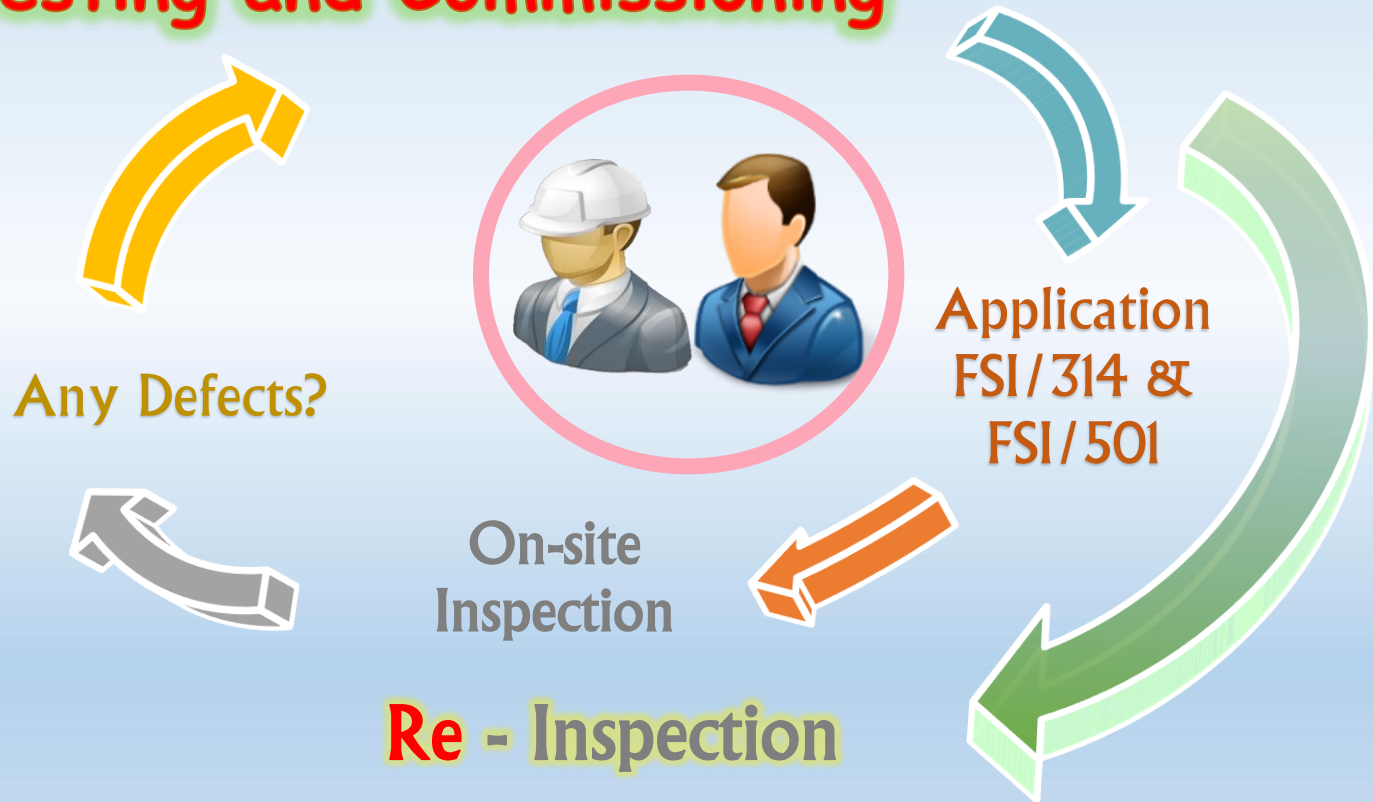
Cases without the need of re-inspection

Scale of Projects	Nov 17 – Oct 18	Nov 18 – Oct 19
<u>Addition or Alteration Works</u>	71%	75%
<u>Small Scale Development</u>	63%	58%
<u>Medium & Large Scale Development</u>	47%	49%

T & C before Application



Testing and Commissioning



On – site inspection

- ✓ On-site installations vs As-fitted drawings
- ✓ Functionality vs Acceptance Criteria



Incomplete building works - EVA



Incomplete building works - FS inlets



FS Inlets shall be properly enclosed and protected

Incomplete building works



Smoke Stop Door found missing

Incomplete installation of FSI



Incomplete installation of FSI



Missing of a directional sign

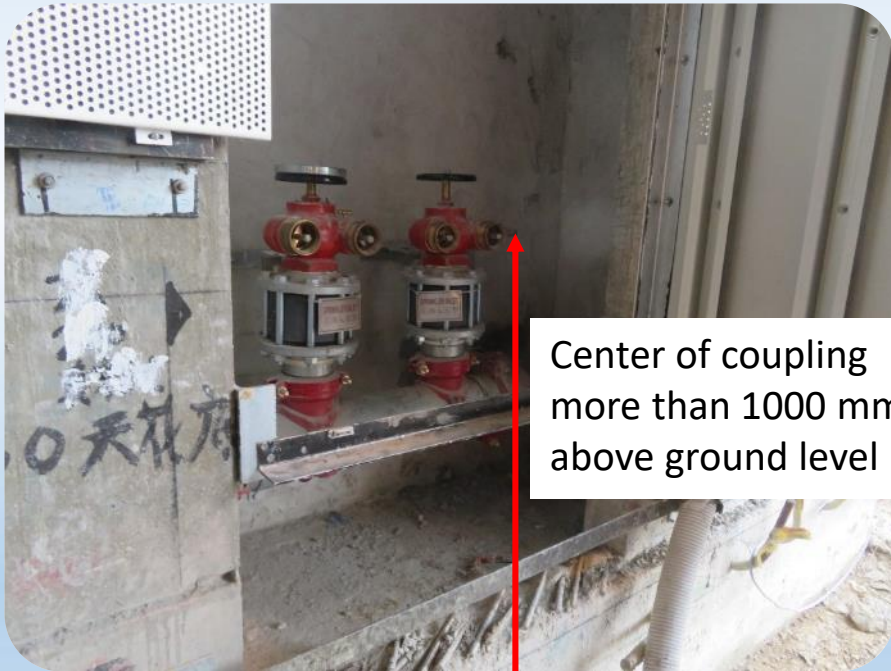


Missing of a manual call point

Improper Installation of FSI



Improper Installation of FS Inlet



Center of coupling more than 1000 mm above ground level



Obstruction to Fire hydrant outlet



Obstruction to Hose Reel



Testing and Commissioning Done Properly???

Static pressure at Hydrant Outlet exceeded 850 kPa

1100 kPa



Testing and Commissioning Done Properly???

Numerous fault & trouble Signals of AFA panel



Obstruction to sprinkler head



Improper Installation of Sprinkler

Concealed sprinkler is not allowed for open cell ceiling



Outstanding Provision of Spare Sprinkler Heads



A stock of spare sprinklers shall be kept in Fire Control Room according to BS EN 12845:2003c

Improper Installation of FSI



Butterfly valve shall not be installed at the inlet of sprinkler pumps

Testing and Commissioning Done Properly???



Incomplete sprinkler installations

Improper Installation of FSI



Observations – Among Cases required re-inspections

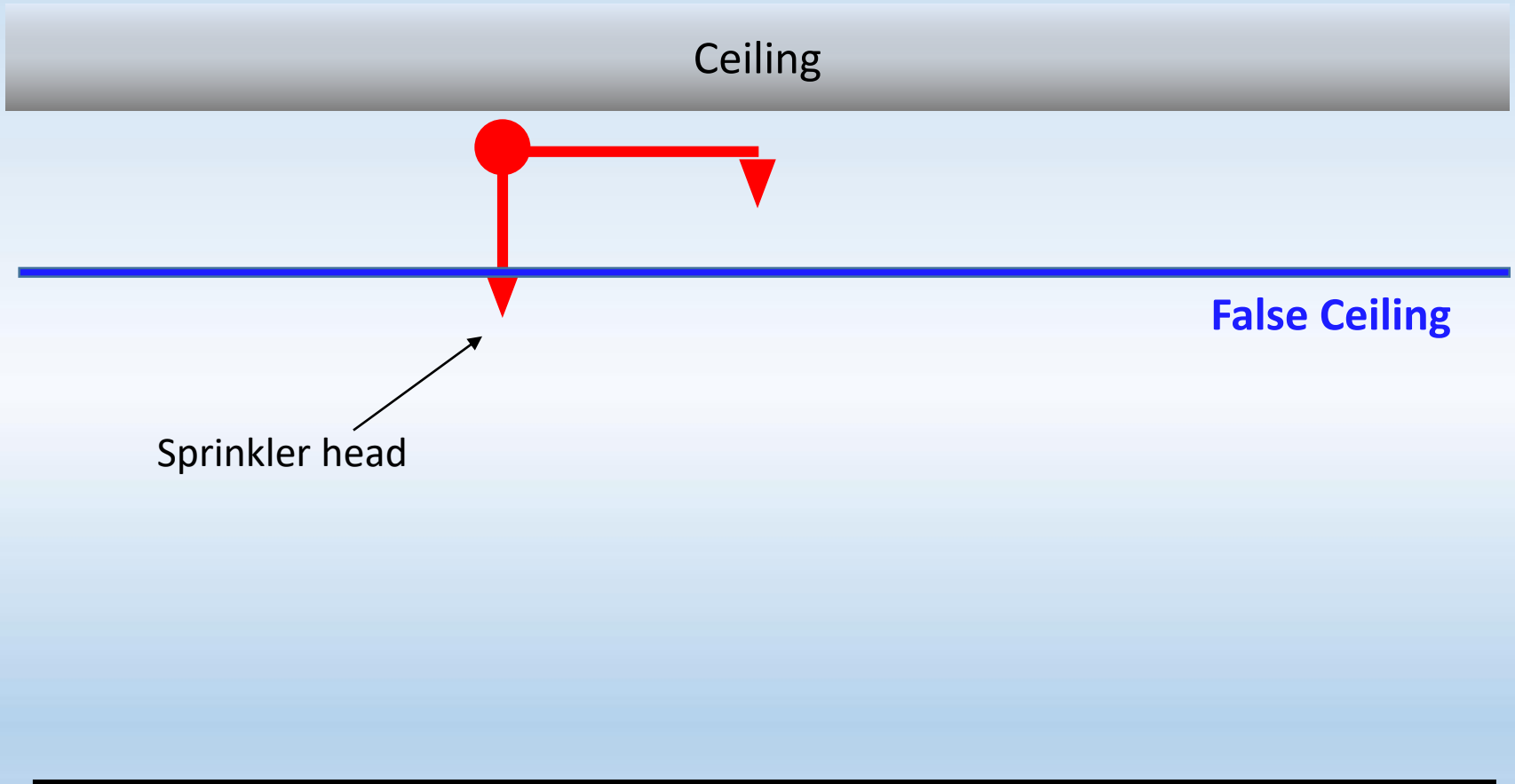
- Failure in complying statutory requirements
 - Installations
 - Functionality
- Lack of testing for system interfacing
- Insufficient T&C for smoke control systems

Insufficient Coverage of Installations, e.g.

- Sprinkler heads
- Heat/Smoke Detectors
- Essential lighting/ Directional /Exit Signs

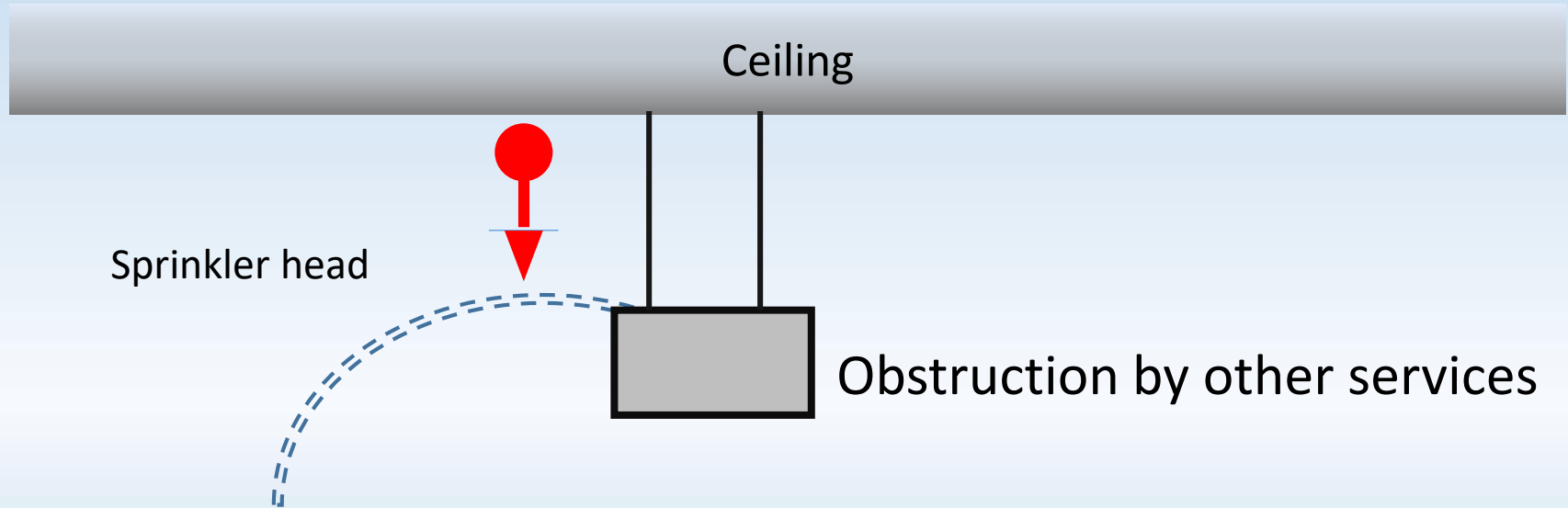
Observations – System Coordination

EXAMPLE



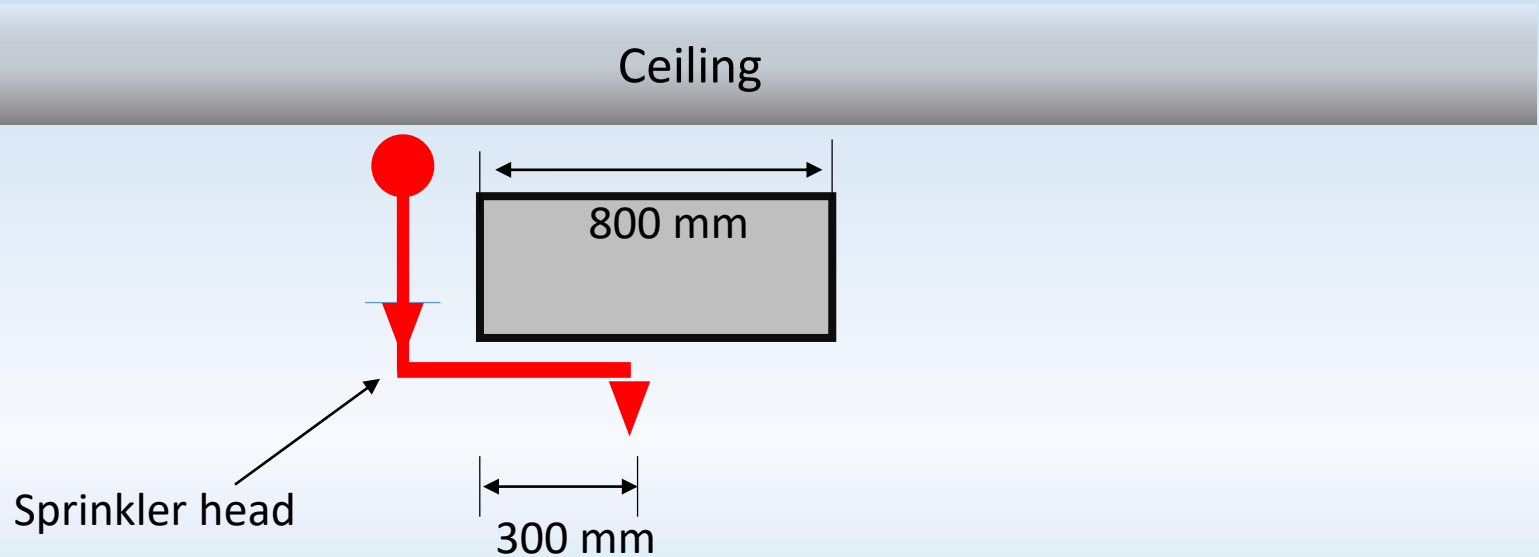
Observations – System Coordination

EXAMPLE



Observations – System Coordination

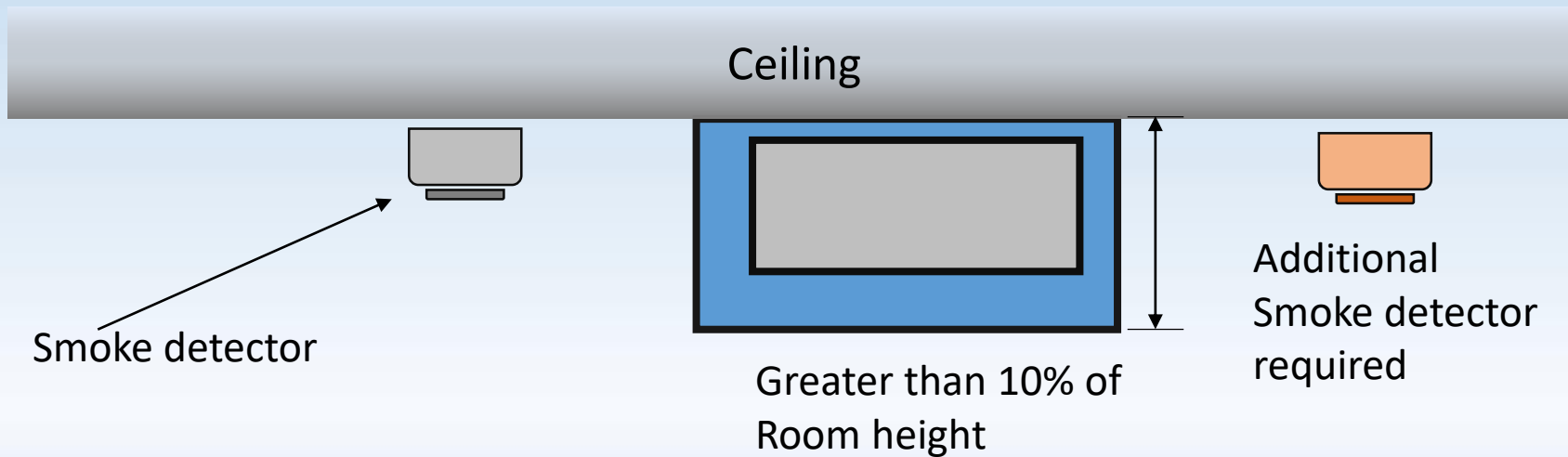
EXAMPLE



Reference: FSD Circular Letter No. 3/2006

Observations – System Coordination

EXAMPLE



Reference: BS-5839-1:2002 +A2:2008

Observations – System Coordination

Changeover from
Duty Pump to Standby Pump



Power Changeover from
Normal Power to Emergency Power



Observations – Smoke Control Systems

Projects involved following smoke control systems (SCS)

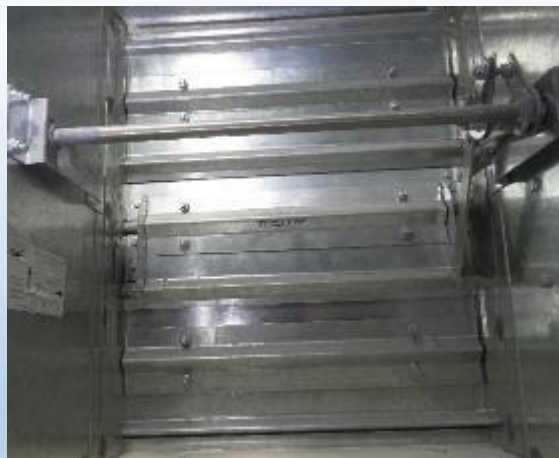
- Staircase pressurization system
- Smoke extraction system

Observations

- 90% projects involved SCS required re-inspections
- Due to failure of functionality

On – site inspection

- ✓ Installations vs As-fitted Drawings
- ✓ Functionality vs Design Principle
- ✓ Performance vs Acceptance Criteria



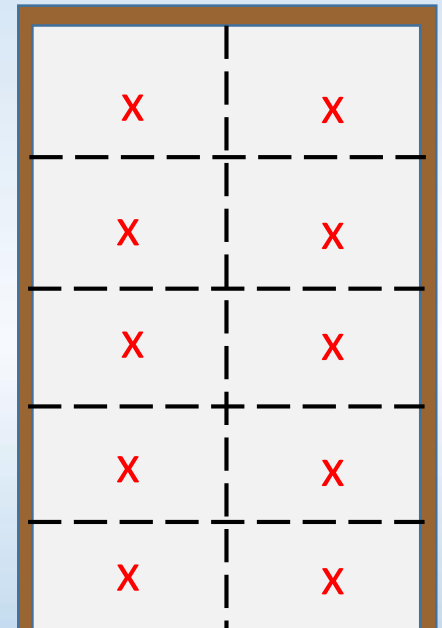
Details on Airflow measure

Air flow

- **Minimal** value shall be met
- At least **10** measurement points
- Reference point should be selected within $\pm 10\%$ of the mean air velocity
- Within 5 seconds to achieve 90% to 110% of the velocity



A doorway



Reference: FSD Circular Letter No. 2/2006

Verification against the Results of the T&C Reports

Functional checking	Performance checking
Fan Operation	Door opening force
Air-intake	Airflow
Actuation	Pressure-differential in Staircase

Inspection Acceptance Criteria

- Reference to the Code of Practice for Inspection, Testing and Maintenance of Installations and Equipment (2012)
- FSD Circular Letter No. 2/2006

Scope	Criteria
Air flow	<ul style="list-style-type: none">• Class A : ≥ 0.75 m/s• Class B : ≥ 2.0 m/s
Pressure differential	<ul style="list-style-type: none">• 50Pa (across Staircase to Accommodation)• 45Pa (Lift Lobby to Accommodation)
Door opening force	<ul style="list-style-type: none">• < 100 N

Supervisory Control Panel for Smoke Control Systems



What kind of control switches and indications shall be provided ?

Supervisory Control Panel for Staircase Pressurization System

		Control Switches	Indicator
General		Manual Override Switch (Manual Reset Type)	Fire Signal
		Reset	Auto On
		Lamp Test	Manual Override On
		Mute (Optional)	Alarm Buzzer
Fans	Duty fan/ motor	Run	Power Run
		Stop	Stop Fault
			Manual Mode on Local Motor Control Panel
	Standby fan / motor	Run	Power Run
		Stop	Stop Fault
		--	Manual Mode on Local Motor Control Panel
	Probe type detector at each intake	--	On
	MFSD at each intake	Open	Open
		Close	Close
	MFSD for each pressurization fan	--	Open Close
	MFSD for each pressurized lobby(ies)	--	Open Close

Subject to the prior approval of FSI/314 drawings

Supervisory Control Panel for Staircase Pressurization System

		Control Switches	Indicator
Air Release Fan	Duty fan/ motor	Run	Power
			Run
		Stop	Stop
			Fault
			Manual Mode on Local Motor Control Panel
	Standby fan / motor	Run	Power
			Run
		Stop	Stop
			Fault
			Manual Mode on Local Motor Control Panel
	MFSD for each air release fan	--	Open
			Close
MFSDs at each accommodation	--	Open	
		Close	

Subject to the prior approval of FSI/314 drawings

Case Study



Medium & Large
Scale Development

A 5-level podium used as PTI, carpark,
clubhouse and plant rooms

- i) Outstanding documents submission
- ii) Document checking
- iii) Drawings amendment



On-site
Inspection

6 Days

13 Days

7 Days



26 Days

EL, ES, E-Gen, PE, FH/HR,
Sprinkler, FDS, AVAS, MFA,
F-Shutter, SFH, VAC, EVA,
SES, Drencher

- i) Final verification
- ii) Issue F.S. 172

FSI/314 v.s. Approved FER/FSMP

Approved GBP



Actual layout

Fire Engineering Report



Schematic drawings

Fire Safety Management Plan



FSI layout plan



RFSIC



AP

FSI/314 v.s. Approved FER/FSMP

FOR OPEN KITCHEN

1. SMOKE DETECTOR INSIDE THE FLATS WITH OPEN KITCHEN
SMOKE DETECTOR WITH SOUNDER BASE SHALL BE PROVIDED TO THE LIVING AREA INSIDE THE FLATS WITH OPEN KITCHEN EXCEPT BED ROOMS AND BATHROOMS. THE ALARM SIGNAL SHALL BE LINKED TO THE FIRE SERVICE SUB-MAIN PANEL IN CARETAKER'S COUNTER OF RELATED TOWER. (NO DIRECT TELEPHONE LINKED TO THE FIRE SERVICES COMMUNICATION CENTRE). ONLY THE SOUNDER BASE OF THE SMOKE DETECTOR INSIDE THE FLAT WITH OPEN KITCHEN WILL SEND SIGNAL TO THE FIRE SERVICE SUB-MAIN PANEL IN CARETAKER'S COUNTER OF RELATED TOWER.
2. SMOKE DETECTOR TO (ENTIRE LOBBY / CORRIDOR) OF THE FLOOR WITH OPEN KITCHEN
SMOKE DETECTORS SHALL BE PROVIDED AT THE (LOBBY / CORRIDOR) OF THE FLOOR WITH OPEN KITCHEN. THE ALARM SIGNAL SHALL BE LINKED TO THE FIRE SERVICE SUB-MAIN PANEL IN CARETAKER'S COUNTER OF RELATED TOWER. ALL FIRE ALARM BELLS ON FLOORS BETWEEN REFUGE AREAS OF THE CORRESPONDING SMOKE DETECTOR BE ACTIVATED.
3. SPRINKLER
SPRINKLER SHALL BE PROVIDED TO COVER THE ENTIRE OPEN KITCHEN AREA. THE ALARM SIGNAL SHALL BE LINKED TO THE FIRE SERVICE SUB-MAIN PANEL IN CARETAKER'S COUNTER OF RELATED TOWER. ALL FIRE ALARM BELLS ON FLOORS BETWEEN REFUGE AREAS OF THE CORRESPONDING SMOKE DETECTOR BE ACTIVATED.



RFSIC



Here Fire Service Inspections Suspected Annually to Keep Your Open Kitchen Safe

Fire Safety Requirements for Units with Open Kitchens
Units with open kitchens constructed according to approved building plans should have been fitted with the fire service installation and equipment specifications listed below at practical completion (including with a warranty bond):

- Smoke detector
- Fire alarm
- Fire extinguisher

Duty of Registered Contractors
Whenever a registered contractor installs, maintains, repairs or replaces any fire service installation or equipment in any premises, he/she shall submit a report after completion of the work to the Fire Service. The report should include a certificate of the fire service installation and equipment (FSI) and be handed to a copy to the Fire Officer of the Fire Service.

Duty of Management/Owners
Management/Owners should conduct regular inspection to ensure that the fire service installation and equipment is maintained in accordance with the requirements of the Fire Service.

Requirements for Existing Premises
Owners should check whether there are any requirements stipulated in the Code of Model Contract regarding the type of existing units in the case of their open kitchen units which are in the Fire Service.

Registration 2023-2027



AP

EVA

plan on FER v.s. GBP

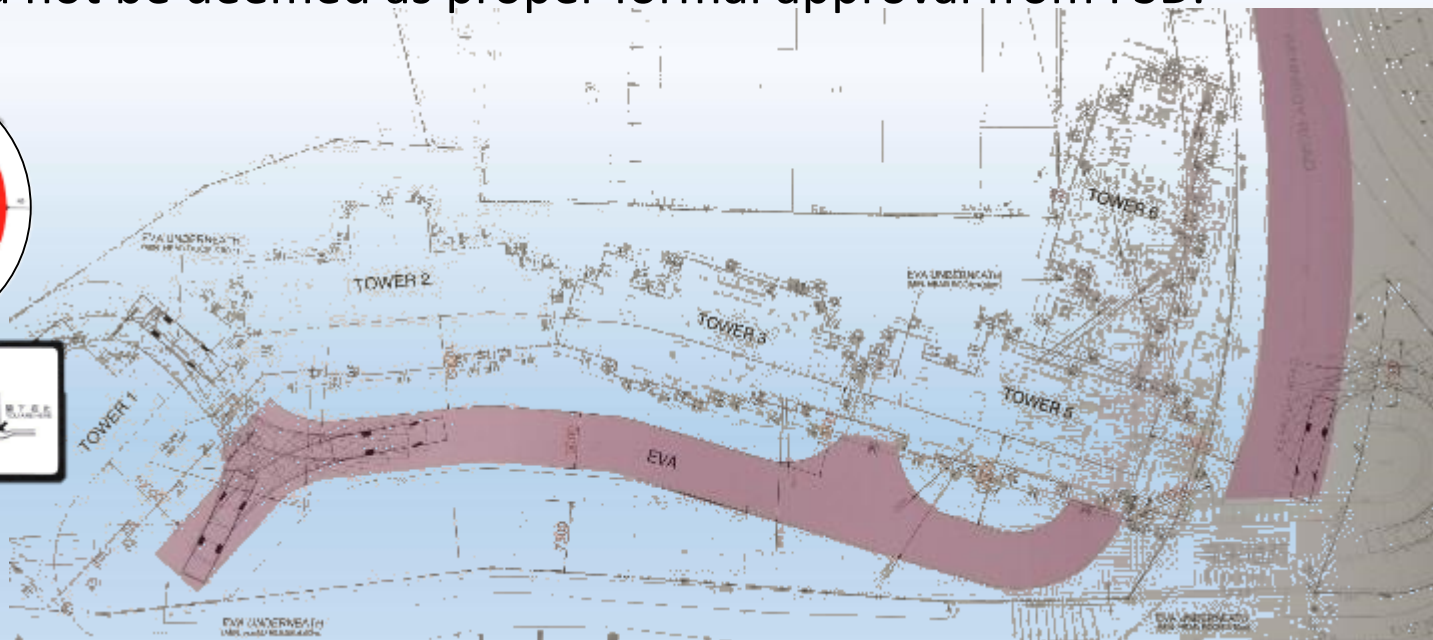
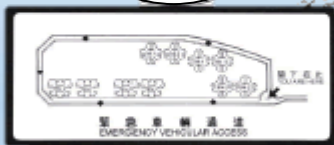
When EVA shall be provided for a building project:



Must be accepted by FSD in the GBP with proper EVA plan



EVA layout mentioned on either FER or phasing plan could not be deemed as proper formal approval from FSD.





Amendment after FSI/501

GBP	Changes in Layout with	
<u>Version</u>	<u>FS provision</u>	<u>FS Note</u>
Original	N.A.	N.A.
Version 1	Yes	Yes
Version 2	Yes	-
Version 3	-	Yes
Version 4	-	-



Acceptance Inspection

To sum up

The key success factors of FSI Acceptance Inspection are:-

- **Collaboration (AP, RPE, RFSIC, etc.)**
- **Site readiness**
- **Sufficient T&C**
- **Proper documents submission**

REVAMPED APPLICATION PROCEDURES FOR INSPECTION AND TESTING OF FSI

Revised Form FSI/501
&
New Form FSI/501a

Senior Building Services Engineer
Ir Stanley CHOW



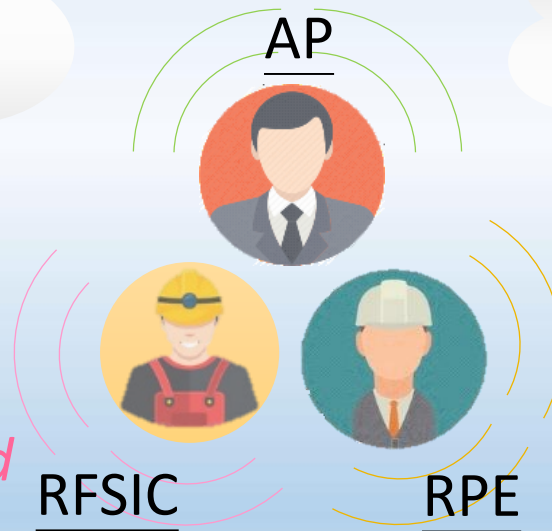
Revamped Application Procedures for Inspection and Testing of FSI (FSI/501)

*Section 21(6)(d) of the
Buildings Ordinance
(Cap. 123)*

➤ To better illustrate the responsibility of respective parties:-

➤ To better facilitate the certification requirement in accordance with:-

*Fire Service
(Installations and
Equipment)
Regulations
(Cap. 95B)*




*Codes of Practice
for Minimum Fire
Service
Installations and
Equipment*

Inspections of FSI

FSD Circular Letter 4/96 Part VI

Work Flow for FSI Acceptance Inspection and Issuance of Certificate



**消防處
防火總區**
香港九龍尖沙咀東部康莊道1號5樓
消防總部大廈

**FIRE SERVICES DEPARTMENT
FIRE PROTECTION COMMAND**
FIRE SERVICES HEADQUARTERS BUILDING,
No. 1 Hong Chung Road, 5/F.,
Tsim Sha Tsui East, Kowloon,
Hong Kong

本處編號 Our Ref.: (60) in FP 314/07 III
來信編號 Your Ref.:
電訊掛號 Telex: 39607 HKFSD }
HX (24-Hour Hours)
圖文傳真 Fax: 852-2723 2197
電話 Tel. No.:

22 October 1996

F.S.D. Circular Letter No. 4/96
F.S.D. Circular Letters

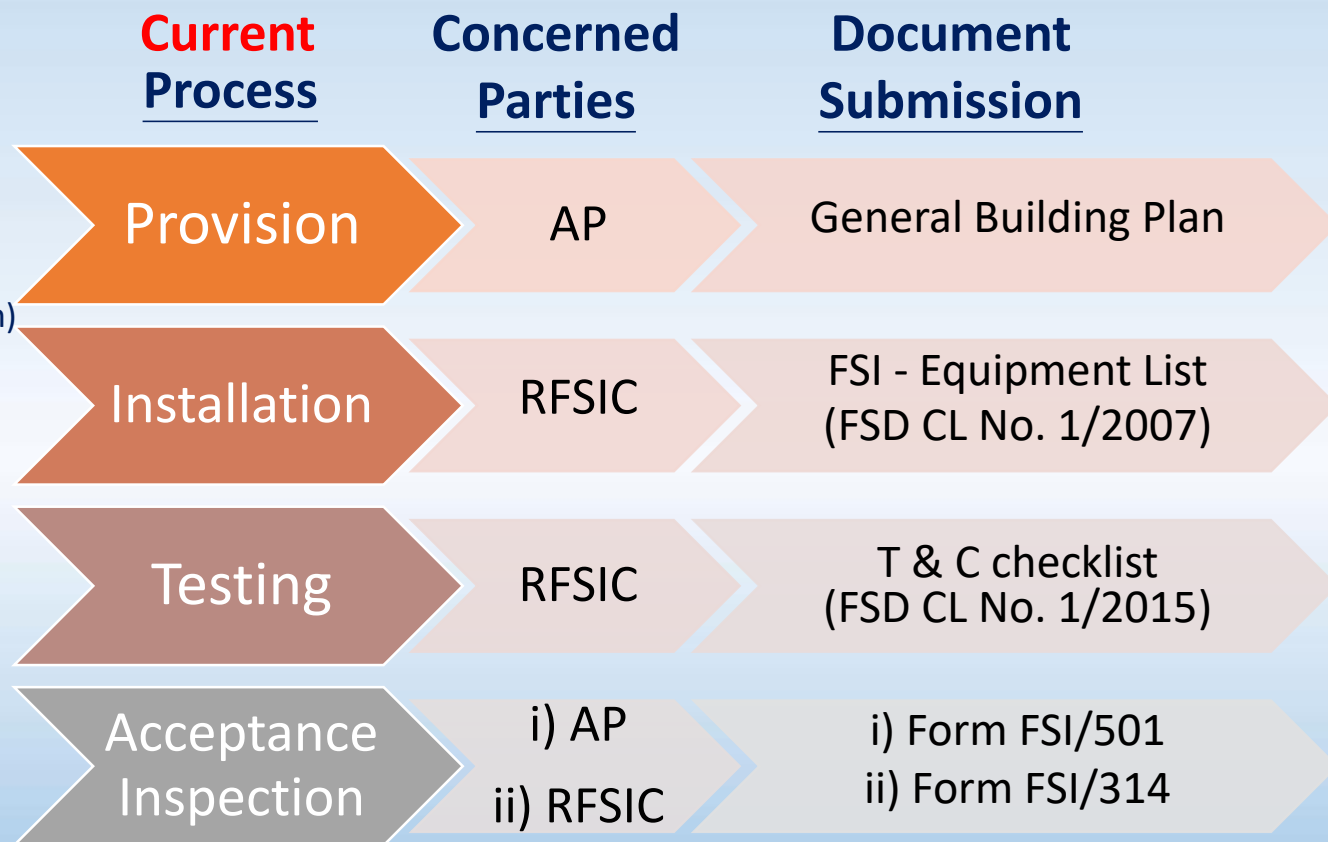
All Fire Services Department (FSD) Circular Letters issued since 1987 have been updated and consolidated in the attached set of "FSD Circular Letters 1996" except those listed in Appendix I which are to remain as stand alone Circular Letters. As a result, all other Circular Letters are to be removed and destroyed.

Listed hereunder are the major amendments incorporated into the consolidated set of Circular Letters. Summary of the updating of each circular letter is also attached at Appendix II for reference.

- (a) Part I 'Annotation of Smoke Control Installations Plans' has been extracted from previous Circular Letter 1/90 and incorporated into paragraph 3.7.
- (b) Part II 'Improvised Sprinkler System' has been removed from previous Circular Letter 7/90 to paragraph 9 of this Part.
- (c) Part III Updated lists of approved agencies and products have been incorporated into this Part.

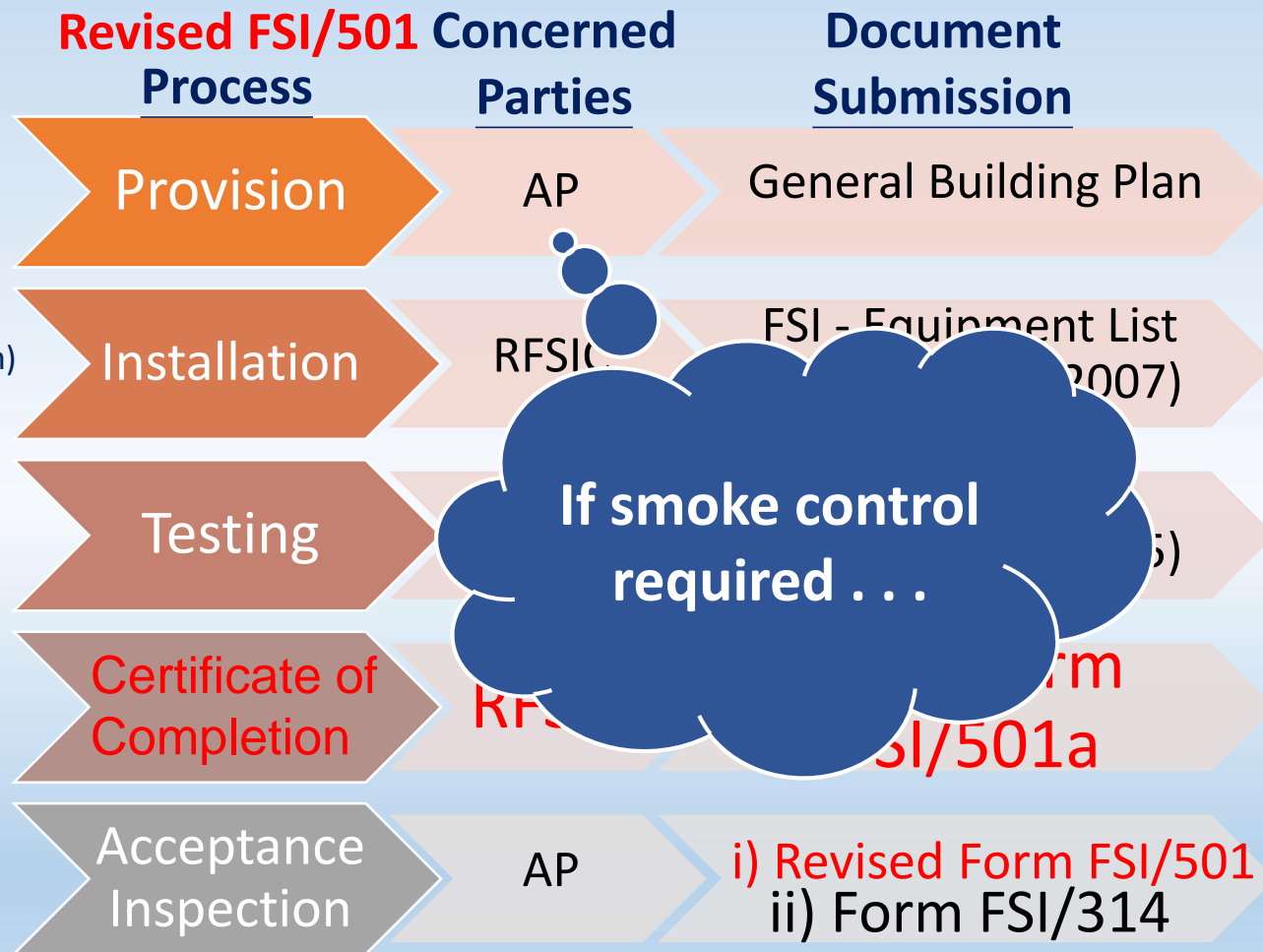
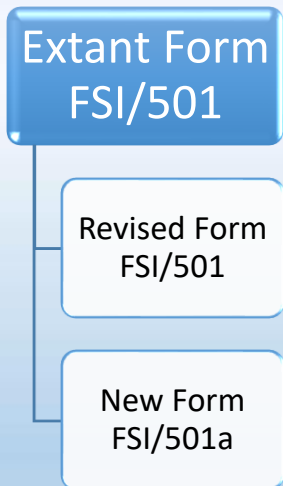
Existing workflow on FSI

(except smoke control system)



Revamped Procedures on FSI

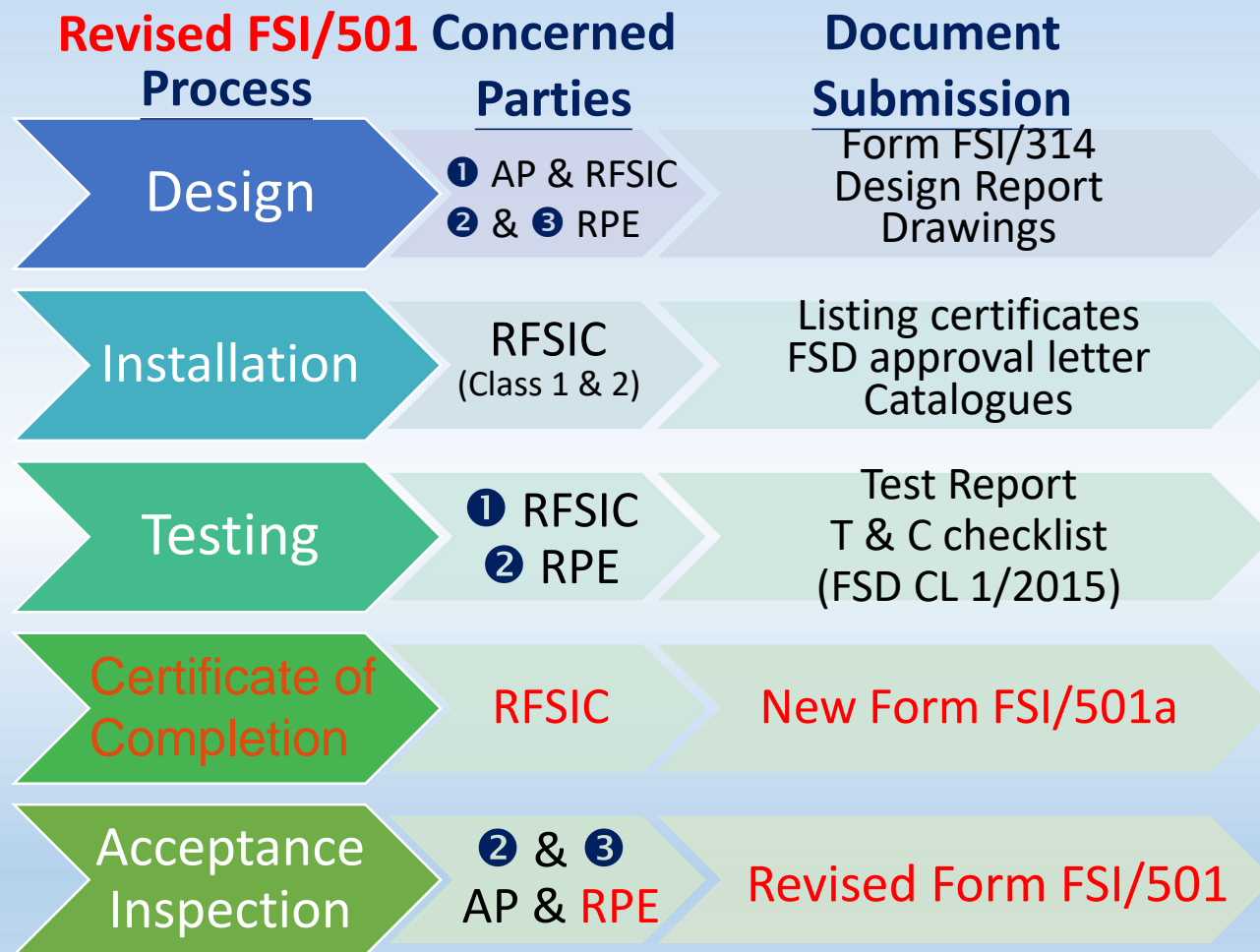
(except smoke control system)



If smoke control system involved,

Revamped Procedures

- ① VAC
- ② SPS
- ③ SES



Extant Form FSI/501

FSI/501 (Rev.08)

Appendix B

Section 21(6)(d) of Buildings Ordinance

- Application for Inspection and Testing of Fire Service Installations and Equipment

To : Director of Fire Services

FP Ref. no. *8/43/

Date :

*19/20/43/

Description of Fire Service Installations/Equipment :

Part A :

The above installations / equipment have been installed at (address of premises)

and the installation work was completed on _____, I hereby certify that such installations / equipment in accordance with the FSI plans submitted under the cover of FSI/314 (Rev. 08) dated _____ have been inspected and are in efficient working order.
* Copies of completed checklist, equipment test reports and catalogue/data sheets are attached herewith for your information.

Office name :

Tel. :

Office address :

Name in Full:
(Class 1 & 2)

Name in Full:
(Class 3)

Signature :

Signature :

Registration no. : RC1/

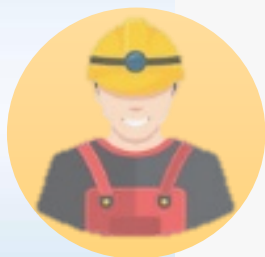
RC2/

RC3/

Date :

Office Chop :

Part B :



RFSIC

Extant Form FSI/501



AP

Date : _____ Office Chop : _____

Part B : I, _____, Authorized Person, certify that the above installations have been installed in accordance with the approved building plans stamped by FSD on _____ and, in my opinion they are ready for inspection.

The Fire Service Completion Advice from Water Supplies Department in respect of Fire Service Installations (**copy attached*) requiring Government water mains connection has been ** issued / applied for*.

**An undertaking letter / memo from building owner for providing 24-hour attendant service with normal telephone provision pending the connection of direct telephone link for the fire service installation(s) is attached herewith.*

I request that a ** Certificate F.S. 172, required under S21(6)(d) of the Buildings Ordinance / acceptance memo / acceptance letter* be issued to me. I can be contacted on telephone no. _____ for collection.

I also certify that the building gross floor area as defined under the Buildings Ordinance is _____ m² and the type of building is *domestic / non-domestic*.^{*}

Office name : _____ Tel. : _____

Office address : _____

Signature of Authorized Person : _____
Full Name of Authorized Person : _____ Date : _____

(Rev. 01/2012)

Type of Fire Service Installations and Equipment

Revised Form
FSI/501

FSI/501

Section 21(6)(d) of the Buildings Ordinance (Cap. 123)

Application for Inspection and Testing of Fire Service Installations and Equipment

FP Ref. No. *8/43/_____ *19/20/43/_____

Types of Fire Service Installations and Equipment:

- | | | |
|------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------|
| <input type="checkbox"/> Audio/Visual Advisory System | <input type="checkbox"/> Fire Alarm System (MFA) | <input type="checkbox"/> Pressurization of Staircase |
| <input type="checkbox"/> Automatic Actuating Device | <input type="checkbox"/> Fire Control Centre | <input type="checkbox"/> Ring Main System with Fixed Pump(s) |
| <input type="checkbox"/> Automatic Fixed Installation other than Water | <input type="checkbox"/> Fire Detection System | <input type="checkbox"/> Sprinkler System |
| <input type="checkbox"/> Automatic Fixed Installation using Water | <input type="checkbox"/> Fire Hydrant/Hose Reel System | <input type="checkbox"/> Static Smoke Extraction System |
| <input type="checkbox"/> Deluge System | <input type="checkbox"/> Fire Shutter | <input type="checkbox"/> Supply Tank |
| <input type="checkbox"/> Drencher System | <input type="checkbox"/> Fixed Automatically-Operated Approved Appliance | <input type="checkbox"/> Ventilation/Air Conditioning Control System |
| <input type="checkbox"/> Dry Riser System | <input type="checkbox"/> Fixed Foam System | <input type="checkbox"/> Water Spray System |
| <input type="checkbox"/> Dust Detection System | <input type="checkbox"/> Gas Detection System | <input type="checkbox"/> Water Supply |
| <input type="checkbox"/> Dynamic Smoke Extraction System | <input type="checkbox"/> Gas Extraction System | <input type="checkbox"/> Street Fire Hydrant System |
| <input type="checkbox"/> Emergency Generator | <input type="checkbox"/> Hose Reel | <input type="checkbox"/> Others |
| <input type="checkbox"/> Emergency Lighting | <input type="checkbox"/> Portable Fire Extinguisher | _____ |
| <input type="checkbox"/> Exit Sign | <input type="checkbox"/> Portable Hand-operated Approved Appliance | _____ |

Please tick the appropriate box(es).

Address of Premises

Role of RPE in Form FSI/501

5.21 Staircase Pressurization System
(SPS)

5.23 Dynamic Smoke Extraction System
(Dynamic SES)

(As a designer to certify)

- ✓ Design
- ✓ Drawing
- ✓ Calculations
- ✓ Test Report



RPE

*CODES OF PRACTICE FOR MINIMUM FIRE SERVICE
INSTALLATIONS AND EQUIPMENT 2012*

Part A: (to be completed by RPE (if applicable))

Revised Form FSI/501

Part A : (to be completed by Registered Professional Engineer (if applicable))

I hereby certify that the *staircase pressurization system(s)/dynamic smoke extraction system(s)/other system(s) (please specify) _____ listed above and in the attached FSI/501a, which was/were approved by the Fire Services Department (FSD) on _____ (FSD Ref. No. _____), has/have been installed and tested in accordance with the FSD's requirements. I am satisfied that the installations are operating in accordance with the approved design and the requirements of the FSD.

Full Name: _____ Discipline: _____

Certificate of Registration Number: _____ Date: _____

Signature of Registered Professional Engineer: _____



RPE

Part B: (to be completed by Authorized Person)

Revised Form FSI/501

Part B : (to be completed by Authorized Person) ↻

I hereby **certify** that: ↻

1. the fire service installation(s)/equipment listed above and in the attached FSI/501a has/have been installed in accordance with the approved building plans stamped by the FSD on _____ and is/are ready for inspection; ↻
2. Fire Service Completion Advice in respect of fire service installation(s)/equipment requiring government water main connection has been *applied for/issued by the Water Supplies Department (copy *attached/not attached); ↻
3. the building owners have undertaken to provide 24-hour attendant service with normal telephone provision pending the connection of (a) direct telephone link(s) to the fire service installation(s)/equipment. The *undertaking letter/memo from the building owners is attached herewith; and ↻
4. the building gross floor area of the above premises as defined under the Buildings Ordinance is _____ m² and the type of building is *domestic/non-domestic. ↻

I request that a *Certificate F.S.172 required under section 21(6)(d) of the Buildings Ordinance (Cap. 123)/an acceptance memo/an acceptance letter be issued to me. ↻

Company Name: _____ Telephone No.: _____ ↻

Full Name of Authorized Person: _____ ↻

Signature of Authorized Person: _____ Date: _____ ↻



AP

Revised Form FSI/501

I hereby **declare** that to the best of my knowledge and belief, the information provided above is true, correct and complete. I understand that if I wilfully give any false information, make any misrepresentation or withhold any material information in this application form, the case may be referred to appropriate professional registration bodies/disciplinary boards for necessary action.

Signature of Registered Professional Engineer
(if applicable)

Signature of Authorized Person

* Please delete as appropriate.
FSI/501 (Rev. 1/2019) P. 2/2



RPE

&



AP

New Form FSI/501a

FSI/501a

Regulation 9 of the Fire Service (Installations and Equipment) Regulation
Certificate of Completion of Installation of
Fire Service Installations and Equipment in New Buildings

FP Ref. No. *8/43/_____ *19/20/43/_____

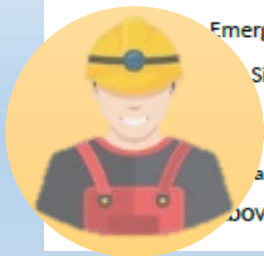
Types of Fire Service Installations and Equipment:

- | | | |
|------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------|
| <input type="checkbox"/> Audio/Visual Advisory System | <input type="checkbox"/> Fire Alarm System (MFA) | <input type="checkbox"/> Pressurization of Staircase |
| <input type="checkbox"/> Automatic Actuating Device | <input type="checkbox"/> Fire Control Centre | <input type="checkbox"/> Ring Main System with Fixed Pump(s) |
| <input type="checkbox"/> Automatic Fixed Installation other than Water | <input type="checkbox"/> Fire Detection System | <input type="checkbox"/> Sprinkler System |
| <input type="checkbox"/> Automatic Fixed Installation using Water | <input type="checkbox"/> Fire Hydrant/Hose Reel System | <input type="checkbox"/> Static Smoke Extraction System |
| <input type="checkbox"/> Deluge System | <input type="checkbox"/> Fire Shutter | <input type="checkbox"/> Supply Tank |
| <input type="checkbox"/> Drencher System | <input type="checkbox"/> Fixed Automatically-Operated Approved Appliance | <input type="checkbox"/> Ventilation/Air Conditioning Control System |
| <input type="checkbox"/> Dry Riser System | <input type="checkbox"/> Fixed Foam System | <input type="checkbox"/> Water Spray System |
| <input type="checkbox"/> Dust Detection System | <input type="checkbox"/> Gas Detection System | <input type="checkbox"/> Water Supply |
| <input type="checkbox"/> Dynamic Smoke Extraction System | <input type="checkbox"/> Gas Extraction System | <input type="checkbox"/> Street Fire Hydrant System |
| <input type="checkbox"/> Emergency Generator | <input type="checkbox"/> Hose Reel | <input type="checkbox"/> Others |
| <input type="checkbox"/> Emergency Lighting | <input type="checkbox"/> Portable Fire Extinguisher# _____ | |
| <input type="checkbox"/> Sign | <input type="checkbox"/> Portable Hand-operated Approved Appliance# _____ | |

Tick the appropriate box(es).

Portable equipment, FS251 is required to be submitted separately.

_____ above fire service installation(s)/equipment has/have been installed at (address of premises)



RFSIC

New Form FSI/501a

and the installation work was completed on _____. I hereby certify that such fire service installation(s)/equipment, which was/were installed according to the FSI plans submitted under the cover of FSI/314 dated _____, has/have been tested and, to the best of my knowledge, is/are in efficient working order in accordance with the Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment published from time to time by the Director of Fire Services.

Original/certified true copies of the following documents are attached as follows:

- Completed testing and commissioning checklist(s)
- *Listing certificate(s)/record(s)/document(s)/printout(s) from product certification bodies
- *FSD approval/acceptance letter(s)
- *Test certificate(s)/data sheet(s)/catalogue(s)/calculation(s)
- Others (please specify, e.g. Fire Safety Management Plan, Fire Engineering Report): _____

Please tick the appropriate box(es).

Remarks: Relevant test report(s) for dynamic smoke extraction system/ staircase pressurization system endorsed by the Registered Professional Engineer, if applicable, should be attached.

This certificate shall be issued to the person on whose instructions the installation work was undertaken and a copy thereof shall be forwarded to the Director of Fire Services within 14 days after completion of the work.

* Please delete as appropriate.
FSI/501a (Rev. 1/2019) P. 1/2



RFSIC

New Form FSI/501a

FP Ref. No. *8/43/ _____

*19/20/43/ _____

I understand that this Certificate is issued under Regulation 9 of the Fire Service (Installations and Equipment) Regulations. Any registered fire service installation contractor (RFSIC) commits an offence and is liable on conviction to a fine at level 5 pursuant to Regulations 9(2A) and 9(3) of the same Regulations, if it issues or forwards a certificate thereunder, or a copy thereof, which is false or misleading in a material particular.

Name of RFSIC: _____ Telephone No.: _____

Full Name of Authorized Signatory (Class 1 & 2 RFSIC only):

Company Chop:

Authorized Signature:

Registration No.: _____

Date: _____



RFSIC

Revised Form
FSI/501

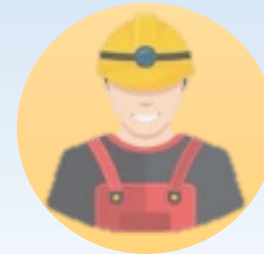
FSI/501a
(New Form)



RPE



AP



RFSIC



Revamped
Application
Procedures

Circular Letter Date:
(tentative)

Early Jan 2020

Effective Date:

1 April 2020

Promulgation of revised Fire Protection Notice No.15

Senior Station Officer(Investigation and Research)

Mr. YAM Ka-wang

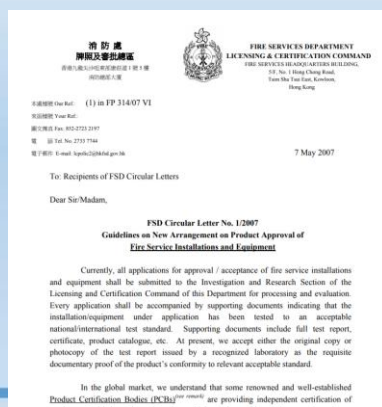


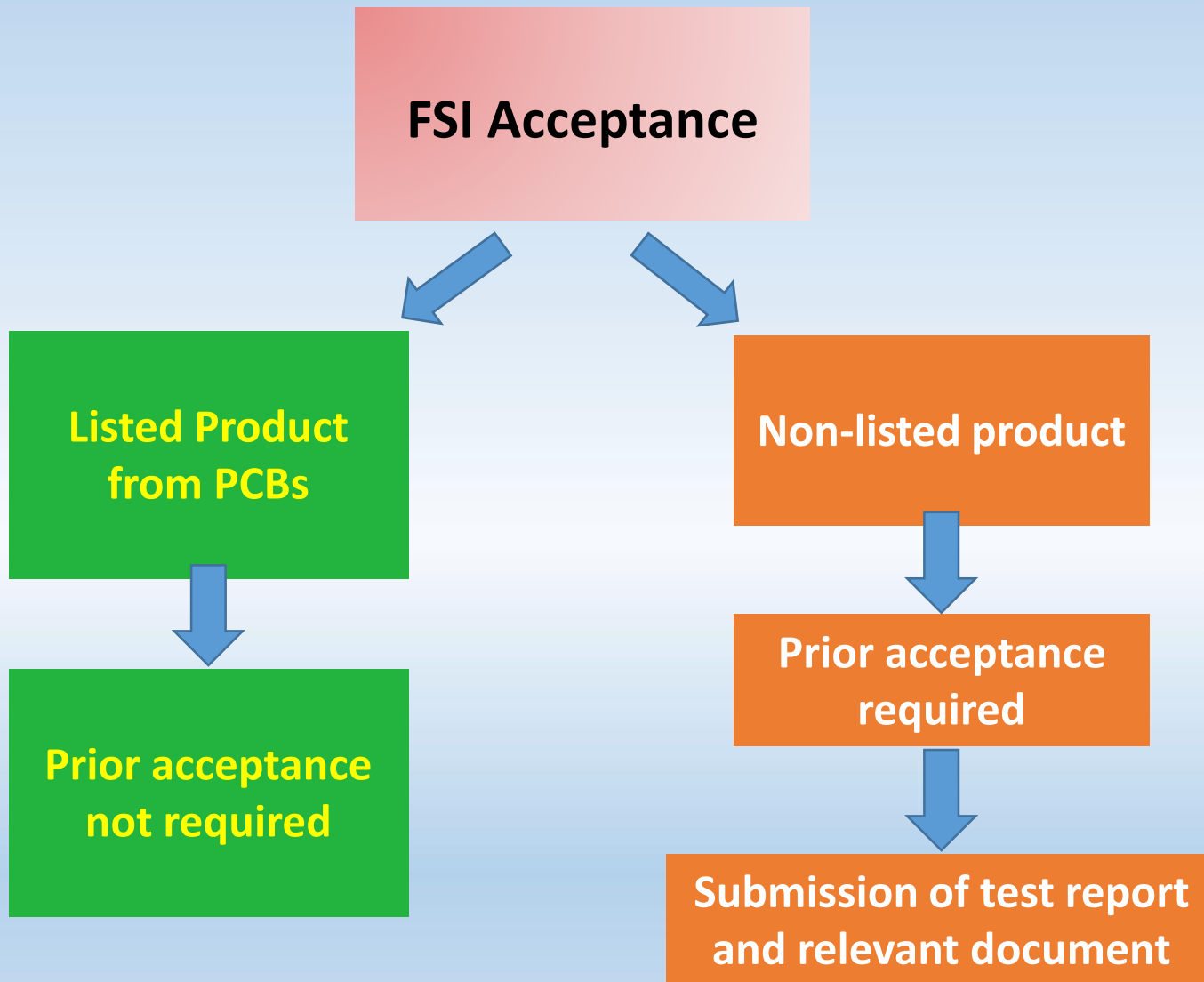
Application of FSI approval/acceptance

- ✓ Regulation 3 of Fire Service(Installations and Equipment) Regulation, Cap.95B
 - All portable equipment shall be approved by the Director of Fire Services for sale and supply
 - Other FSIs required for protection of buildings shall also be of an accepted type

Fire Protection Notice No.15

- Promulgated in 2007 (FSD Circular Letter 1/2007)
- Introduction of Listed Equipment
 - **Equipment listed** by Product Certification Bodies (PCBs) – deemed to be accepted by FSD
 - **Prior acceptance not required** for FSI other than portable Equipment





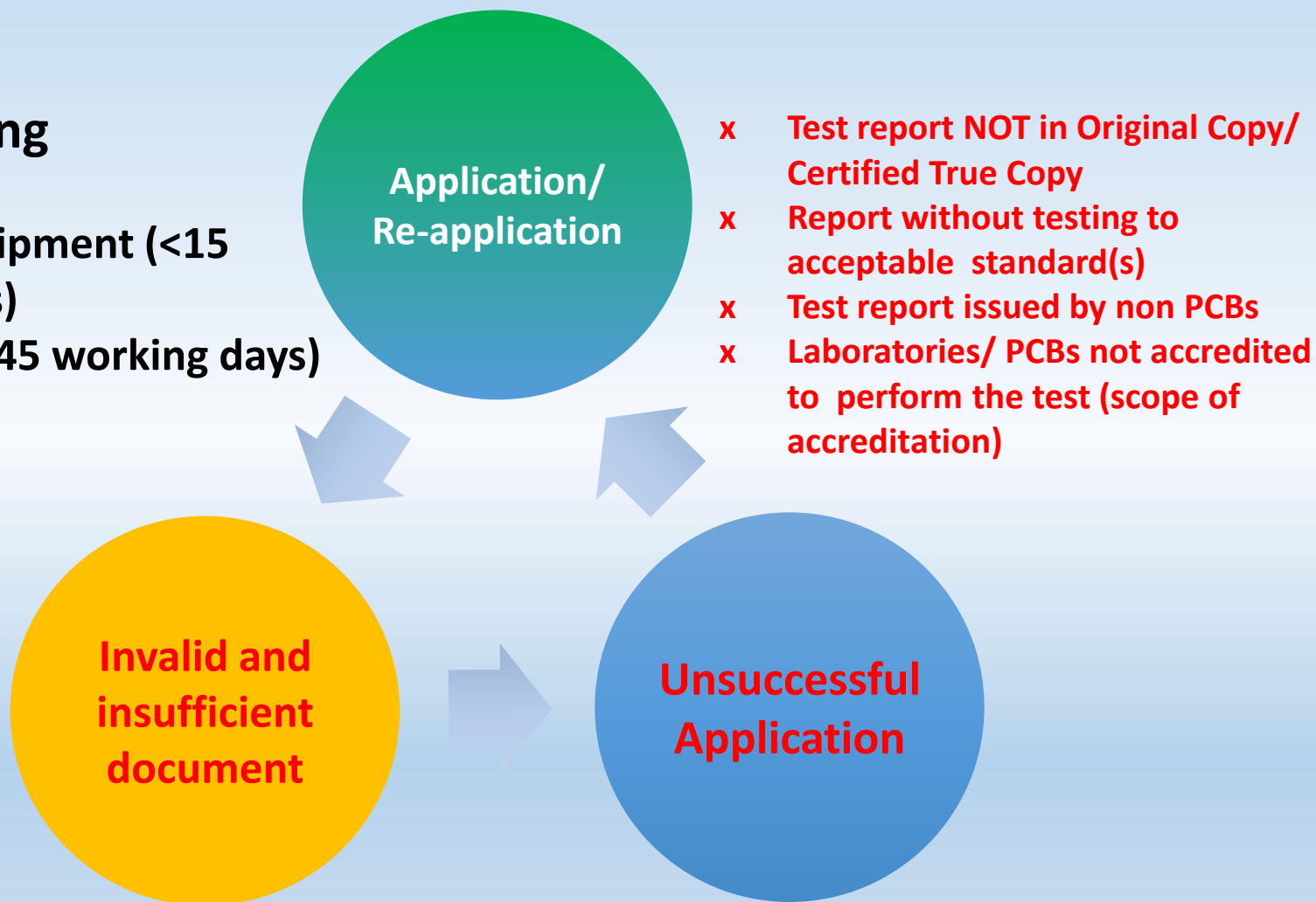
by testing bodies accredited by HKAS or overseas accreditation body under MRA

Current Situation

Detailed vetting

FSD Reply

- Portable Equipment (<15 working days)
- Other FSIs (<45 working days)



Application NOT required to be submitted

- Listed Product
- FSI not required FS acceptance

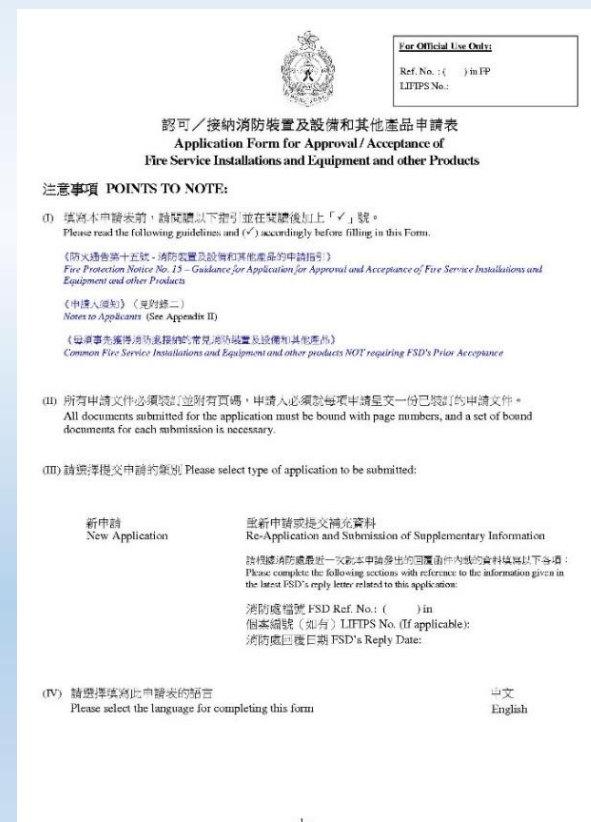


Enhancement Application Procedure

✓ Revised Fire Protection Notice No.15

(to be promulgated in 2020)

- Application Form
- Pre-vetting arrangement
- Revised acceptance list of FSI
 - ventilation system
 - smoke control system



The image shows a sample of the 'Application Form for Approval / Acceptance of Fire Service Installations and Equipment and other Products'. At the top right, there is a box for 'For Official Use Only' containing 'Ref. No. : () in FP' and 'LIFPS No. :'. Below this is the Fire Services Department crest and the title of the form in both Chinese and English. The form includes a section for '注意事項 POINTS TO NOTE:' with three main points: (i) Read the guidelines and fill in the form accordingly, with references to Fire Protection Notice No. 15 and the 'Notes to Applicants' (Appendix II). (ii) All documents must be bound with page numbers and a set of bound documents for each submission. (iii) Select the type of application to be submitted: 'New Application' or 'Re-application and Submission of Supplementary Information'. The latter section includes instructions to complete sections with reference to the latest FSD's reply letter and to provide the FSD Ref. No., LIFPS No. (if applicable), and the reply date. At the bottom, there is a section for selecting the language for completing the form, with options for '中文' (Chinese) and 'English'.

Target of Processing

Pre-vetting
(all applications)
< 7 working days

Detailed vetting
(Portable
Equipment)
< 15 working days

Detailed vetting
(FSIs and products
other than
portable
equipment)
< 45 working days

Guidance for filling the application form

- ✓ Notes to Applicants
- ✓ Checklist
 - Test Report
 - Product Catalogue and Menu
 - Technical Details and Drawings
 - Manufacturer Information
- ✓ Product Testing Information



丁項 - 申請人聲明

Section D - Declaration of Applicant

本人現聲明已閱讀「注意事項」，並向消防處呈交所需文件，以申請認可／接納消防裝置及設備和其他產品：
I hereby declare that I have read the 'POINTS TO NOTE' and submit the required documents to the Fire Services Department in support of my application for Approval / Acceptance of Fire Service Installations and Equipment and other Products:

所需文件 Required Document	文件要求 Requirements of Document	請「✓」 Please (✓)
(a) 認可／接納消防裝置及設備和其他產品申請表 Application Form for Approval/Acceptance of Fire Service Installations and Equipment and other Products	(i) 按要求填寫 Completed as required	
(b) 重新申請或提交補充資料時的所需文件 Required document(s) for Re-Application or Submission of Supplementary Information	(i) 消防處最近一次發出的回覆函件所要求的其他文件，以及所附連的核對清單(如有者) Other document(s) requested by FSD in the latest FSD's reply letter and the checklist as attached therein (if available) (ii) 消防處回覆函件副本 Copy of FSD's reply letter(s)	
(c) 測試報告 Test Report	(i) 測試標準應為最新標準，並等同於「最低限度之消防裝置及設備守則與裝置及設備之檢查、測試及保養守則」和消防處處函內載的標準(如有者) The testing standard is the latest one and same as those mentioned in the 'Code of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment' (COP) and FSD Circular Letter (FSCL) (if available) (ii) 如測試標準沒有在以上 i) 段指明，則產品須以目前有效之國際標準／國家標準進行測試，且獲消防處處長接納 If the testing standard is not specified in (i) above, the product was tested against with current International / National Standards acceptable to the Director of Fire Services (iii) 測試實驗室須以下其中一個認可機構認可進行有關測試： The testing laboratory is accredited to carry out the test by any of the following accreditation bodies:- (a) 香港認可處；或 the Hong Kong Accreditation Service (HKAS); or (b) 與香港認可處簽訂《相互承認安排》的中國合格評定國家認可委員會；或 the China National Accreditation Service for Conformity Assessment (CNAS) which has signed Mutual Recognition Arrangement with the HKAS; or (c) 與香港認可處簽訂《相互承認安排》的其他海外認可機構認可 Other Overseas Accreditation Body which has signed Mutual Recognition Arrangement with the HKAS (iv) 測試報告以中文或英文撰寫，或翻譯為中文或英文本並經測試實驗室核證無誤 It is prepared in Chinese or English or translated into Chinese or English and certified correct by the testing laboratory (v) 須為完整的測試報告，並附有封面、測試記錄和合格的測試結果 It must be a full test report with cover page, test record and positive test result (vi) 測試報告在過去十年內發出 It has been issued within 10 years (vii) 測試報告是正本／已獲有關測試實驗室或香港消防處人員核證無誤的副本 It shall be an original copy/a true copy certified by the respective test laboratory or staff of the Hong Kong Fire Services Department	

甲項 - 申請人資料

Section A - Applicant Information

- (a) 公司檔號 Company Reference No.:
- (b) 申請人姓名 Applicant Name:
- (c) 公司名稱 Company Name:
- (d) 公司地址 Company Address
- (e) 聯絡人姓名 Contact Person Name:
- (f) 電話號碼 Telephone No.:
- (g) 傳真號碼 Fax No.:
- (h) 電郵地址 E-mail Address:

以下「乙項」及「丙項」不適用於申請接納「煙控系統」的組件。如申請接納「煙控系統」的組件，請填寫附件二有關產品及測試資料的欄目。

The following 'Section B' and 'Section C' are not applicable to the application for acceptance of components of 'Smoke Control Systems'. For the application in respect of components of 'Smoke Control Systems', please fill in the sections on Appendix II for the provision of product and testing information.

乙項 - 產品資料

Section B - Product Information

請從《須獲消防處認可／接納的消防裝置及設備和其他產品》的名單內選擇有關的系統及組件。
Please select the relevant system and component from the list as provided in the 'Fire Service Installations and Equipment and other Products Requiring FSD's Approval/Acceptance'.

- (a) 系統 System:
- (b) 組件 Component:
- (c) 品牌名稱 Brand Name:
- (d) 型號／系列 Model Number/Series:
(如申請多過一個型號，請使用附錄一)
(If applying for more than one model, please use Appendix I)
- (e) 製造商名稱 Manufacturer Name:
- (f) 製造商地址 Manufacturer Address:

丙項 - 產品測試資料

Section C - Product Testing Information

請先閱讀《香港消防處接納的測試證書／報告》。
Please read the 'Test Certificate / Report acceptable to the HKFSD'.

測試報告 1
Test Report 1

測試報告 2
Test Report 2

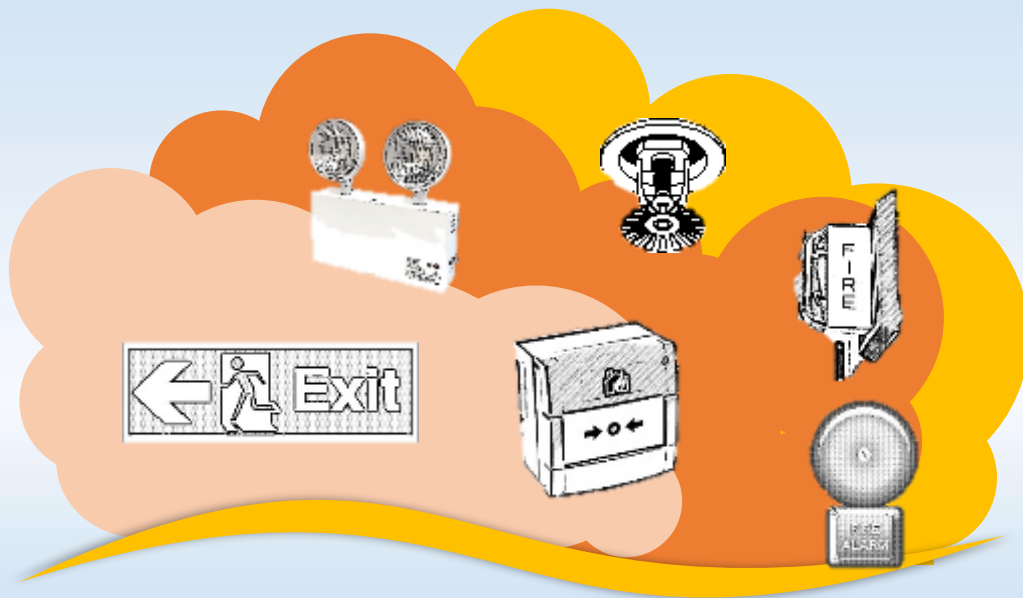
測試報告 3
Test Report 3

- (a) 測試機構 Testing Agency:
- (b) 測試報告編號 Test Report No.:
- (c) 測試標準 Testing Standards:
- (d) 簽發日期 Issue Date:
- (e) 失效日期(如有) Expiry Date (If any):

Accepted/Approved FSI

The screenshot shows the Fire Services Department website. The header includes the department logo, name, and language options (ENG | 粵 | 國). A search bar is present. The main navigation menu on the left lists various services, with 'Fire Protection' highlighted. The main content area is titled 'Fire service installation and equipment' and contains a breadcrumb path: 'Home > Fire Protection > Fire service installation and equipment'. Below this, the section 'Accepted / Approved Equipment' features a table with the following items:

Item	File
Regulation, Disposal and Recycling of Fire Extinguishers	
List of approved Fire Extinguishers and Fire Blankets	
List of accepted Fire Service Installations and Equipment	
List of Accepted Fire Retardant Solution (BS 476: Part 7)	
List of Accepted Fire Retardant Solution (BS 5867-2 : Type "B" performance)	
List of Approved Cylinders or other Containers	
List of accepted materials and equipment (Ventilating system)	
List of approved equipment (Ventilating system)	



Break

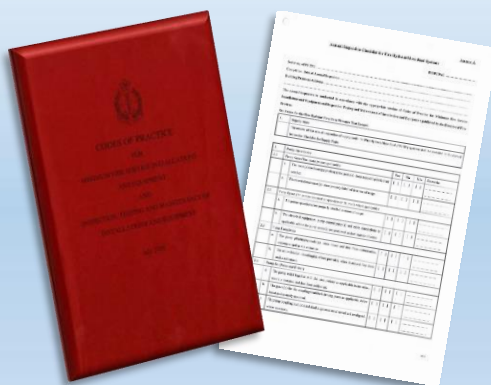
Implementation of Annual Inspection Checklists for FH/HR System

Assistant Divisional Officer(FSITF)

Mr. KAO Chung-lei



Implementation of Annual Inspection Checklists for FH/HR System and supply tank

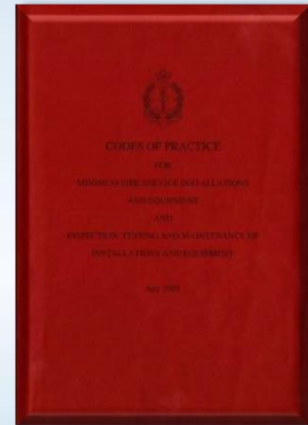


Background

- Cap. 95B Reg.10(2) Standard of inspection

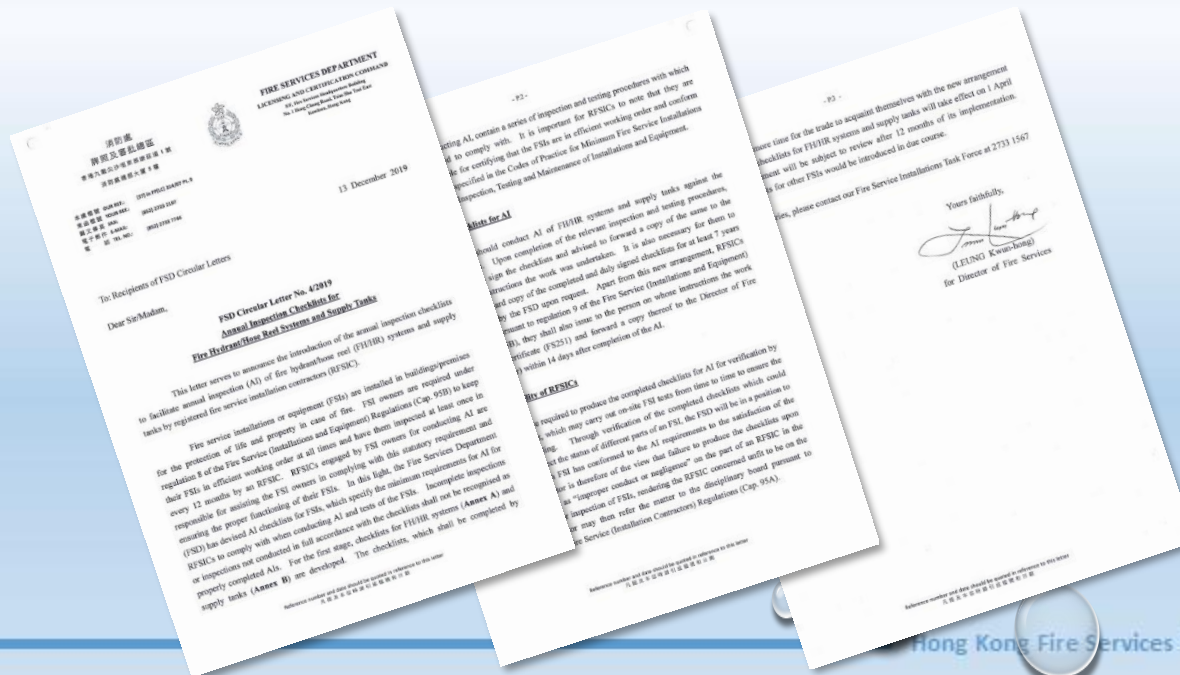
10. Standard of inspection

- (1) The Director may, by notice in the Gazette, prescribe a Code of Practice which shall govern the inspection and testing of fire service equipment.
- (2) Any fire service installation or equipment shall be deemed to be in efficient working order if it complies with the requirements specified by the Director in the Code of Practice prescribed under paragraph (1).



FSD Circular Letter No. 4/2019

- Issued on 13.12.2019
- Annual Inspection (AI) checklists for Fire Hydrant/Hose Reel System and Supply Tanks
- The checklists will take effect on **1 April 2020**



Objectives

The purpose of A/I Checklist is to:

- specify the procedures of A/I;
- standardize minimum checks of FSIs;
- maintain the level of quality of workmanship;
- improve quality control and enhance overall A/I standard;
- assist FSI Owners to have a consistent and practical tool for standard of FSI maintenance
- monitor performance of RFSICs
- RFSIC carry the ultimate responsibility in certifying the working efficiency of FSI



Comparison

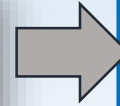
Existing (ITM of CoP)

New (A/I Checklists)

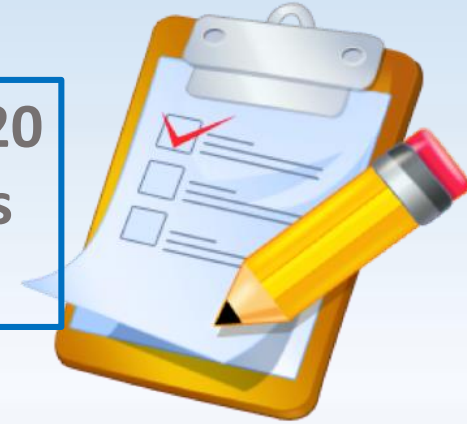
Supply Tank

(ii) Maintenance

The supply tank should be maintained in full storage capacity by the owner or his agent at all times and be checked for leakage periodically.



**Over 20
items**

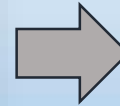


FH/HR System

(ii) Maintenance

The installation shall be maintained in efficient working order at all times and shall be inspected by a registered fire service installation contractor at least once in every 12 months.

The owner or his agent should carry out regular checks to ensure the hydrant/hose reel nozzles, valves, fittings etc. remain intact at all times and are not damaged or misused for other purposes.



**Over
120
items**



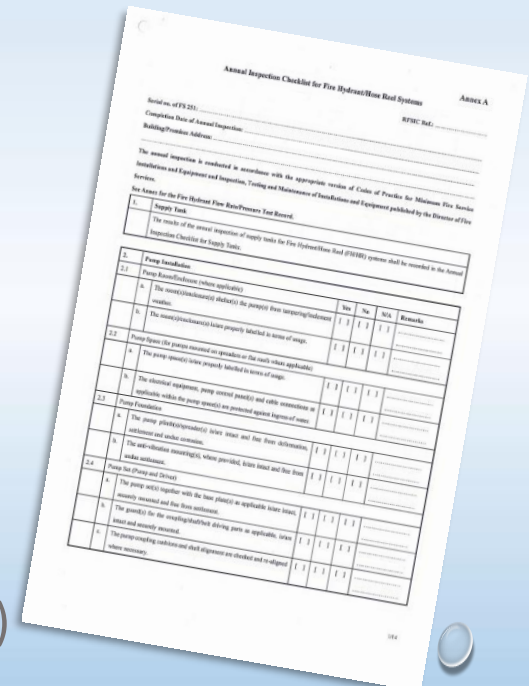
Content of Checklists

Supply Tanks

1. Tank structure (5 items)
2. Tank connections, Valves, Switches and Accessories (12 items)
3. Stored water (7 items)

FH/HR System

1. Supply Tank (1 item)
2. Pump Installation (34 items)
3. Pump Operation
 - a. Jockey Pump (7 items)
 - b. Fixed Fire Pump (28 items)
4. Intermediate Booster Pump Installation (32 items)
5. Intermediate Booster Pump Operation (14 items)
6. System Equipment and Pipework (36 items)
7. Other observations (6 items)
8. Annex – Zoning, Pressure and Flow (1 table)



Implementation arrangement

Is signature required on the checklist?

- Upon completion, RFSIC is required to sign the checklists by AS (who signs the FS251)
- Serial number of the FS251 will be filled in the checklist
- Advised to forward a copy of the same to the person on whose instructions the work was undertaken.

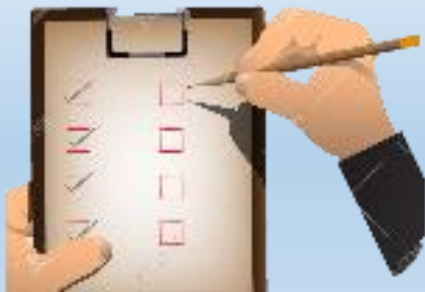
The image shows two overlapping forms. The top form is the 'Annual Inspection Checklist for Fire Substation Red Boxes' (Form A), which includes a table with 24 items for inspection, each with a 'Yes' or 'No' column. The bottom form is the 'CERTIFICATE OF THE EFFECTIVE COMPLIANCE REQUIREMENTS' (Form A), which contains fields for 'Serial Number', 'Date of Issue', and 'Date of Expiry', along with a table for 'Inspection Results' and a section for 'Remarks'.



Implementation arrangement

How to keep the checklists?

- scanned or hard copy
- keep for at least 7 years
- for verification by the FSD upon request.



 A scanned document titled "Annual Inspection Checklist for Fire Detection/Alarm System" with a reference number "A/1997/001". The document includes a header with the HKFSD logo and name, a section for "Inspection Details" (Name, Address, etc.), and a main table with columns for "No.", "Yes", "No", "Remarks", and "Date". The table contains several rows of inspection items, some with checkboxes and some with handwritten marks.


Implementation arrangement

What is the spot check mechanism?

- produce the completed checklists for AI for verification by the FSD upon request
- FSD carry out on-site FSI tests to ensure the fire safety of a building.



Implementation arrangement



What is the consequences of failure to provide the A/I Checklist?

- FSD will be in a position to confirm whether such FSI has conformed to the AI requirements to the satisfaction of the Director.
- Failure to produce the checklists upon request may considered as “improper conduct or negligence”
- FSIC may be referred to the RFSIC Disciplinary Board for disciplinary inquiry pursuant to Reg. 10 of Cap. 95A

Implementation arrangement

Will Chinese version for all of the checklists be provided?

- **Chinese version will be available in due course.**



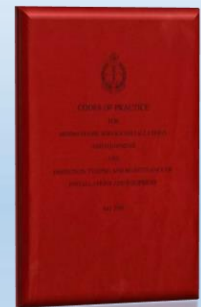
The Way forward



- The arrangement will be reviewed after 12 months of the implementation.
- AI checklists for other FSIs would be introduced in due course
- Incorporate into CoP in the future



FIRE
ALARM



Proper maintenance of moving parts of FSI system

- Two advisory letters dated 19.3.2019 and 22.11.2019 were issued.
- moving parts of FSI systems not operate properly due to wear and tear
- the disc/stem assembly inside FS inlets or hydrant outlets of FH/HR system



Proper maintenance of moving parts of FSI system

- The piston/spring assembly inside the Pressure Reducing Valve (PRV) of a water-based system



Ensure sufficient stock of spare parts/components

- FSI not resume normal after actuation due to shortage of spare parts
- Advise owner of FSI to keep sufficient stock of spare parts
- Particularly for those which are not immediately/readily available in the market
- Multiple Jet Control (MJC) in long throw sprinkler system



FIRE SAFETY MANAGEMENT PLAN (FSMP)

Divisional Officer(NP)

Mr. CHAN Kim-man



Fire Safety Management Plan

Fire Safety in Buildings

- 1. Passive fire protection;**
- 2. Active fire protection;**
- 3. Fire safety management**

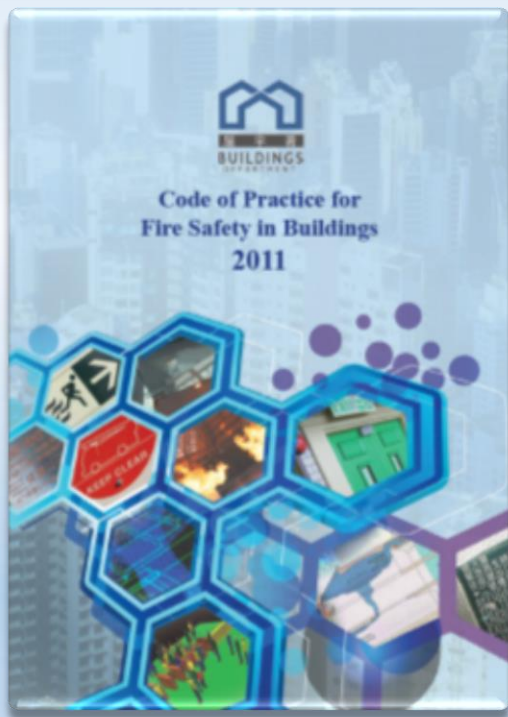
Fire Safety Management Plan



Objectives

1. **reduce** potential fire danger;
2. **assist occupants** to reach the ultimate **place of safety** in case of fire; &
3. **regular maintenance** will **ensure all fire safety provisions** in the building can be kept in **good workable conditions**.

Fire Safety Management Plan



Code of Practice for Fire Safety in Buildings (建築物消防安全守則)

Part F

Fire Safety Management

Fire Safety Management Plan

Fire engineering approach is adopted in fire safety design of a building, the submission of a **fire safety assessment report (FSAR)** for an Alternative Solution may require the **support of a fire safety management plan (FSMP)** which will then form part of the approved **general building plans (GBP)**.

Fire Safety Management Plan

Building Design

Examples:

- Large compartment design (i.e. atrium); &
- No part of the building or basement is more than 60m from such a stairway

Bounding Conditions

- Bounding Conditions should be **observed during the life of a building**.
- Bounding Conditions should be included in the **Deed of Mutual Covenant (DMC)**, where applicable, to ensure compliance.
- Bounding Conditions should be checked and updated at least **annually** by building management or owners.

Bounding Conditions

- The **set of fire safety provisions** to be provided and maintained when adopting performance-based approach to fire safety design.
- Any **changes** to Bounding Conditions (e.g. fire safety provisions/ maintenance/ settings/ obstruction, fire compartment, UBW, fire load or occupant capacity) may **invalidate** the performance-based fire safety design.

Fire Safety Management Plan

Effectiveness

Documentation + Implementation

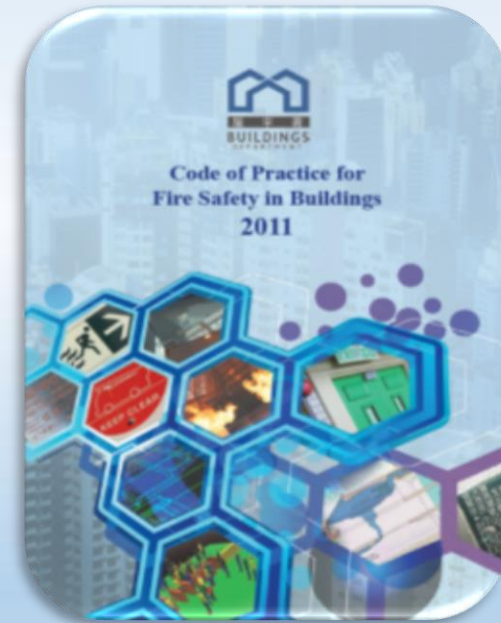
Fire Safety Management Plan



FSMP should be carried out at **regular intervals** through routine **inspections** and **maintenance** of fire safety provisions for rectifying any identified irregularities... by **Competent Persons.**

Fire Safety Management Plan

- **Maintenance Plan**
- **Training Plan**
- **Action Plan**



Maintenance Plan

- Approved general building plans with the **exit routes highlighted**
- Fire safety **provision installed**
- Period for **regular maintenance** of the fire safety provisions installed, etc.

Training Plan

- Relevant content of training to enable staff Knowledge
 - ❑ Familiar with fire safety provisions
 - ❑ Associated irregularities
 - ❑ Action Plan
- Training plan
 - ❑ Interval of training – refresher; in & out
 - ❑ Record of training
- Fire Drill



Action Plan

Basic Procedures

- ❑ Report the fire to FSD
- ❑ Inform occupants
- ❑ Assist occupants to escape to Ultimate Place of Safety
- ➔ Contingency / Evacuation Plan

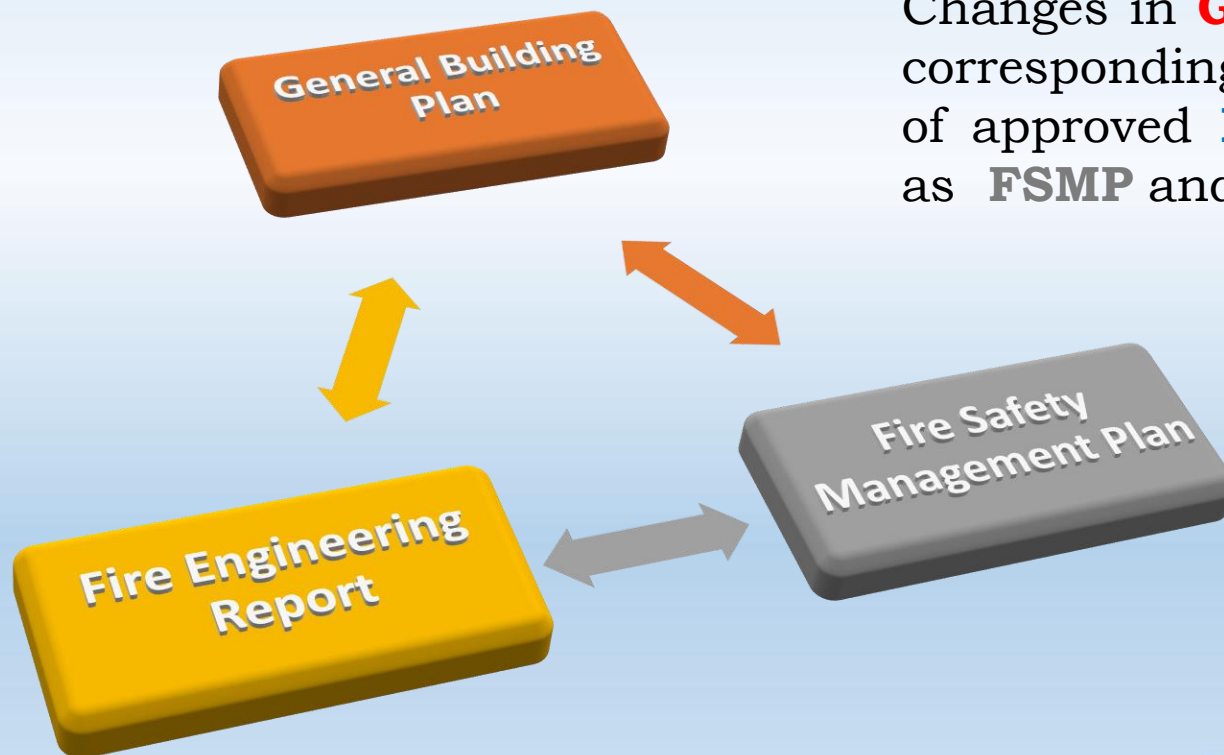
Other Considerations

- ❑ Evacuation Procedures for Disability
- ❑ Temporary Refuge Space

Fire Safety Management Plan

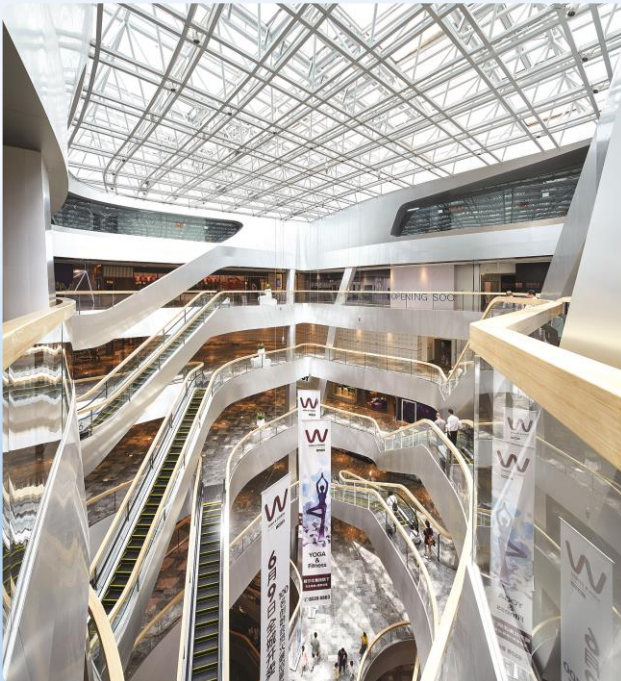
****Reminder****

Changes in **GBP** may need corresponding adjustment of approved **FSAR** as well as **FSMP** and vice versa.



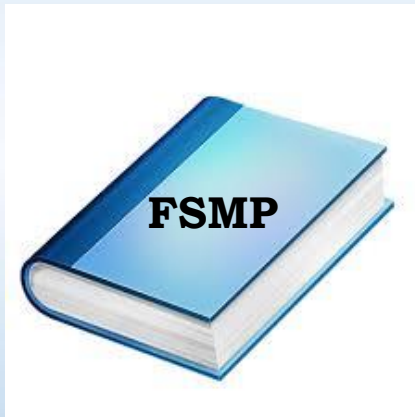
Experience sharing

Design Stage



Experience sharing

Live Operation



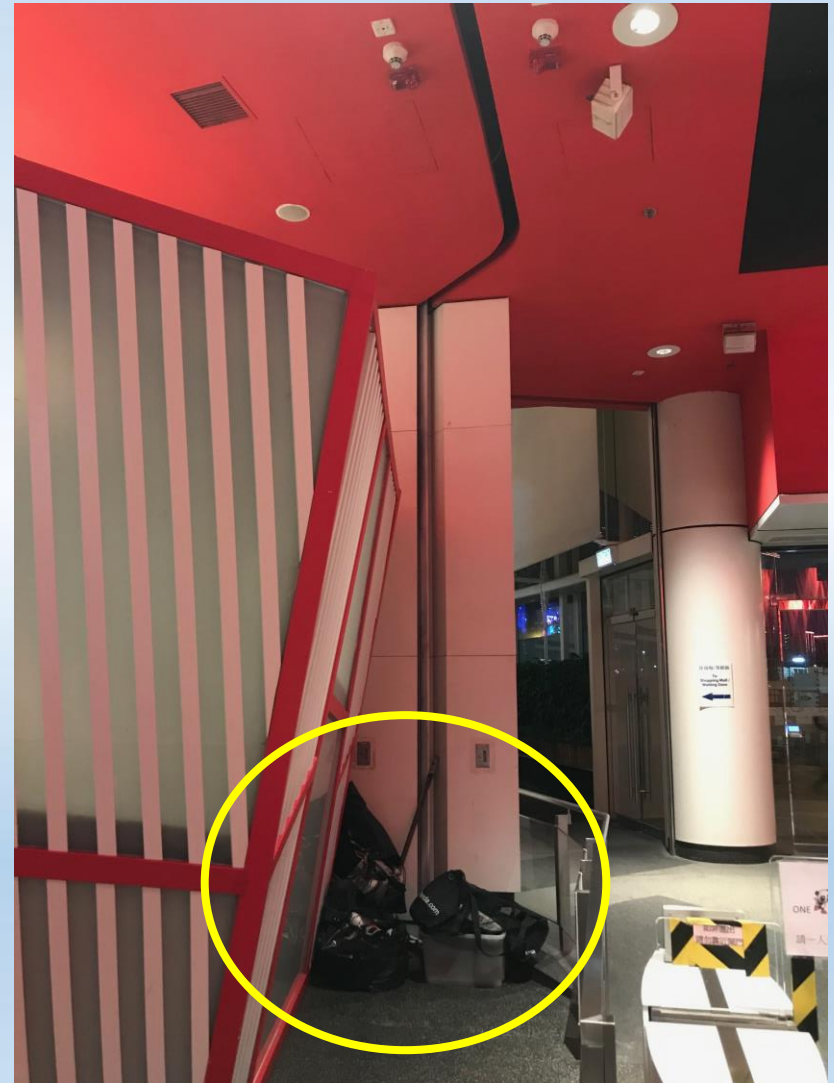
Knowledge



Operators

Experience sharing

Maintenance

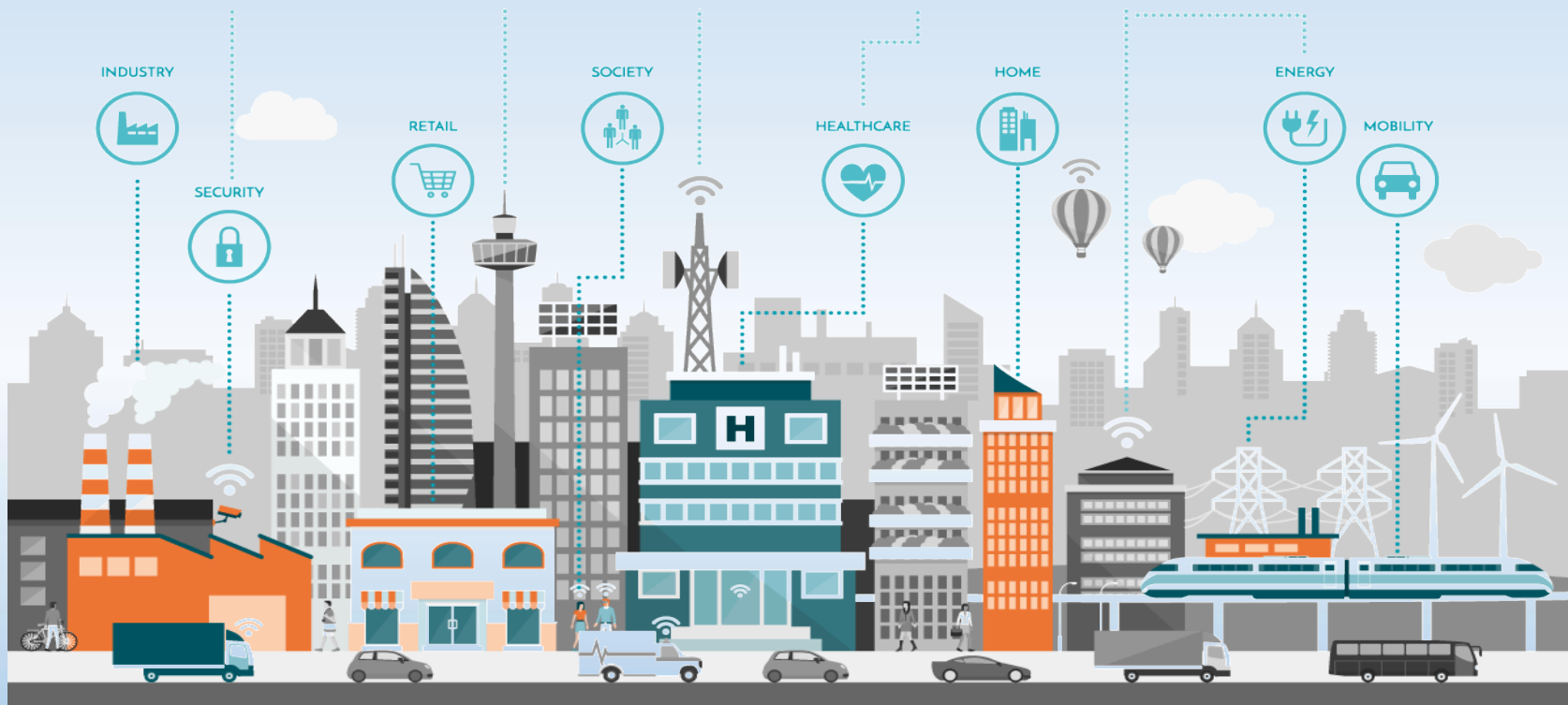


Experience sharing

Maintenance



FIRE SAFETY IN SMART CITY

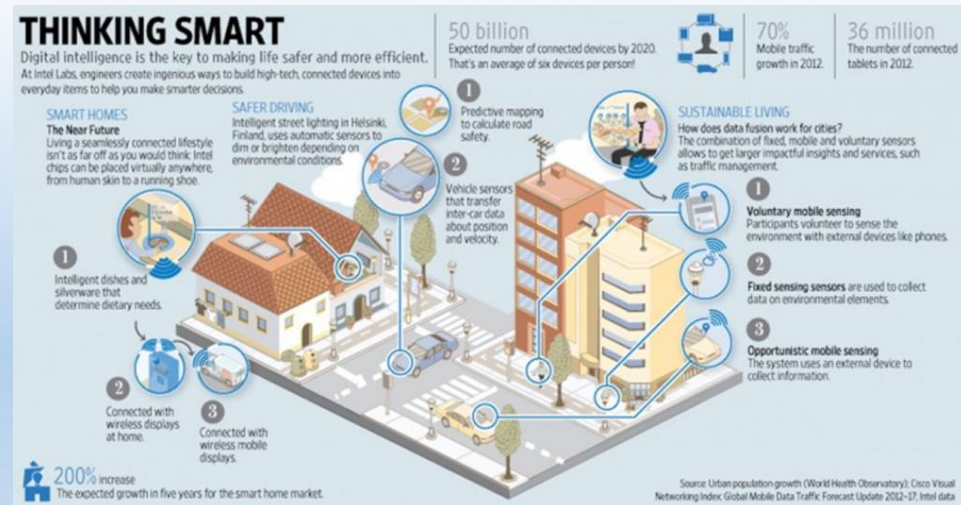


Acting Senior Divisional Officer (NT&KE)

Mr. CHEUNG Ngao-tin

Smart City

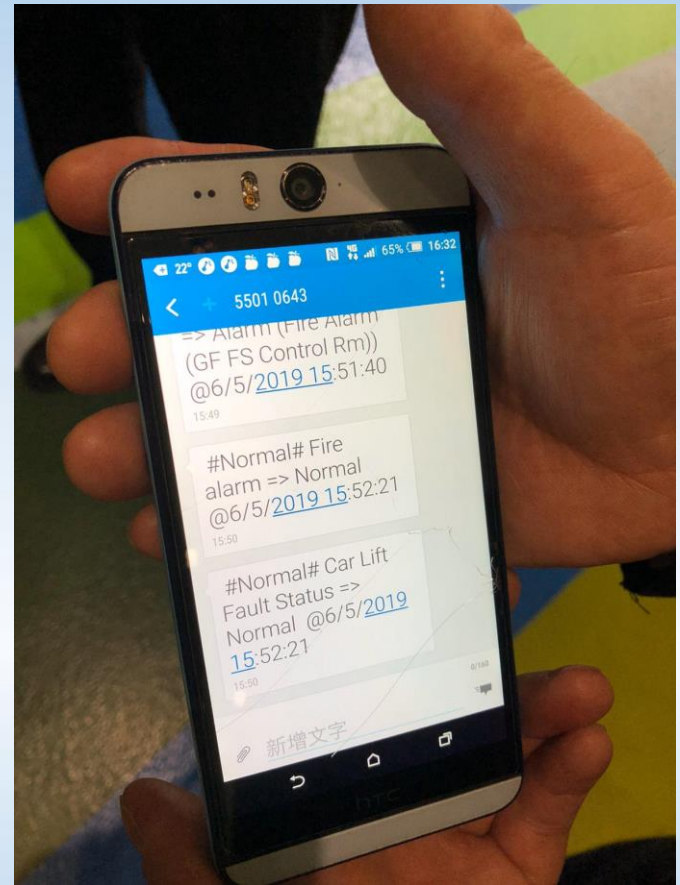
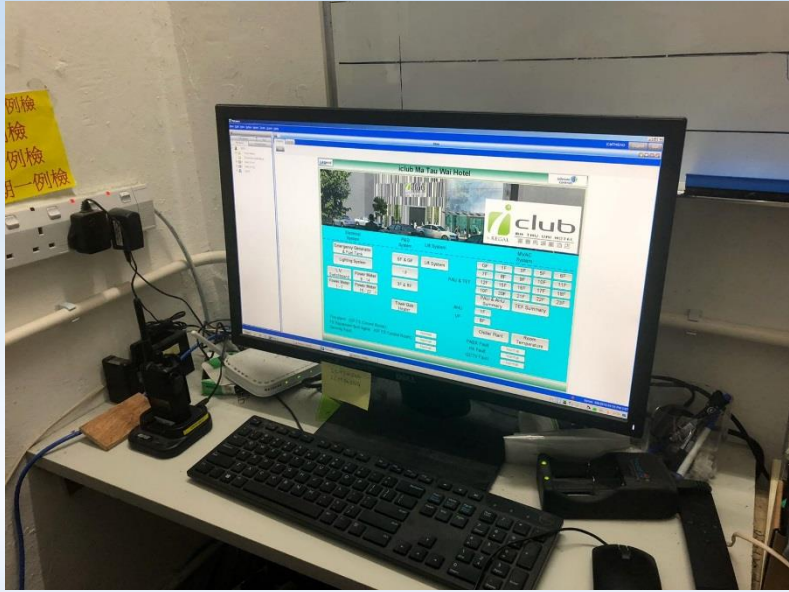
- Making use of **innovation and technology (I&T)** to:
 - a) Address urban challenges;
 - b) Enhance the effectiveness of city management
 - c) Improve quality of living;
 - d) Enhance Hong Kong's sustainability, efficiency and public safety



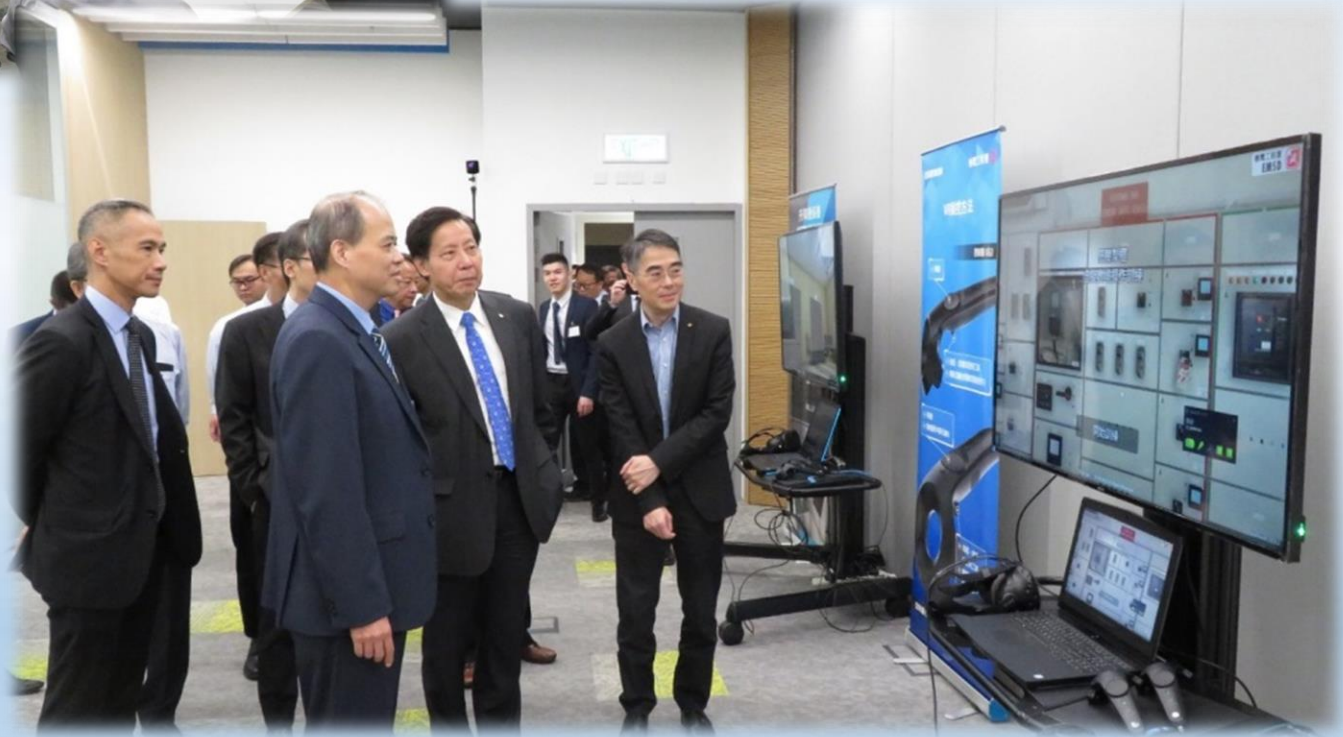
Fire Safety in Smart City

- **Working Group on Application of Smart Technology in FSI System**
 - Feasibility of applying Smart Technology in FSI systems
 - Information on FSI-related Smart Technology products/ services available in the market
 - Promotion of Smart Technology concepts in FSI systems





Visit to Hotel with smart FSI installed



Visit to EMSD on 20.9.2019

Fire Safety in Smart City



Internet of Things Technology



Application of Smart Technology in FSI



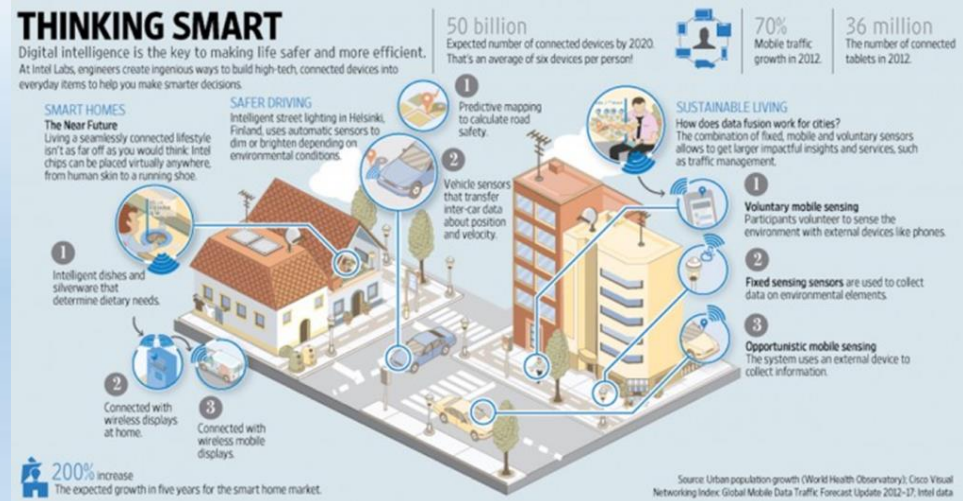
Time to come

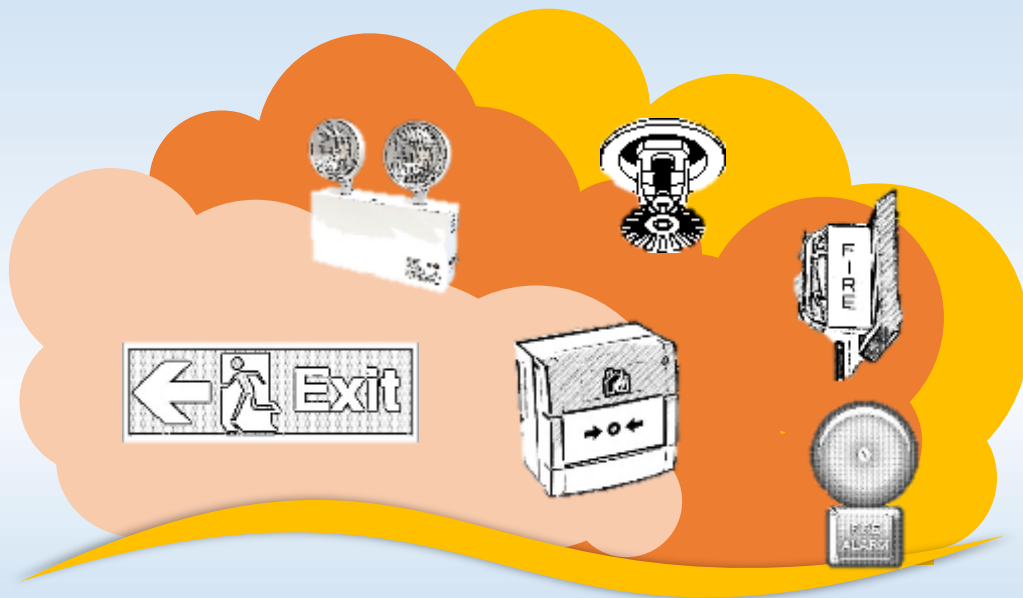
- Smart Technology in FSI is mature and readily available
- Advisory letter will be issued to encourage the incorporation of smart FSI technology



Time to come

- FSD takes an open-minded approach to new ideas
- The Working Group will continue to explore further usage application of smart technology
- All stakeholders are welcome to approach for exchanging views and collaboration





Q & A