



Renewal of Building Rehabilitation

Daniel Ho
Urban Renewal Authority
– 20 Oct 2020



Agenda

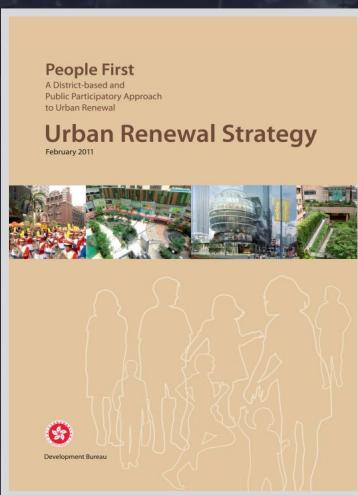
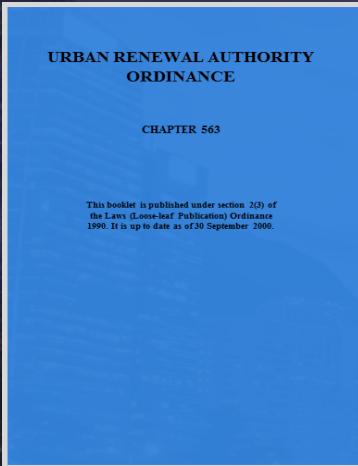
- 01 Effort in building rehabilitation
- 02 Magnitude of urban decay
- 03 Building Rehabilitation Strategy Study
- 04 Promotion of preventive maintenance
- 05 Collaboration with other stakeholders



01

Effort in building rehabilitation

URA's role in promoting building rehabilitation



URAO part II 5 - Purposes of Authority

(d) prevent the decay of the built environment by promoting the maintenance and improvement of individual buildings structural stability, integrity of external finishes and fire safety improvement of the physical appearance and conditions of that built environment

Urban Renewal Strategy (Feb 2011)

“...promote rehabilitation of buildings in need of repair as one of its (two) core businesses.....”

Major objectives of urban renewal:-

(f) promoting the timely maintenance and rehabilitation of buildings in need of repair



URA's effort in promoting building rehabilitation

Facilitation Service



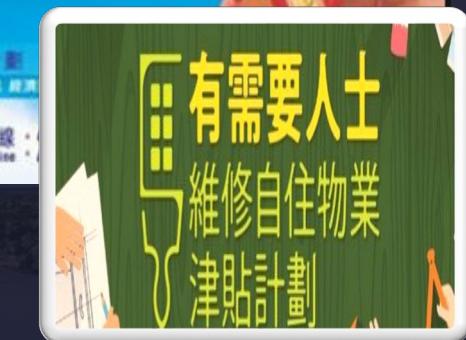
Reduce the risk of tender-rigging at the works procurement stage

Subsidy schemes



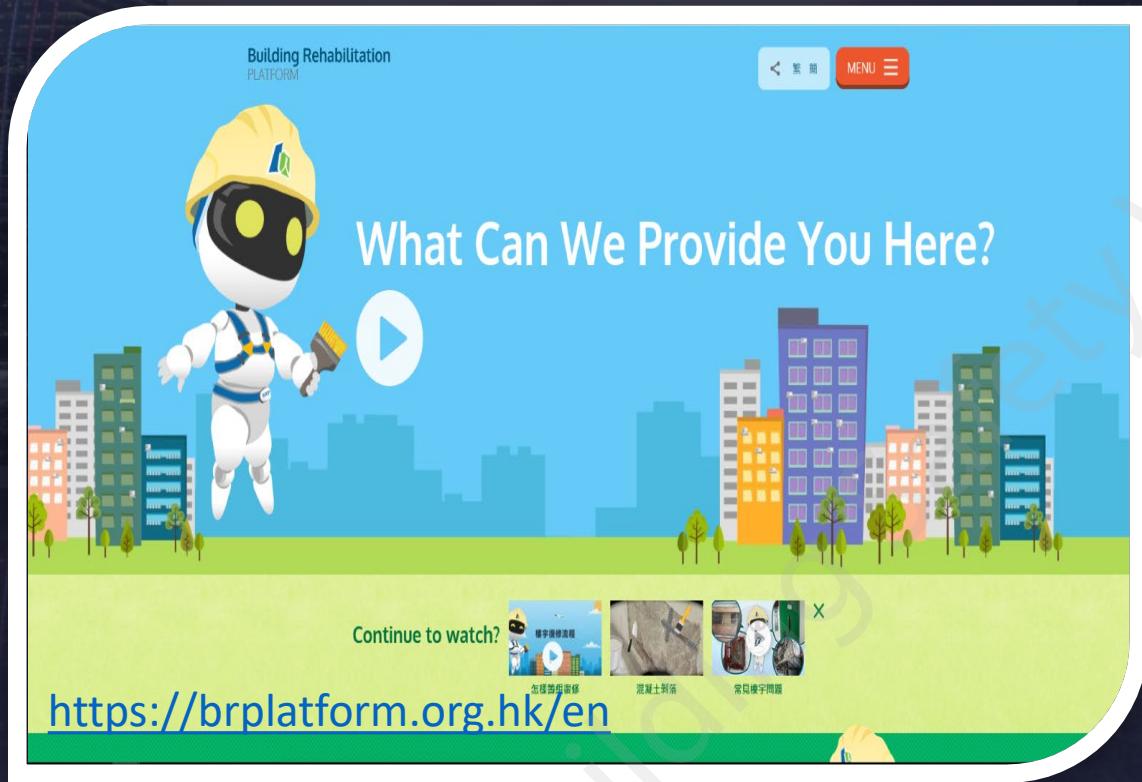
Facilitate building rehabilitation and encourage building maintenance

Loan & grant



Provide financial assistance to needy owners

URA's effort in promoting building rehabilitation



Building Rehabilitation Platform
(BRP)
all-in-one information platform

- Building Rehab. Guidebook
- Standard Tender Documents
- E-tendering Platform
- Cost Reference Center
- Service Provider List
- Subsidy & Assistance

URA's effort in promoting building rehabilitation



**即將接受申請
樓宇更新大行動2.0**

致單位業主
如閣下為租客，請將此信件轉交單位業主。
If you are the tenant, please forward this letter to the owner of your flat. If an English version is required, please call 3188 1188 for assistance.

**第二輪
樓宇更新大行動2.0**

政府為協助有需要的樓宇業主進行「強制驗樓計劃」下的訂明檢驗及修葺工程，已伙拍市區重建局（市建局）推出「樓宇更新大行動2.0（2.0行動）」，並即將接受申請。

根據記錄，你的樓宇為私人住宅或結合用途（商住）樓宇、樓齡達50年或以上，並已接獲屋宇署發出的強制驗樓通知或預先知會函件，而有關業主尚未申請。親愛你的樓宇內的所有住用單位的平均應繳差餉稅額，你的樓宇或符合資格申請2.0行動。本函向你簡介有關計劃的最新詳情，並邀請你參加新一輪的簡介會，使以你作為業主可進一步了解計劃的內容、申請辦法及要求。

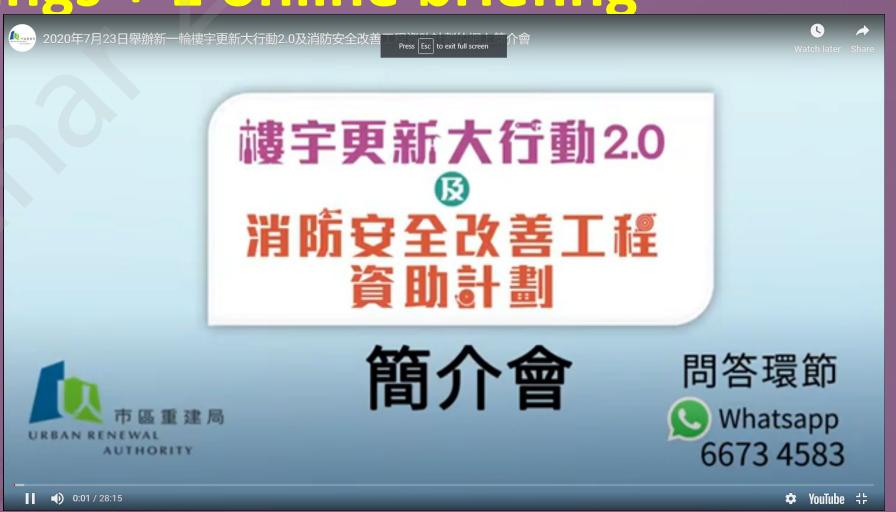
**第二輪
樓宇更新大行動2.0**

政府為協助有需要的樓宇業主進行「強制驗樓計劃」下的訂明檢驗及修葺工程，於2018年伙拍市區重建局（市建局）推行「樓宇更新大行動2.0（2.0行動）」。政府已宣佈額外撥款30億元推行第二輪申請。視乎撥款情況，政府預計最快可於2020年第三季開始接受第二輪申請。

350,000 Promotion letters



21 Mass briefings + 1 online briefing



樓宇更新大行動2.0 及 消防安全改善工程 資助計劃 簡介會

問答環節 WhatsApp 6673 4583

NGO's assistance for promotion



Street booth

Follow up call & Visit

Mass briefing

URA's effort in promoting building rehabilitation



雷霆881
商業一台

Radio promotion

Bus body & seat back
advertisement

定期檢
請定期找
氣機中央排
置冷氣機中央
水滋擾。若
戶盡早處理。

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戶盡早處理。

香港
Hong Kong

樓宇更新大行動2.0
及
消防安全改善工程
資助計劃

樓宇更新大行動2.0 (首報申請)
協助有需要的業主進行「強制
船樓計劃」下的訂明檢驗及修
葺工程

受惠對象
· 住用單位的自住業主
樓宇公屋租戶津貼
· 一般自住業主，資助有關費用的八成。
每個單位上限4萬元。
· 長者自住業主，資助有關費用的全數。
每個單位上限4萬元。

樓宇私人擁有的仲出物津貼
· 資助有關費用的五成。每個單位上限6千元。

合資樓宇
· 樓齡50年或以上的私人住用或綜合用途
(商住) 樓宇
· 符合詳述申請相應上限制要求
· 已獲強制船樓通知或先知會函件

查詢電話 Enquiry:
3188 1188

樓宇復修資訊網 Building Rehab Info Net:
www.buildingrehab.org.hk

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www.buildingrehab.org.hk

Newspaper &
District newsletter

02 Magnitude of urban decay

5,000 out of 24,000
domestic / composite
buildings are **aged 30+**
and **in dilapidated**
condition



2019
5,000 buildings

By 2030
7,600 buildings

By 2046
10,000
buildings

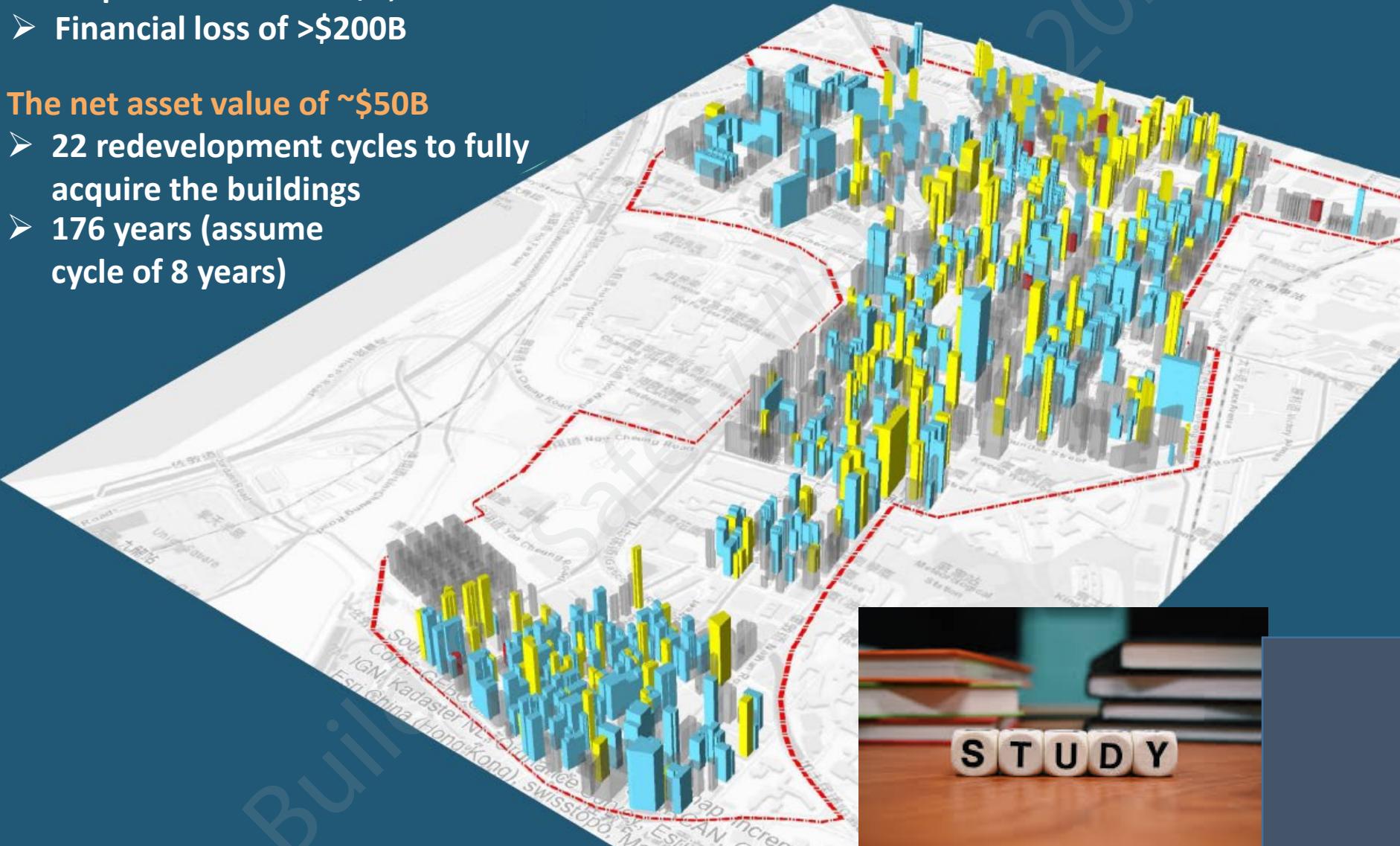
Redevelopment in Hong Kong

Current URA redevelopment mechanism:

- Acquisition cost of ~\$1,100B
- Financial loss of >\$200B

The net asset value of ~\$50B

- 22 redevelopment cycles to fully acquire the buildings
- 176 years (assume cycle of 8 years)



Alternative solutions to urban decay problems

From 2004 to 2019,
URA assisted

4,300+

to complete
rehabilitation

5,000+

Domestic Buildings
*in dilapidated
condition*



Rehabilitation

- Lengthen life span of aged buildings
- Relieve the pressure on redevelopment

Impractical to solve the problem under the current mechanism



03

Building Rehabilitation Strategy Study

Building Rehabilitation Strategy (BRS) Study

Review the
current
regulatory
framework

Objectives

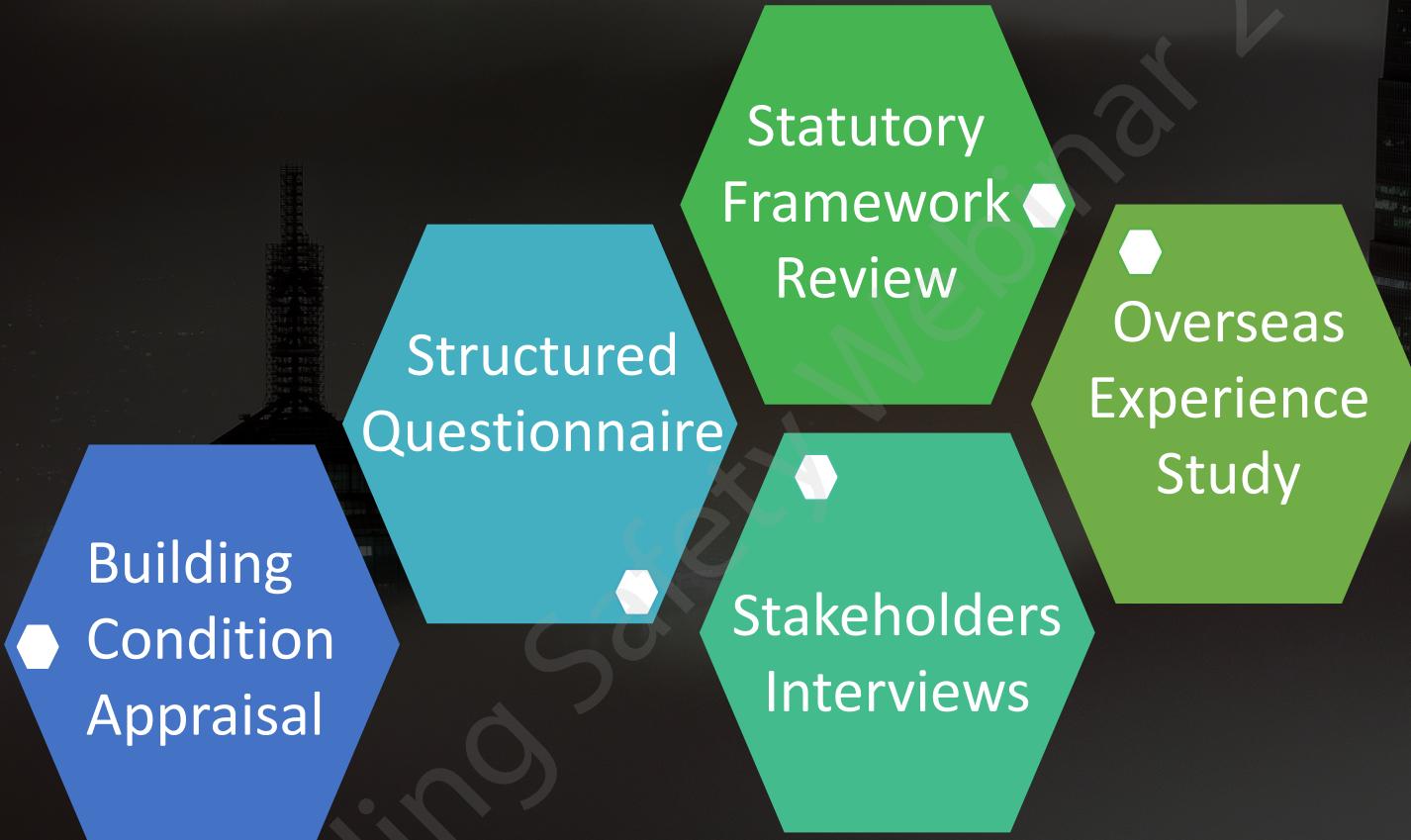
Formulate holistic
strategies for building at
different ages

Identify forward-
looking initiatives





Methodology



Building Seminar 2020

Challenges faced by owners in building rehabilitation

Lack of relevant **Knowledge**:

- Unaware of owners' responsibility
- Unfamiliar with appointment of consultants and contractors for works inspections

Lack of **Financial reserve**:

- No statutory requirement on mandatory contribution to fund
- Often with no financial reserve

Lack of **Capability** to organise:

- Buildings without OC or PMC
- Elderly people have difficulties in organizing owners' meetings and confirming work scope



Existing requirements

DMC guidelines

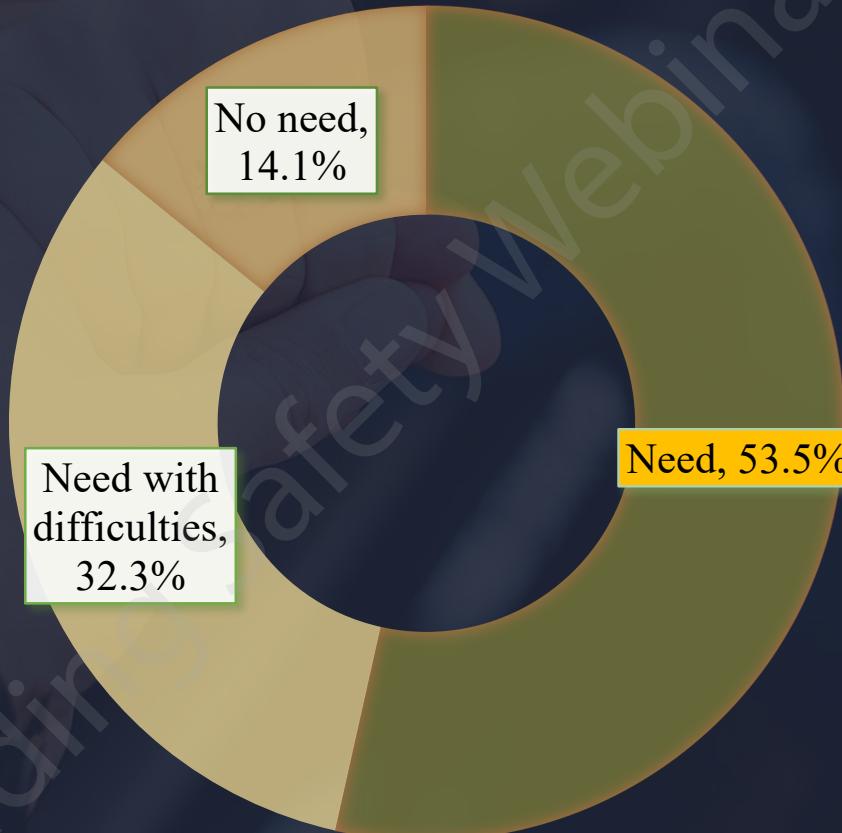
Clause 36 - provide a maintenance manual requiring regular maintenance on a recurrent basis

BMO Cap.344

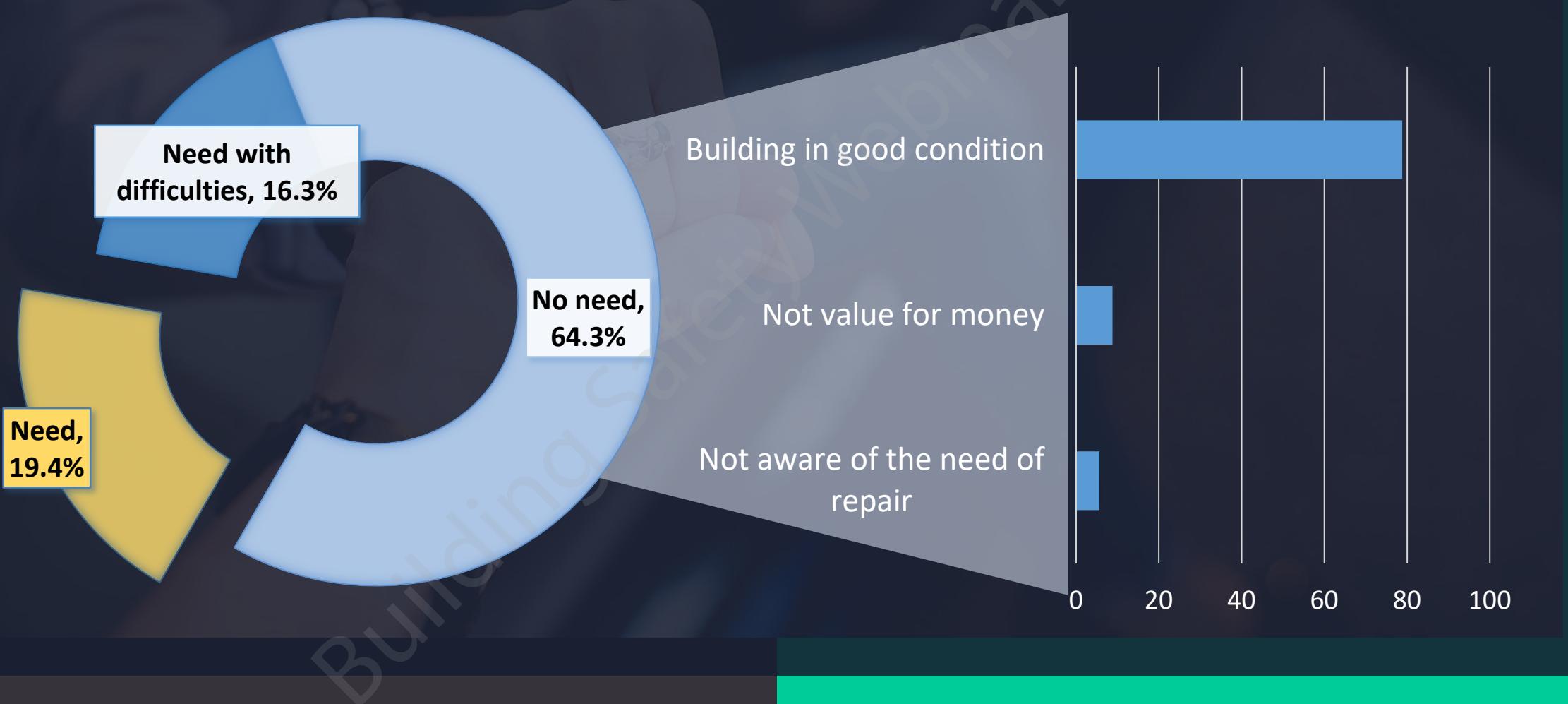
S 20. - A corporation shall establish and maintain a **general fund** to pay other outgoings (including any outgoings in relation to any maintenance or repair work) which are payable in respect of the building as a whole.

Schedule 7– The manager shall establish a **special fund** to provide for expenditure of a kind not expected to be incurred annually

Survey results – Perceived needs for regular inspection and maintenance



Survey results – Perceived needs for building rehabilitation

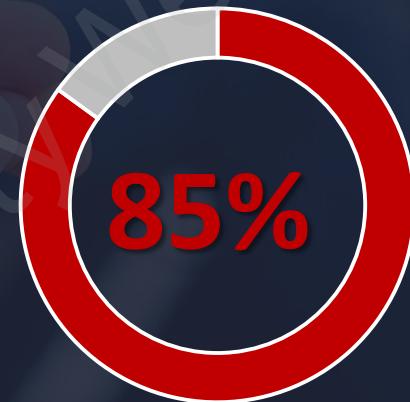


Survey results – Reserve Fund

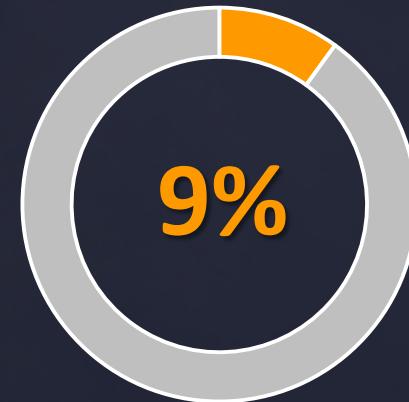
Funding for Building Rehabilitation



Only **one-third**
of buildings have
established reserve fund



Owners' contribution



Reserve fund

Property Management Companies and building condition

Legend

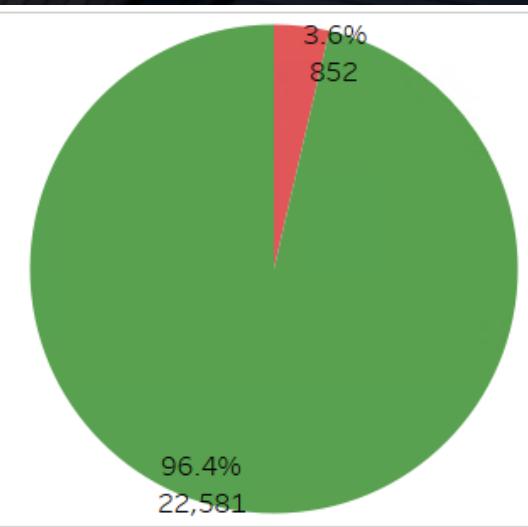
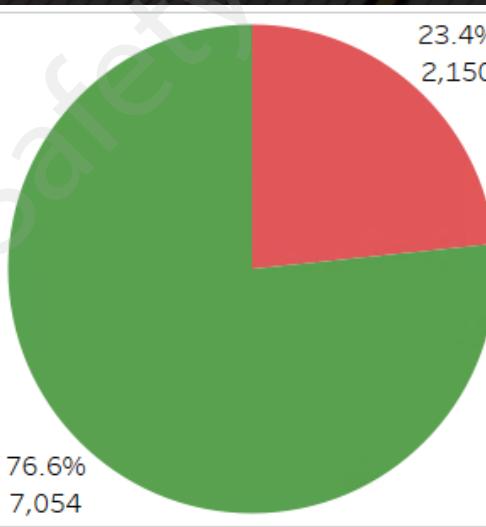
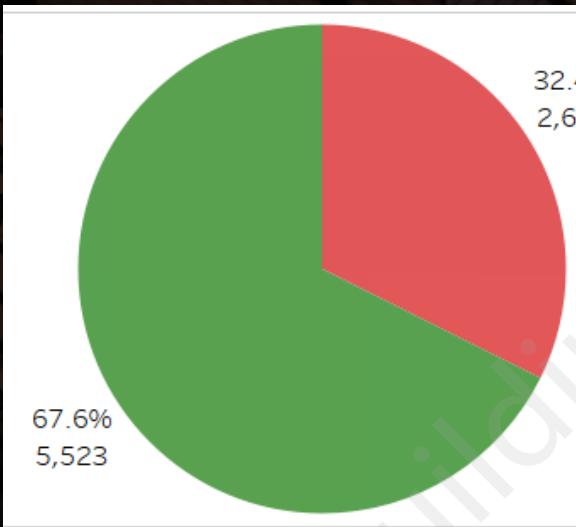
■	Dilapidated
■	Acceptable

All ages

3-Nil

OC only

PMC only or OC & PMC

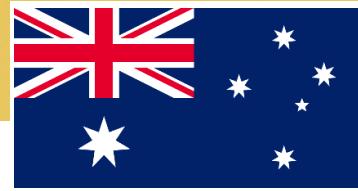


Preventive maintenance culture at overseas

	Hong Kong	New York City, USA	Singapore
Building inspection scheme	Mandatory building inspection scheme (MBIS)	Periodic inspection of exterior walls and appurtenances	Periodic structural inspection (PSI)
Year of promulgation	2012	1998	1999
Target buildings	All buildings aged 30 years old or above	All buildings with more than 6 storeys	Residential : at the 10th year & Non-residential : at the 5th year
Inspection cycle	Every 10 years	Every 5 years	Every 10 years; Every 5 years

Overseas experience in setting up mandatory reserve fund

Queensland, Australia



For capital works or
emergency repairs



Ontario, Canada



Repair cost estimation and reserve
fund plan for at least 30 years



Local examples on regular inspection and reserve fund

	A large estate in Lantau	A large estate in HK Island	A large estate in Kowloon
Year built	1980s	1970s	1960s
Management type	PMC only	PMC only	PMC + OC
Maintenance plan	qualified person to inspect once in every 7 years	maintenance schedule for external wall and pumps inspection and repair	“5-year” or “10-year” maintenance plans for major repair items
Source of finance for the works	Reserve Fund – set aside the management fee	Reserve Fund – contribute separately when paying the management fee	Reserve Fund – set aside the management fee
Maintenance cost from reserve fund	30 - 40 %	30 - 90 %	100 %

Source: Interviews conducted with the PMCs of the respective estates



04 Promotion of preventive maintenance

Definition of preventive maintenance (reference to European Standard, EN13306:2017)

As opposed to ‘**corrective maintenance**’ which is carried out upon breakdown, ‘**preventive maintenance**’ intends to **mitigate degradation** and reduce the **probability of failure** of building elements, facilities and systems by conducting **regular** and **appropriate inspections and maintenance**.

‘**Preventive maintenance**’ consists of

Preventive Maintenance

Predetermined Maintenance

Condition-based Maintenance

Definition of preventive maintenance (reference to European Standard, EN13306:2017)



PREDETERMINED MAINTENANCE

Maintenance carried out in accordance with **established intervals** or **number of usage** recommended by **manufacturers or competent person**.

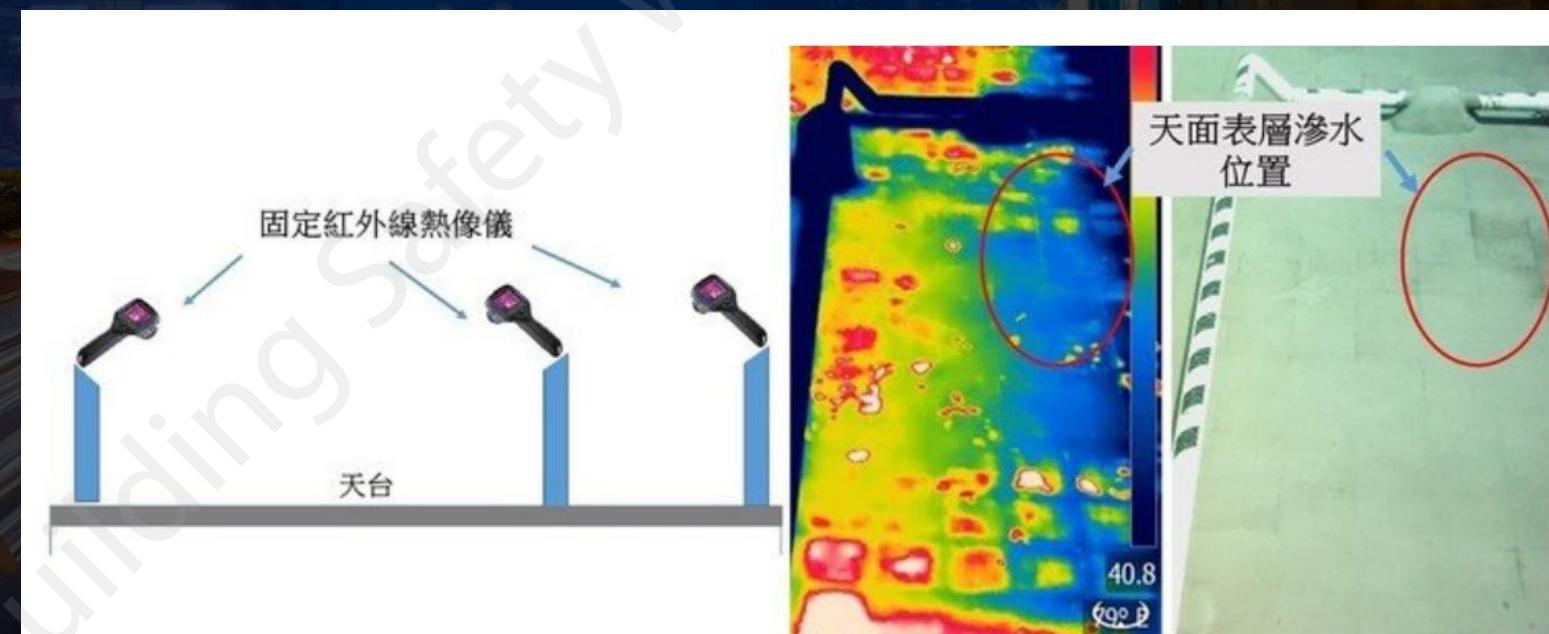


CONDITION-BASED MAINTENANCE

Maintenance which includes **assessment of physical conditions, analysis** and the possible ensuring maintenance conducted by a **competent person** through **inspection, testing** and monitoring under scheduled intervals or upon request.

PREDICTIVE MAINTENANCE

Condition-based maintenance carried out following a **forecast** derived from **repeated analysis** or known characteristics and **evaluation of the significant parameters** of the degradation of the item



Benefits of early regular inspection & maintenance

Prevention is better than cure

Identify early defects to avoid further deterioration

Regular
Inspection &
maintenance

Reduce the cost for emergency maintenance

Extend lifespan

Enhance
building safety

Maintenance should start when building is young and before dilapidated

Future promotion strategy

Instil culture of **preventive maintenance** and **reserve fund**

01

03

02



Raise awareness on building rehabilitation

Encourage building owners **proactively** to maintain their properties



Knowledge enrichment from URA own projects



Promotion of Preventive Maintenance

1. Buildings joining our scheme



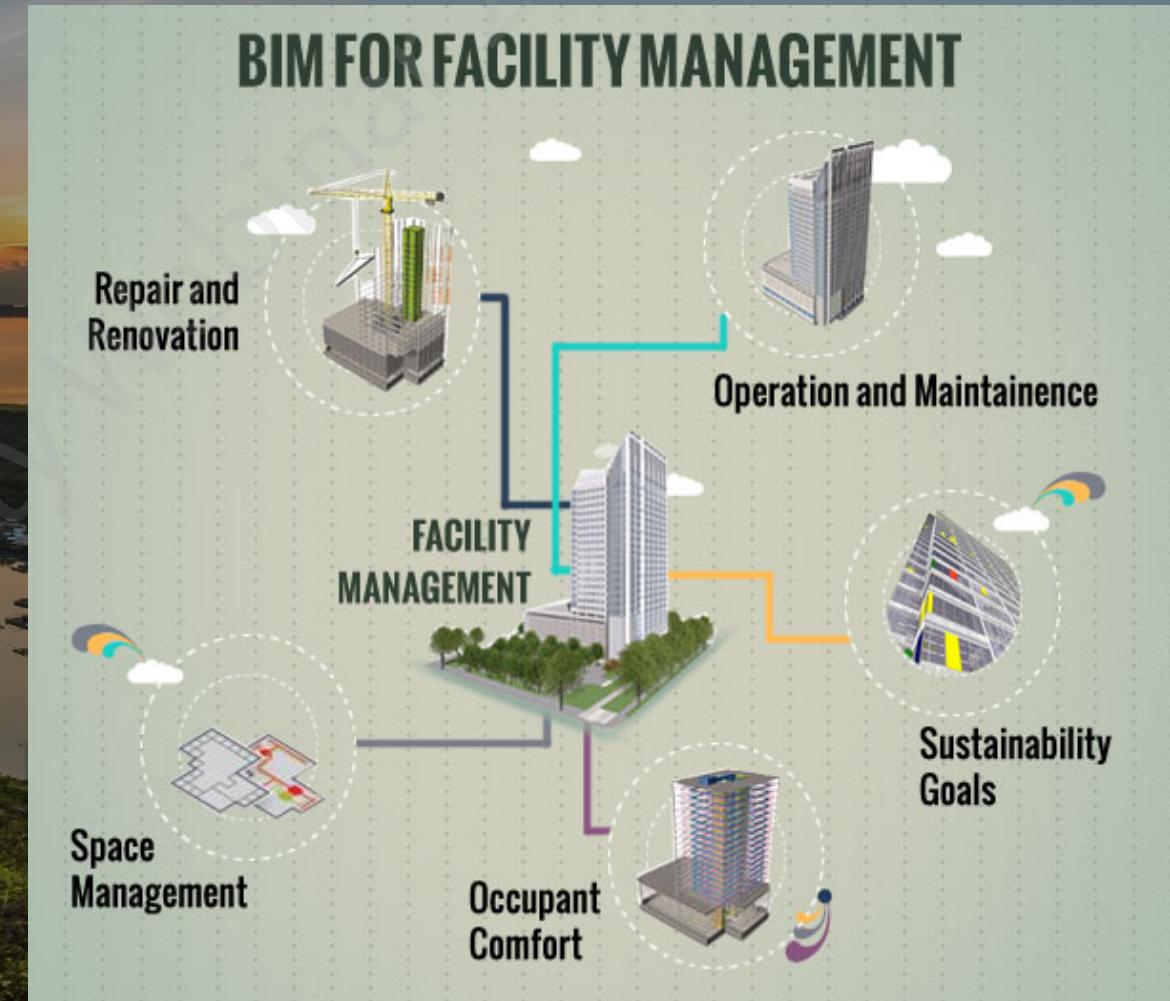
2. General Promotion



Exploring new technology to facilitate Preventive Maintenance

Building Information Modeling (BIM)

- Generate and manage building data
- Assist to plan, design, construct and **manage** buildings and infrastructure
-





BIM Application in Building Rehabilitation



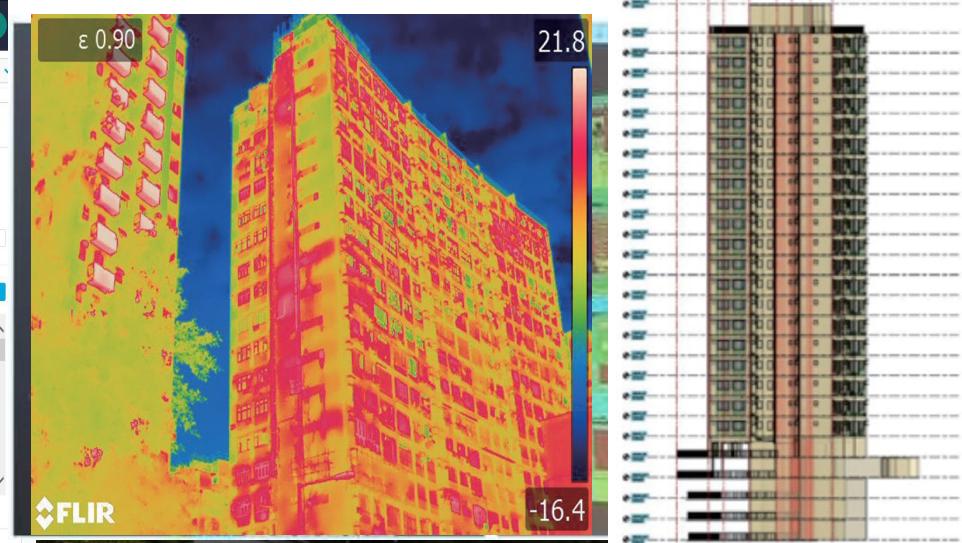
Winner of Autodesk Hong Kong BIM Awards 2018

Coral Court: a pilot residential project to apply BIM in building rehabilitation

The BIM 360 interface includes:

- A 3D model of a modern house.
- A smartphone displaying a 3D model.
- A tablet displaying a floor plan.
- A landscape view with yellow dots indicating survey points.
- A project dashboard for "Coral Court" showing file details and activity logs.
- A detailed list of project members.

BIM 360



Laser Scanning / Infra-red



BIM in facility Management



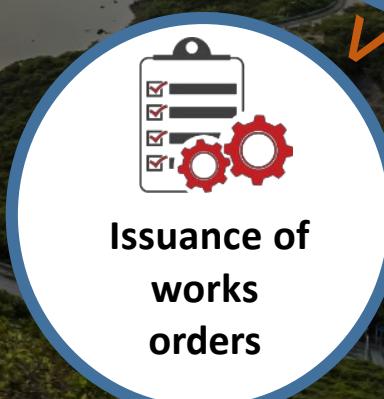
Current Facility
Management Practices



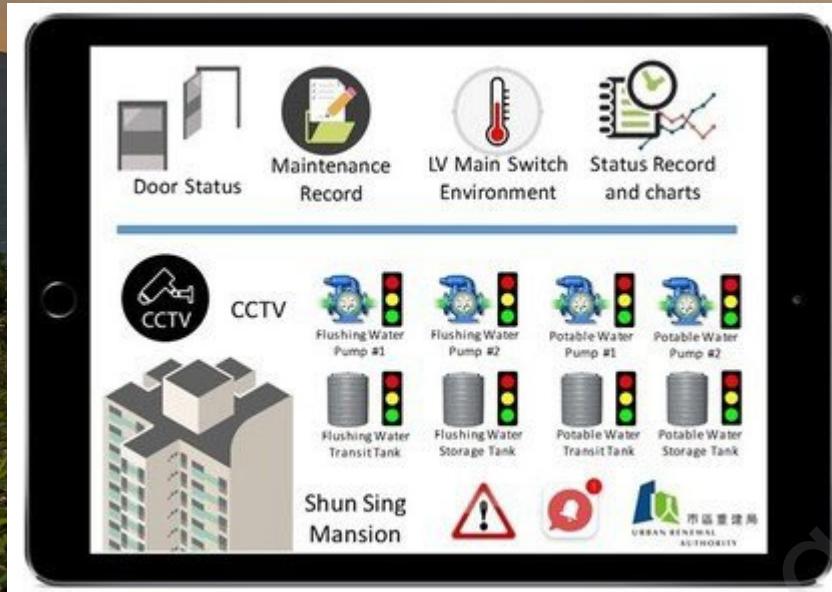
Pilot Project –618
Shanghai Street



Autodesk's AEC
Excellence Awards
2019



Digital Maintenance Manual



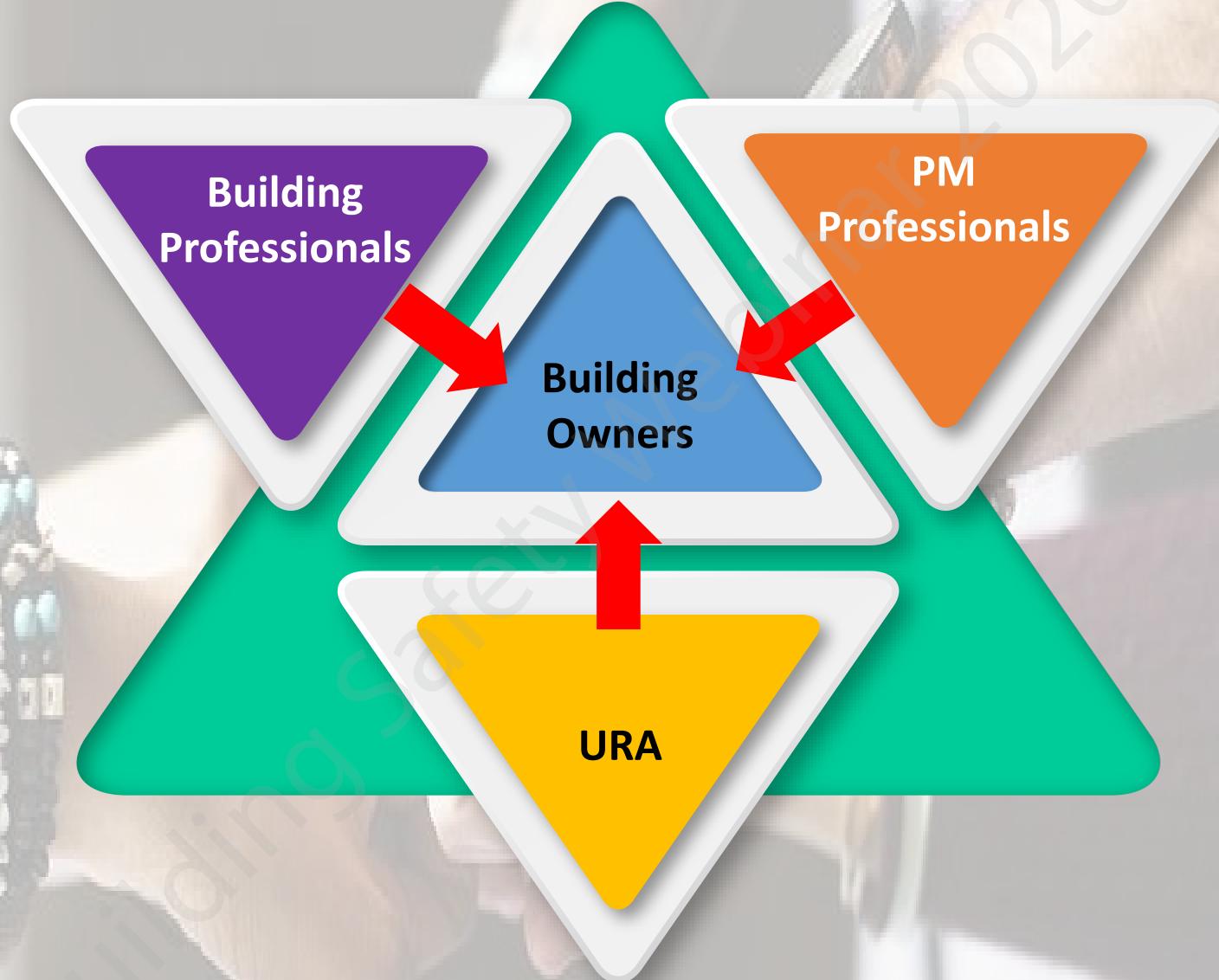
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P&D occaecati	9/24/2019 17:43	9/24/2019 18:43
P&D quaerat	9/24/2019 01:46	9/24/2019 02:46
ELV soluta	9/22/2019 03:11	9/22/2019 04:11
ELV culpa	9/21/2019 07:39	9/21/2019 08:39
AC doloribus	9/20/2019 16:54	9/20/2019 17:54
P&D dignissimos	9/19/2019 18:20	9/19/2019 19:20
FSI quia	9/18/2019 15:40	9/18/2019 16:40
ELV aliquid	9/18/2019 04:38	9/18/2019 05:38
ELE quas	9/15/2019 12:55	9/15/2019 13:55
ELV quis	9/13/2019 07:54	9/13/2019 08:54
ELE aliquam	9/13/2019 05:37	9/13/2019 06:37



05

Collaboration with other stakeholders





Building Professionals

DMC guidelines requirement

a comprehensive maintenance manual

Existing practice

Mere compilation of
the O&M manual

Future

- installation requiring routine maintenance
- technical information
- maintenance schedule

Provide a maintenance plan and advise owners to set up the reserve fund

Property Management Professionals





Count on you

BUILDING
FOR
ALL

Renewal of Building Rehabilitation

[END]