Green Schools 2.0

for Retro-commissioning

Induction Talk for Management Level

Climate Ready@HK 氣候變化香港行動

機電工程署 EMSD

HKGBC 香港綠色建築議會

AGENDA

1 Hong Kong Development Planning

2 Difficulties and Problems Met in Building Management

3 Retro-commissioning (RCx) Value

4 Retro-commissioning (RCx) Considerations
- **a.** Finance
- **b.** Technical Competence
- **c.** Technology

5 Conclusion

1

Hong Kong Development Planning

2030+ HK's Climate Action Plan

2030 Carbon Reduction Target

Operational Model (Existing Bldgs.)

- ❑ Timeline
- ❑ Target
- ❑ Transparency
- ❑ Together

Coherent with Paris Agreement in Nov 2016

4Ts partnership between Government and Building Sector

TARGET

TIMELINE

Source: DEEPENING ENERGY SAVING IN EXISTING BUILDINGSIN HONG KONG THROUGH '4Ts' PARTNERSHIP

2

Difficulties and Problems Met in Building Management

Vision and Mission of the Facility Management

Conventional

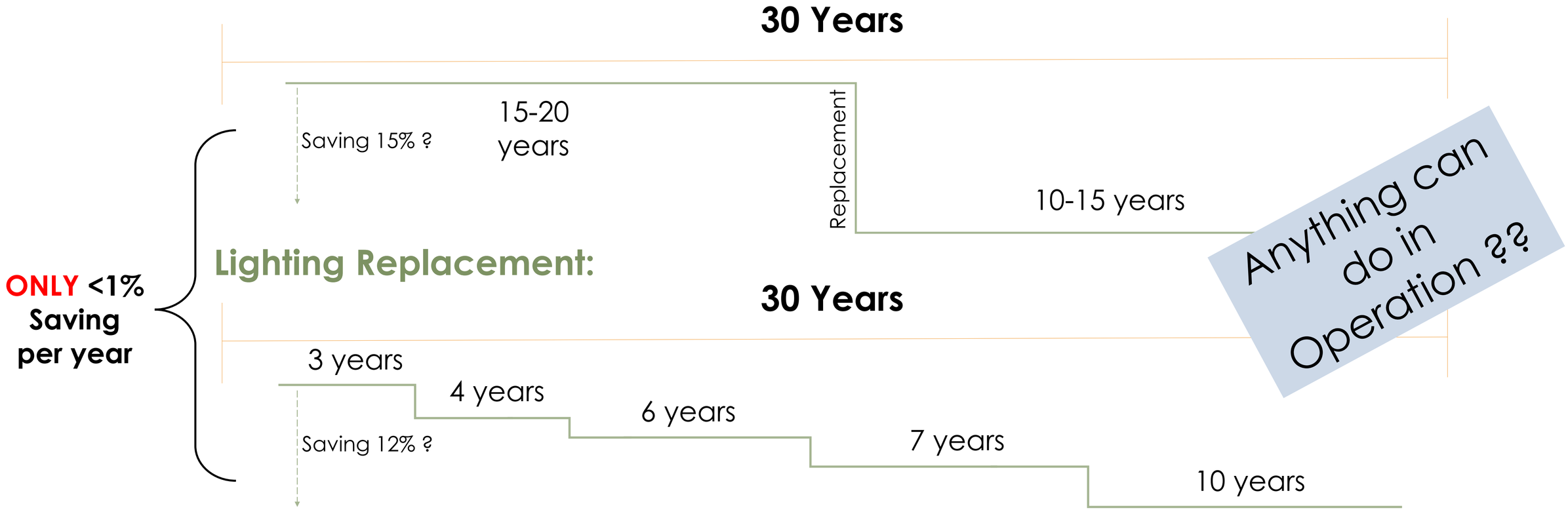
How to meet the TARGET in the TIMELINE??

Lighting Replacement ?

Chiller Replacement ?

Meeting Target in the Timeline

Chiller Replacement:



3

Retro-commissioning (RCx) Value

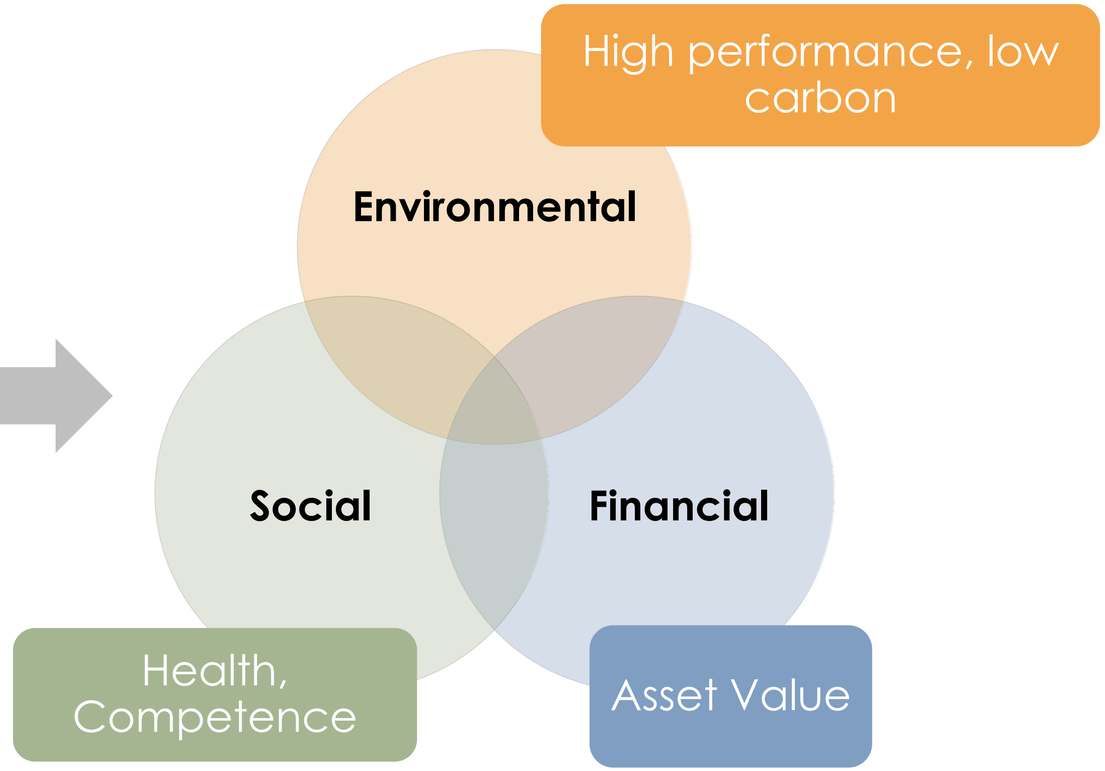
Value of Retro-commissioning (RCx)

TARGET

TIMELINE

Towards low carbon, sustainable and healthy building (asset value)

SD VALUE



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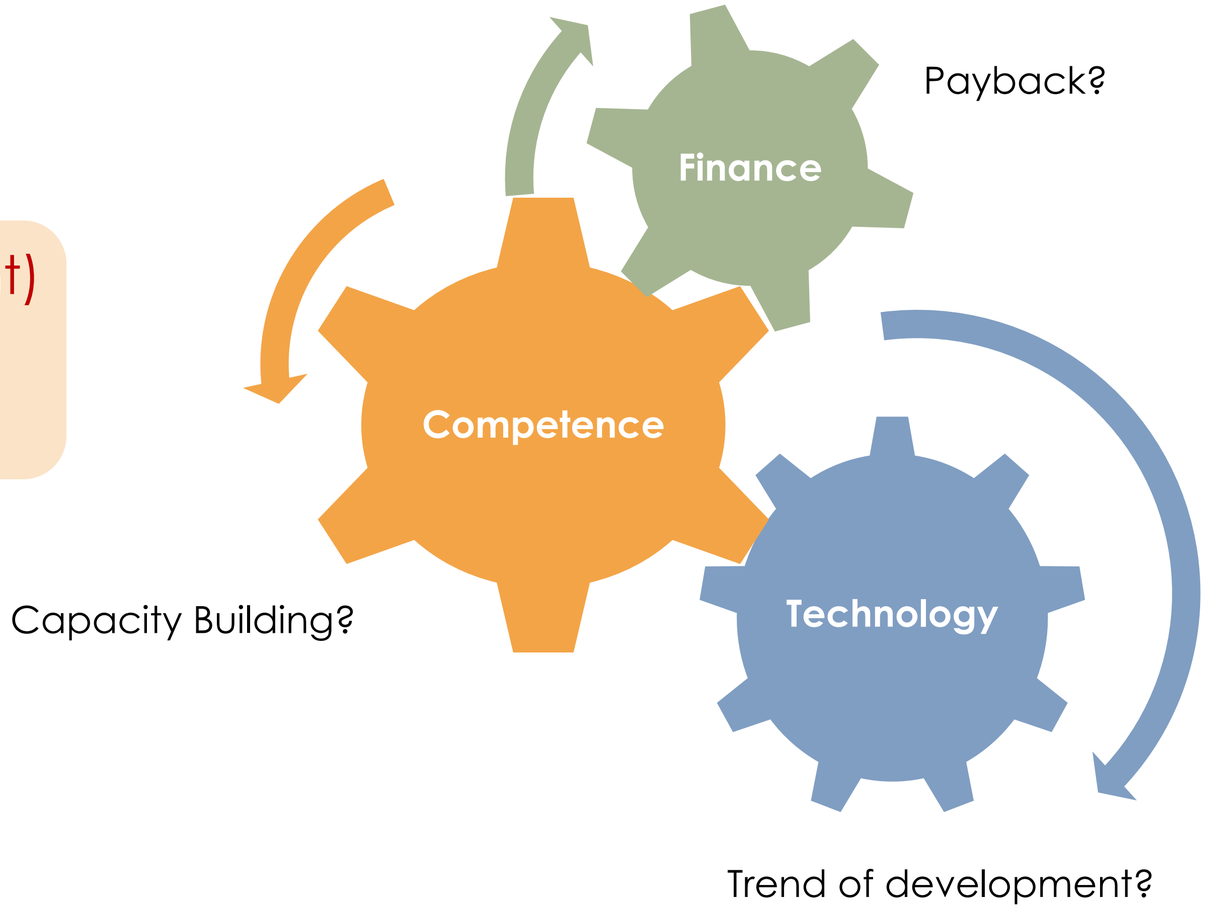
Retro-commissioning (RCx) Considerations

Considerations of Retro-commissioning (RCx)

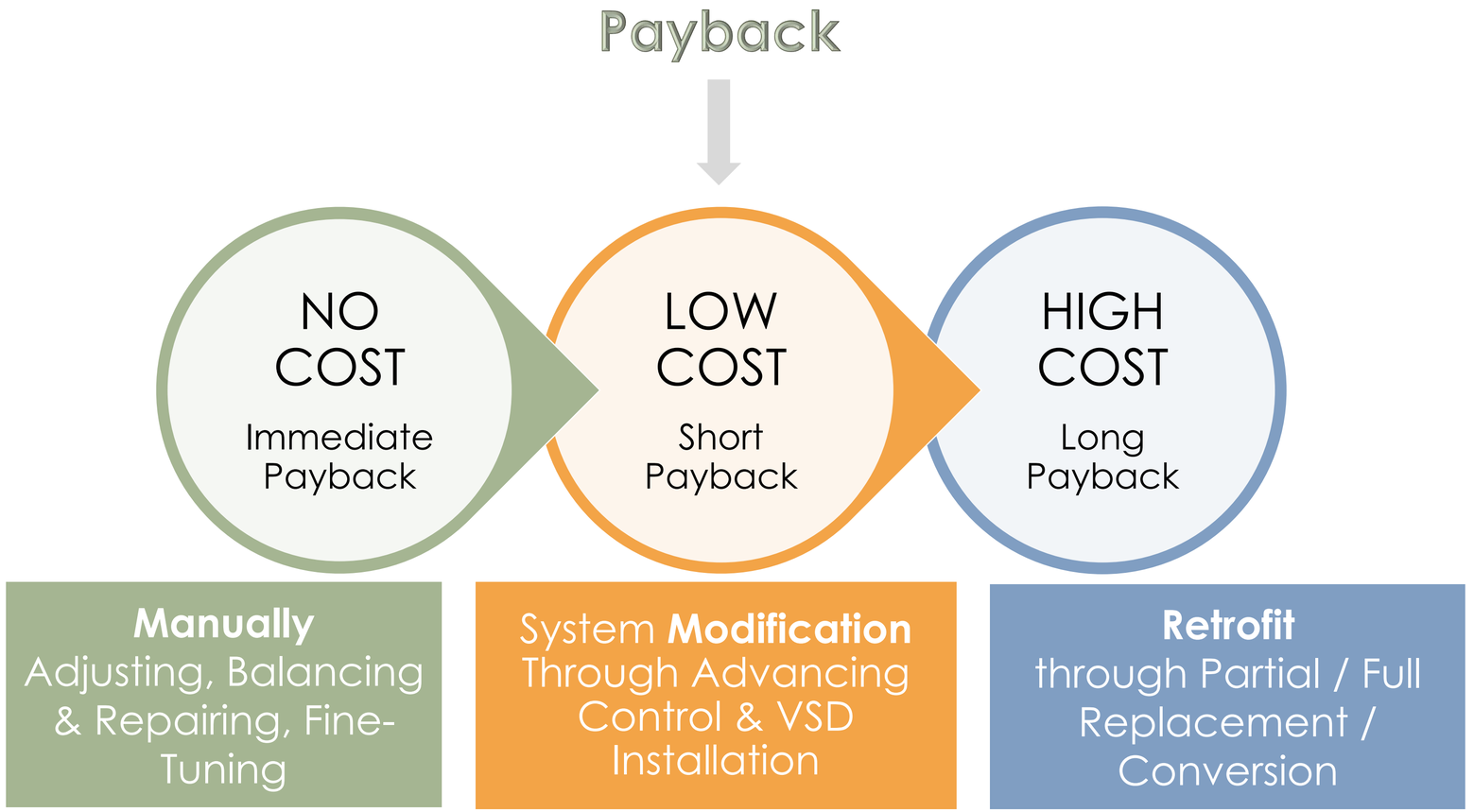
Retrofit (replacement)

Retro-commissioning

…..



Retro-commissioning (RCx) – Finance



Retro-commissioning (RCx) – Financial Management

Integrate with routine operation

NO COST

MANUAL WORKS

Integrate with Major Renovation / Retrofitting works

$

LOW COST

MODIFICATION

$$

HIGH COST

RETROFIT / CONVERSION

Retro-commissioning (RCx) – Financial Management

Integrate with routine operation

MANUAL WORKS

Late Jan to early Feb 2021

Integrate with Major Renovation / Retrofitting works

$

MODIFICATION

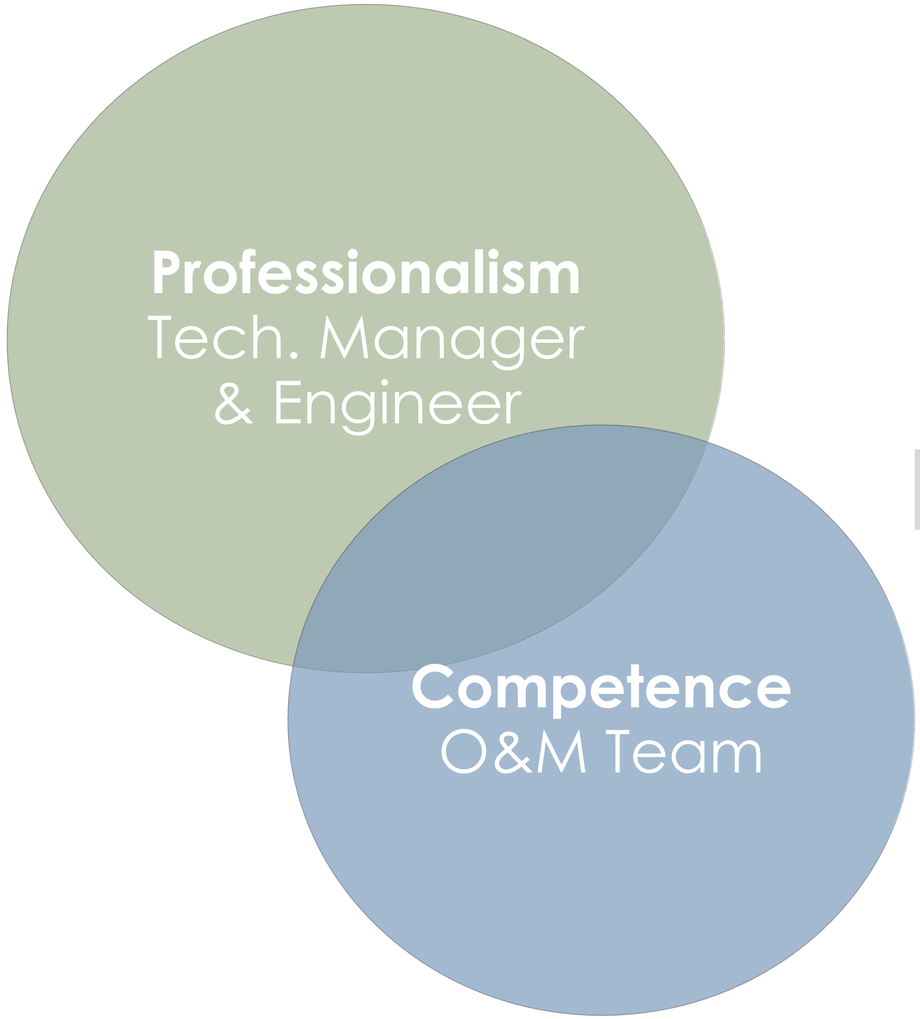
$$

RETROFIT / CONVERSION

CLP HKE

15 Dec, 2020 (Tue)

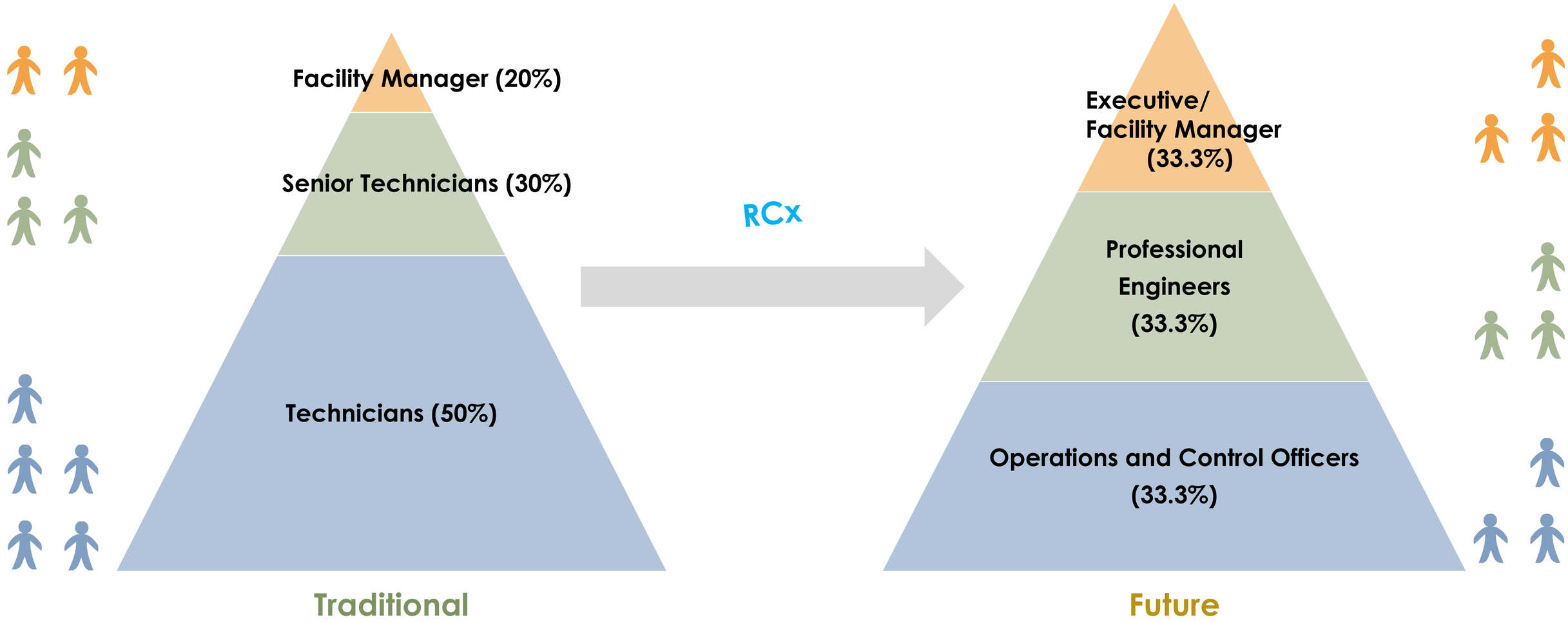
Retro-commissioning (RCx) – Competence



Demo, Sharing Training & Registration

Energy Efficient in Operation

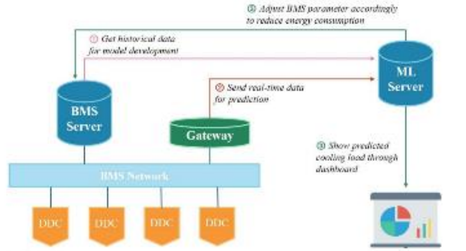
Retro-commissioning (RCx) – Competence

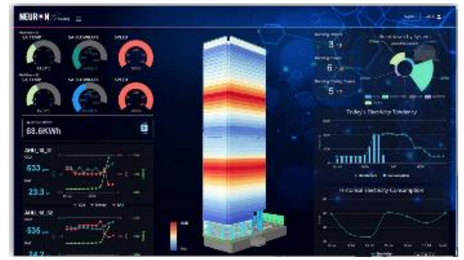


Retro-commissioning (RCx) – Competence

Traditional O&M

Future FM





[Source: https://inno.emsd.gov.hk]

Retro-commissioning (RCx) – Capacity Building

Uplift Technologies & Skillset

- Demonstration
- Training
- CPD

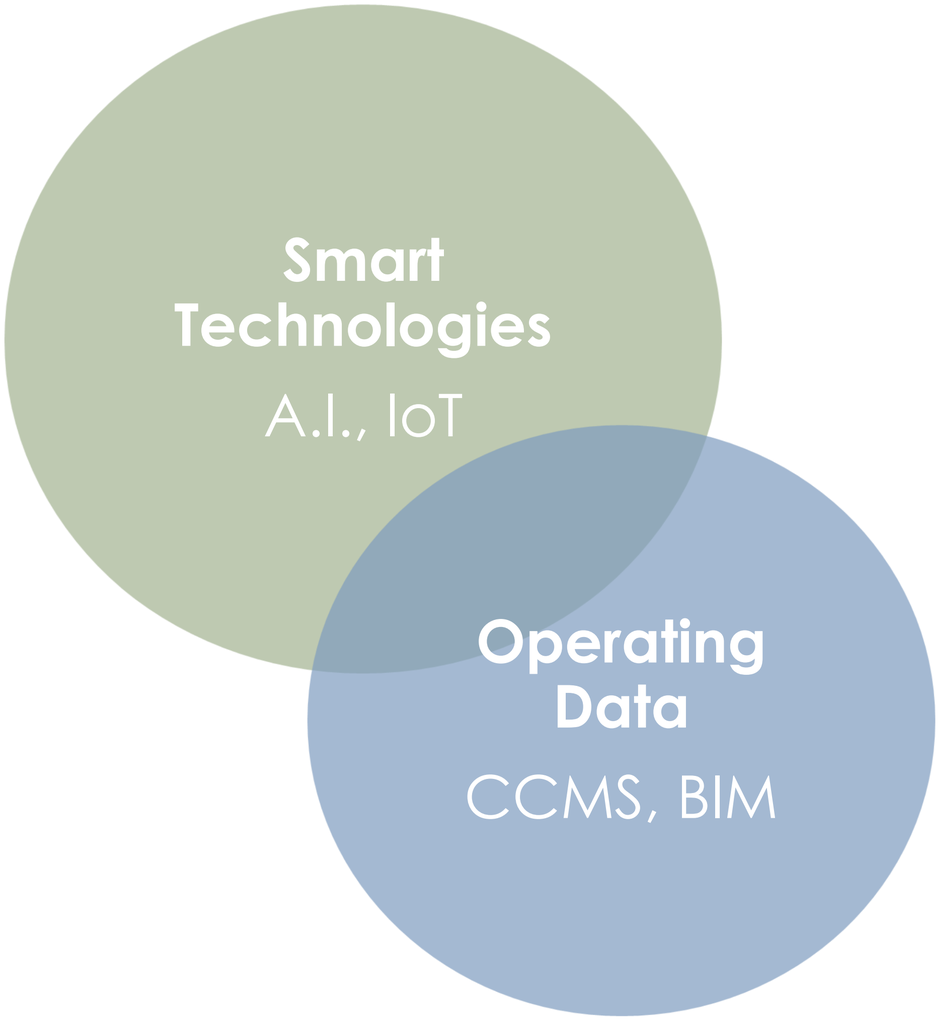
2 Dec 2020 (Wed)
11 Dec 2020 (Fri)
15 Dec, 2020 (Tue)

Outsource

- Sharing
- RCx Services Provider

Late Jan to early Feb 2021

Retro-commissioning (RCx) – Technology Development



Sustainable, Intelligent, Health

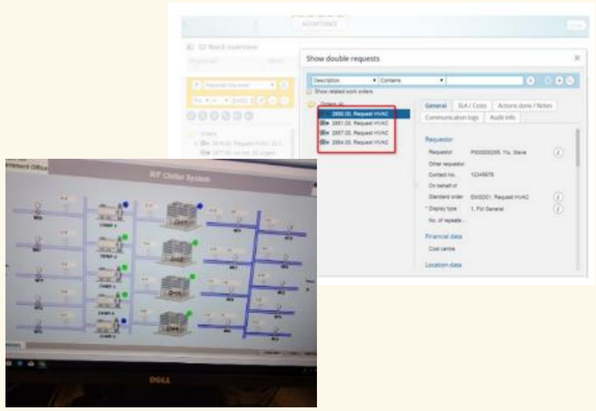
ASSET VALUE

Retro-commissioning (RCx) – Technology Transformation

Current Technology

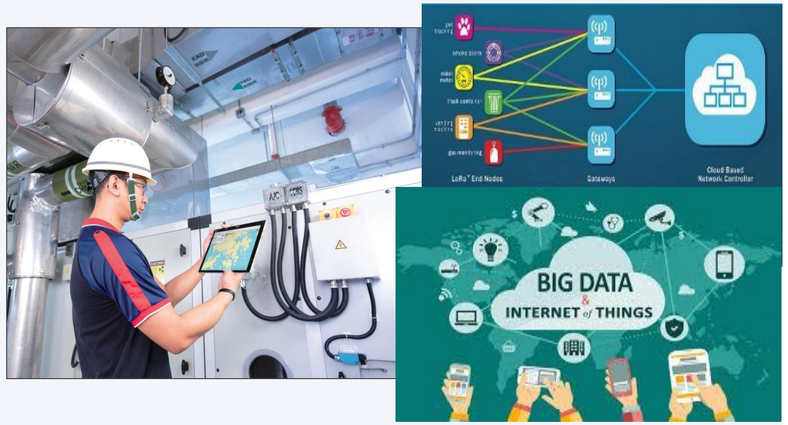
Future Technology

BMS/ CCMS



Data Capture & Storage

A.I.



Cloud Data

Retro-commissioning (RCx) – Technology Transformation

How to make use of technology & operating data in RCx ?

- A.I. Tech.
- IoT Tech.
- Operating Data

How to source external funding for technologies ?

- Funding

2 Dec 2020 (Wed)

11 Dec 2020 (Fri)

15 Dec, 2020 (Tue)

Late Jan to early Feb 2021

Achievement for the Campus/Buildings

2050

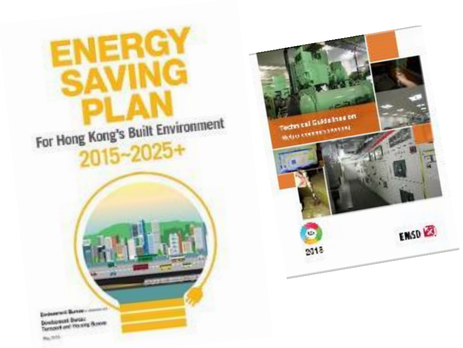
- Uplifting the FM knowledge and practices in O&M Industry;
- Promoting diversification of energy-saving initiatives;
- Improving and keeping the campus/building system operated at energy efficiency, healthy and high performance conditions;
- Enhancing future RCx development and integration with retrofitting, major renovation;
- Accelerating advancing net zero carbon buildings by 2050.

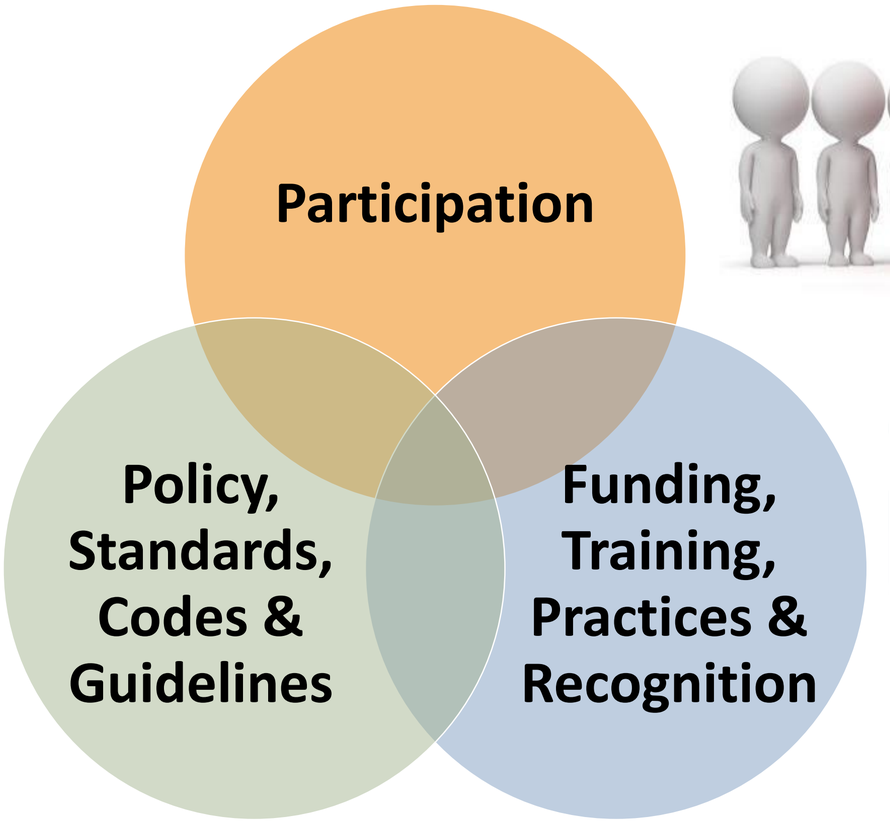
5

Conclusion

Conclusion

2050





Green Schools 2.0 for RCx

INDUCTION TALKS

Date: 5 Nov 2020 (Thu) (45 minutes)

1. How to enhance O&M practices, major renovation works / project & energy reduction using RCx
   (Operation Level)

PROFESSIONAL TALKS

Date: 2 Dec 2020 (Wed) (1 hour)

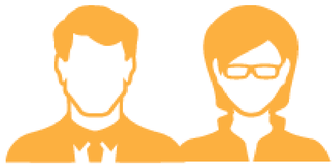
1. Introduction of EMSD Technical Guidelines on Retro-commissioning
2. Sharing of successful cases

Date: 11 Dec 2020 (Fri) (1 hour)

1. Introduction of use of operating data
2. Introduction of smart technologies to facilitate RCx

Date: 15 Dec 2020 (Tue) (1 hour)

1. HKGBC RCx Training and Registration Scheme
2. Utilities funding scheme



WORKSHOP CUM SEMINARS

Date: Late Jan to early Feb 2021 (1 hour)

1. Online demonstration video
   - RCx site evaluation
   - Implementation of energy saving measures, measurement and verification process
2. RCx services and products sharing
3. Q&A

Your feedback is important to us!

https://forms.gle/jLYdhSc1VbTvJ1zt5

Green Schools 2.0

for Retro-commissioning

REGISTER NOW FOR FREE

- Engagement Meeting (Pre-recorded video)
- Induction Talks
- Professional Talks
- Workshop cum Seminars

In you are interested, please refer to our website for details and registration:
http://greenschools2.hkgbc.org.hk/

Register NOW!

EMSD RCx Resources Centre

HKGBC RCx Training and Registration Scheme

Utilities Funding Scheme- RCx

Electricity Supplier	CLP	HKE
Funding Name	**Eco-Building Fund**	**Smart Power Building Fund**
Energy Efficiency Projects	• Provide subsidies for energy-saving improvement works of:- ❑ Retrofitting NEW ❑ RCx ❑ Smart building technologies	
Subsidy Brief	• Subsidised amount is depended on the types and scale of projects and determined based on expenditure, saving and duration of projects but subject to a cap • Disbursed on a reimbursement basis	

15 Dec, 2020 (Tue)