

# FMAC2022

3<sup>rd</sup> Facility Management Asia Conference

IR 4.0 in the New Normal:  
The Future of  
Facilities Management

13-14  
DECEMBER  
2022 | Le Meridien Hotel  
Kota Kinabalu



Opening Remarks from  
YB Datuk Dr. Joachim Gunsalam  
Deputy Chief Minister III /  
Industrial Development Minister of Sabah



Speech by  
YBhg. Professor Ir Dr. Rosalam Hj. Sarbatly  
Deputy Vice-Chancellor  
(Research and Innovation),  
Universiti Malaysia Sabah (UMS)



Welcoming Speech by  
YBhg. Dato' Sri Zohari bin Haji Akob  
President  
Malaysia Association of Facility Management (MAFM)

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Website: <https://fmaconf.org/>

## Facility Management of Green Buildings:

# Is it Easy / Difficult? Is it Cheap / Expensive?



## Gregers Reimann

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Architect: Design Unit Architects  
Green Consultant: IEN Consultants

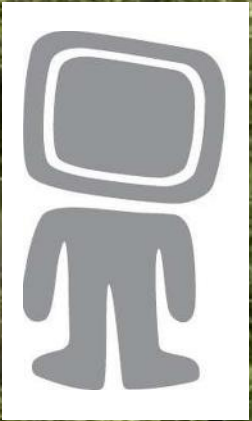
# GREEN BUILDING IN PENANG





**GREEN BUILDING**  
**FIRST IMPRESSION:**  
**Wow! But looks expensive...?**





NO, on the contrary it is the cheapest building when factoring in all the benefits and designing for maintainability!

**Wow! But looks expensive...?**



# 40% energy savings

## Benefits:

- Staff less sick
- Staff more productive
- Staff retention higher
- Energy savings
- Improved image
- Free publicity

## More project info:

<https://www.ien.com.my/projects/paramit---factory-in-the-forest>

... and two full time gardeners out of 800 total staff



# ST Diamond Building Facilities Management Experience & Lessons Learnt



12 years of green  
building operation

Interview date: 9 June 2022

Play 30-minute interview:

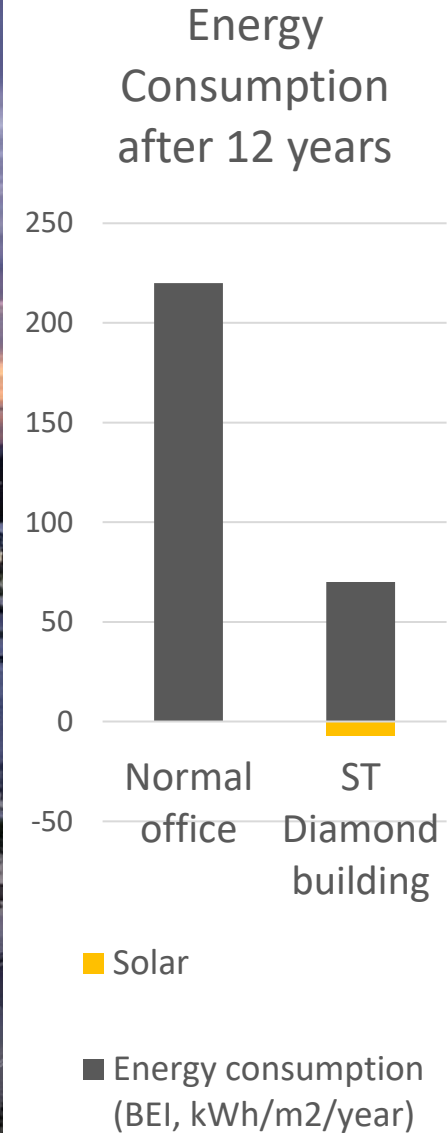
<https://www.ien.com.my/post/interview-with-fm-is-green-building-operation-easy-difficult-cheap-expensive>



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# Façade Cleaning

Normal practice:

Façade cleaning every year, but.....





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...facade not dirty after 1 year, no need to clean





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# Façade Cleaning

## Normal practice:

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# Façade Cleaning

## Normal practice:

Façade cleaning every year, but.....

...facade not dirty after 1 year, no need to clean

...facade not dirty after 2 years, no need to clean

...facade not dirty after 3 years, no need to clean

...but still decided to go ahead after 3 years, also to check on façade gaskets/clips etc.



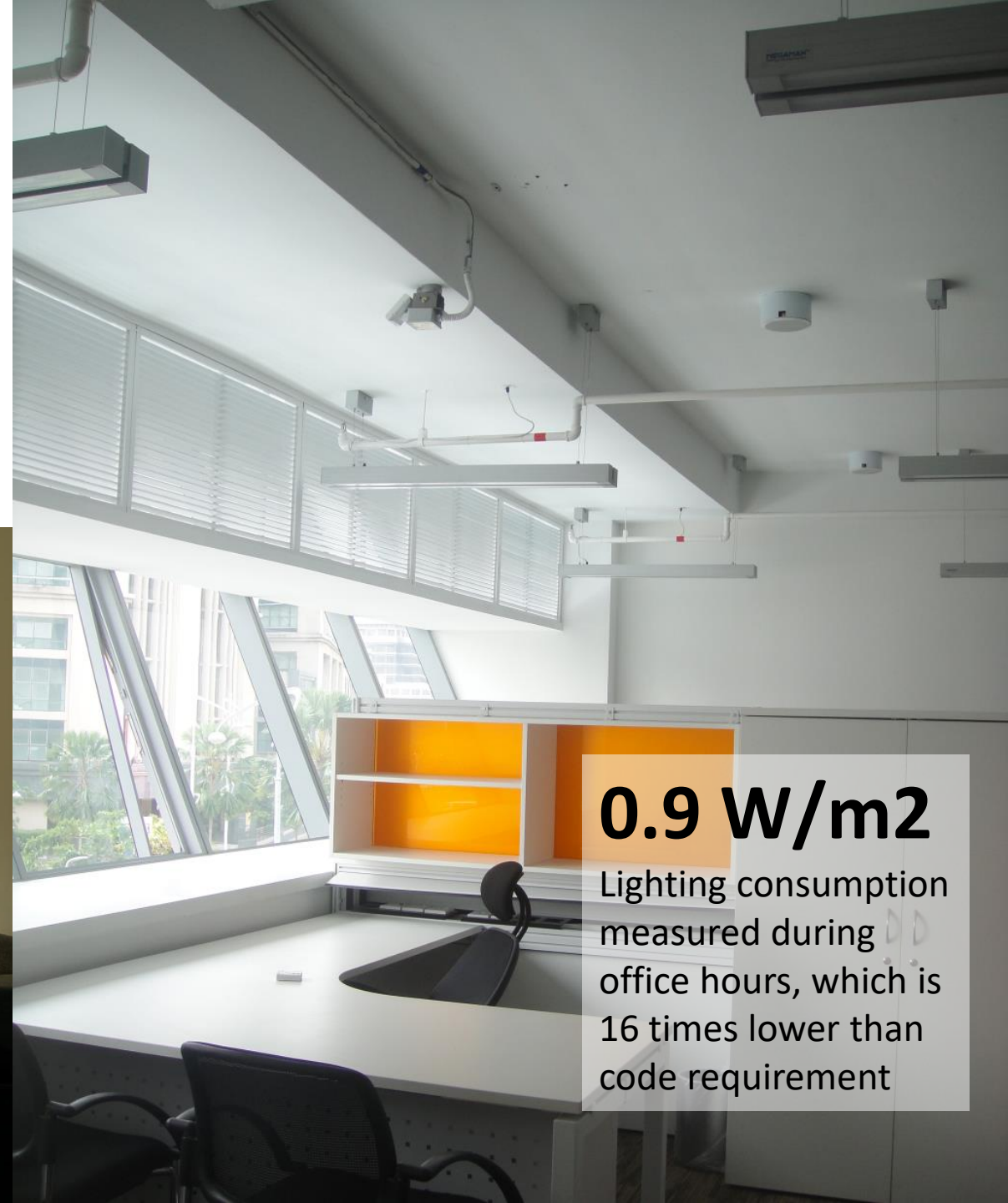


# Daylighting systems

- Less use of electric lighting, less need to replace bulbs
- Good quality light bulbs



Photo: Lin Ho



**0.9 W/m<sup>2</sup>**

Lighting consumption measured during office hours, which is 16 times lower than code requirement



# Pumps & Fans

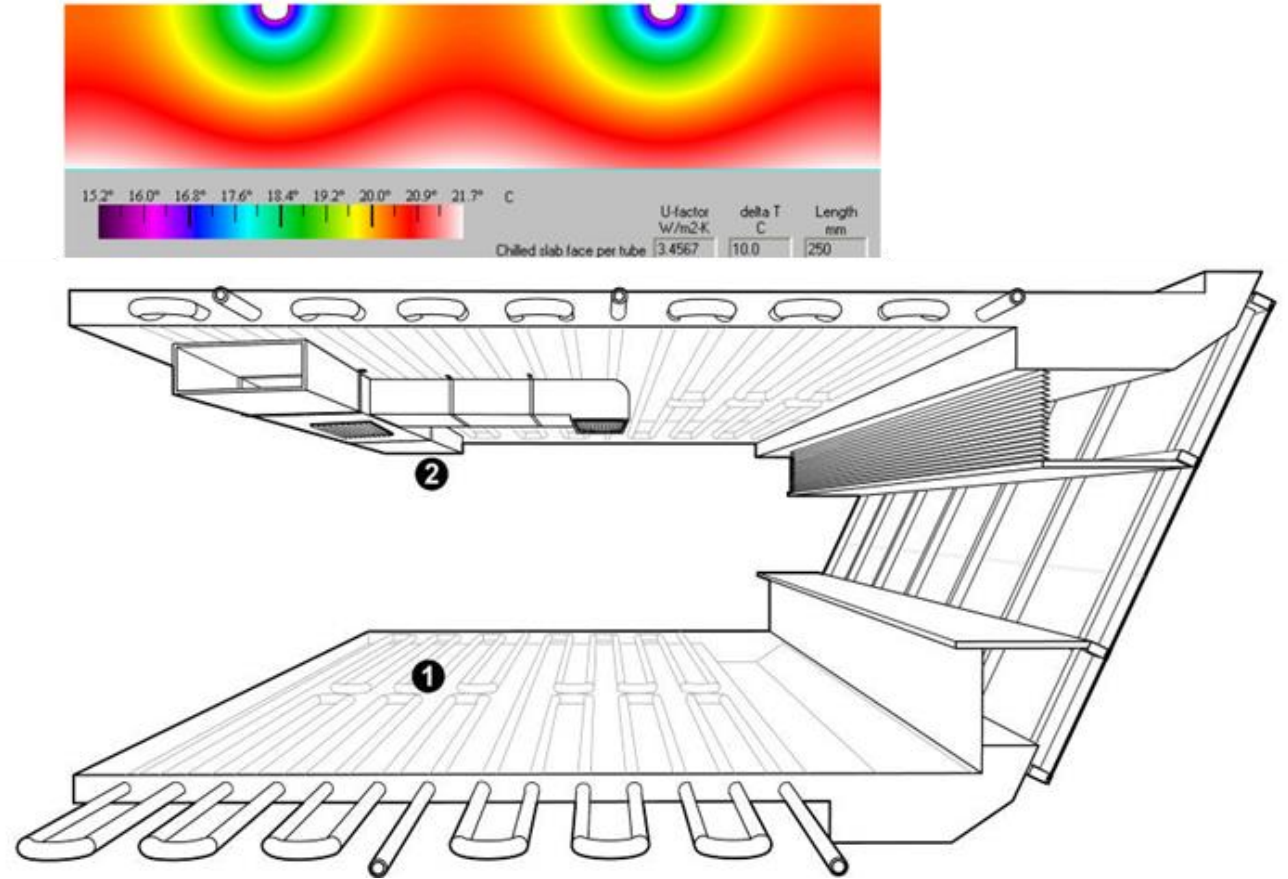
- Variable Speed Drives (VSD) means smoother operation, less need to replace equipment



Photo: Lin Ho



# 40% of Cooling from Slab Cooling Embedded in Reinforced Concrete Slab



Durability:  
Maintenance:

Lifetime of the building ( approx. 100 years)  
Replace pump every 15 years





## **Ensure maintenance access**

the automated atrium blind system did not have easy maintenance access, so in the end, it was placed in a fixed position. Not ideal!



# ST Diamond Building Facilities Management Experience & Lessons Learnt

## SUMMARY:

Pn. Hamidah dispels the notion that green buildings are difficult and expensive to maintain. On the contrary, she has found it to be **easier** and **cheaper** than ordinary buildings, spending as little at RM20,000 per year for maintenance of this 14,000m<sup>2</sup> office building.

## Key lessons:

- All building need maintenance
- Do preventive maintenance
- BMS is useful tool for maintenance



## 12 years of green building operation

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Play 30-minute interview:

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Maintainability is important.  
Ideally, design for no maintenance





# Thank you



**Gregers Reimann**



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*Suruhanjaya Tenaga Diamond Building – part of the Energy Efficient Buildings stamp series, all buildings by IEN Consultants*



# Green Building Lunch & Learn: Unlock the Potential of your Existing Buildings with LEED v4.1



Menara Maxis - LEED v4.1 GOLD

**11 January 2023 | Wednesday**  
**12pm - 1pm | MYT Time (GMT +8)**  
**via ZOOM**

**Register Now: <https://bit.ly/IENLEEDv4-1>**



Sample Dashboard of ARC Platform for LEED v4.1



**Suwan Bonma**

Senior Consultant (IEN Consultants)  
LEED AP (BD+C), USGBC Faculty Member

**SCAN QR TO REGISTER**



Register here: <https://www.ien.com.my/post/green-building-lunch-learn-unlock-the-potential-of-your-existing-buildings-with-leed-v4-1>