

# Ecopuncture

perspectives from  
a green building design consultant

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I I E I N



CONSULTANTS

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It starts with a  
**VISION**

## Case Study: PARAMIT – factory in the forest (Malaysia)

- Client/ Owner: PARAMIT
- Architecture Firm: DESIGN UNIT ARCHITECTS SDN BHD
- Green Building Design : IEN CONSULTANTS
- Engineering & Construction: WEB STRUCTURES SDN BHD
- Mechanical & Electrical Engineer: PERUNDING EAGLES ENGINEERS SDN BHD
- Project Management: JLL SDN BHD
- Main Contractor: SOUTH ISLAND BUILDING SDN BHD
- Photography: LIN HO PHOTOGRAPHY





## Client wanted

- Energy Efficient Building with Low Operating Costs
- Healthy, Sustainable & High-Performance Building
- Environmental Showpiece Factory for others to follow

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# PROCESS

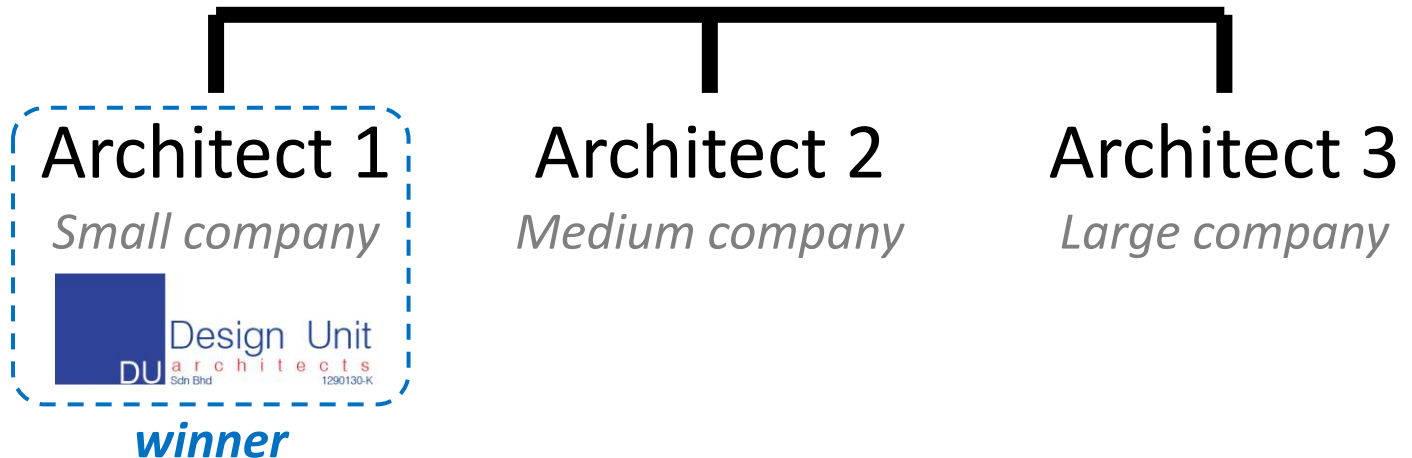
## Client Wanted

- *Energy Efficient Building with Low Operating Costs*
- *Healthy, Sustainable & High-Performance Building*
- *Environmental Showpiece Factory for other to follow*

***Engaged first***

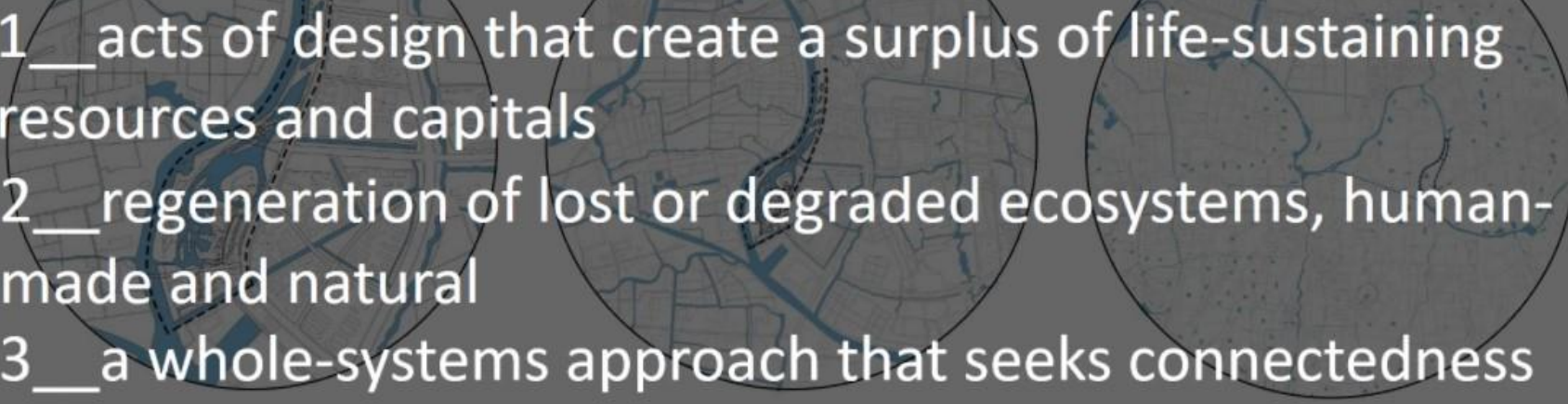


***Invited architects for design competition***



# How do the **Ecopuncture** principles apply to the Paramit factory project?

## ecopuncture

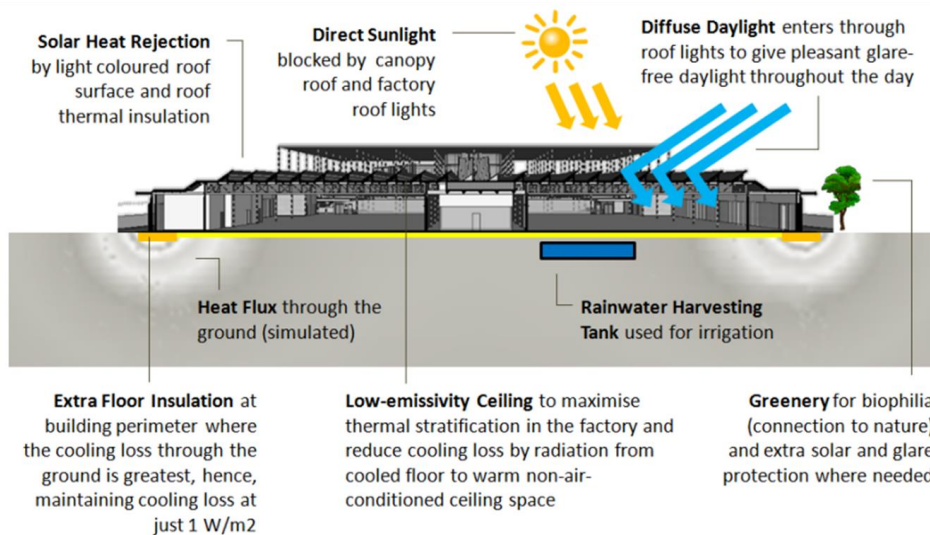
- 
- 1\_\_acts of design that create a surplus of life-sustaining resources and capitals
  - 2\_\_regeneration of lost or degraded ecosystems, human-made and natural
  - 3\_\_a whole-systems approach that seeks connectedness and reciprocity

# Ecopuncture principle #1

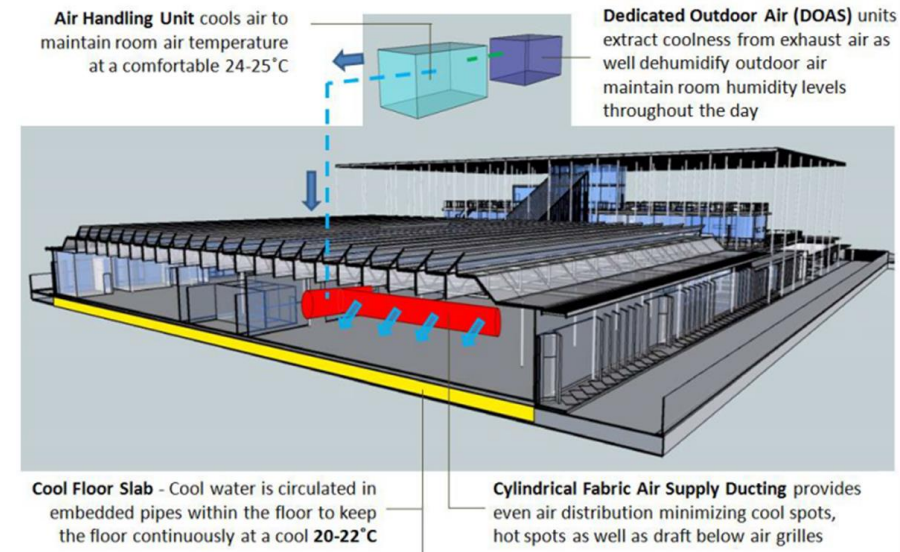
Acts of design that create  
a surplus of life-sustaining resources and capitals

**40% Measured Energy Savings**

## Passive Design



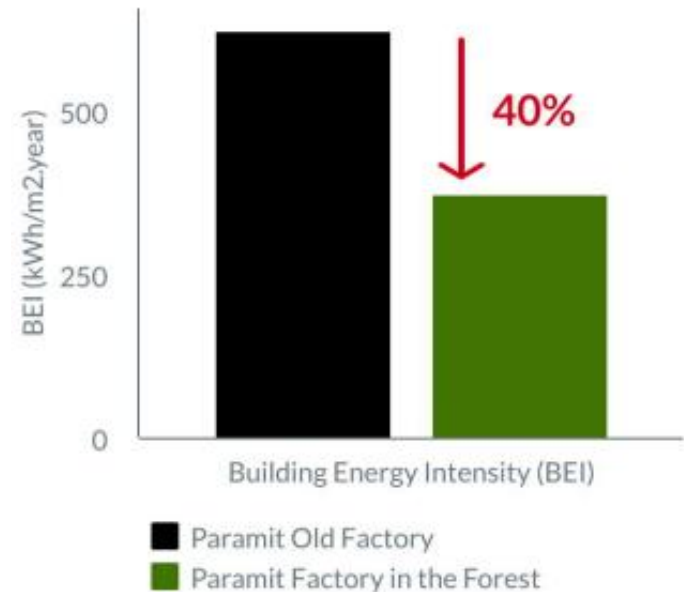
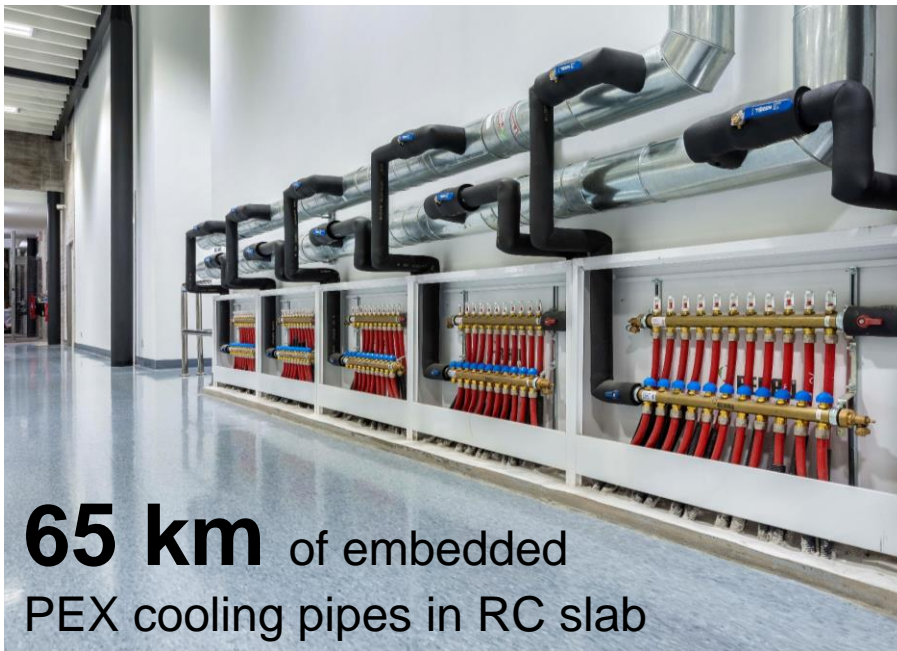
## Active Design



# Ecopuncture principle #1

Acts of design that create  
a surplus of life-sustaining resources and capitals

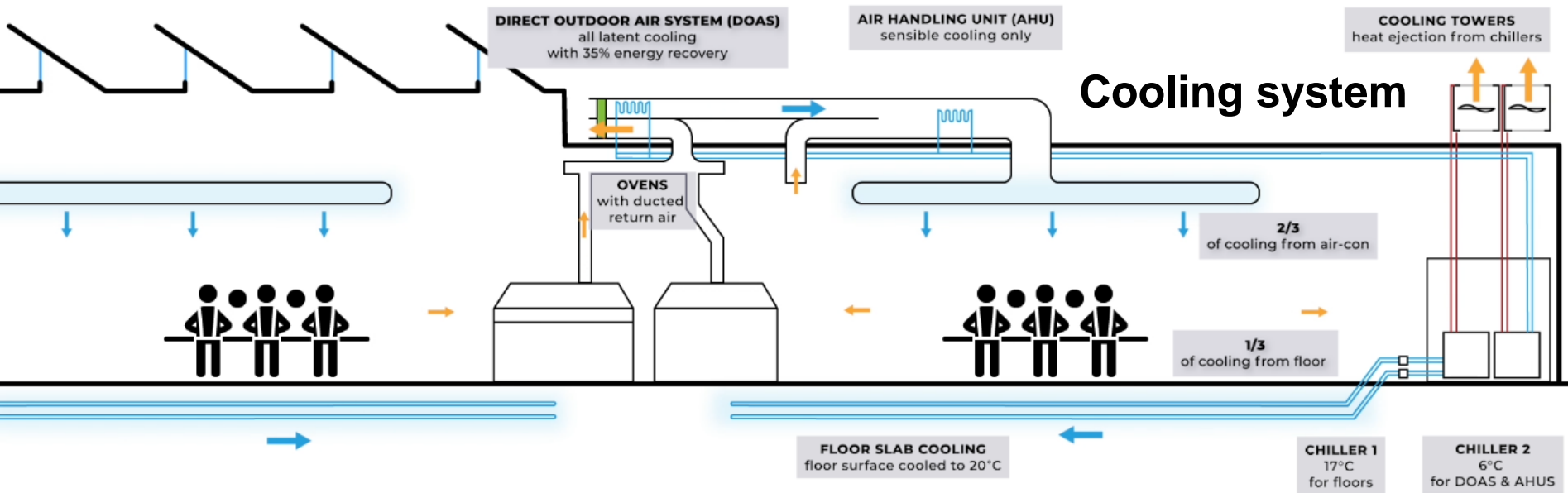
**40% Measured Energy Savings**



# Ecopuncture principle #1

Acts of design that create  
a surplus of life-sustaining resources and capitals

**40% Measured Energy Savings**



- 1/3 cooling from floor slab cooling (COP=10)
- 2/3 cooling from air-con
- 35% energy recovery from exhaust air

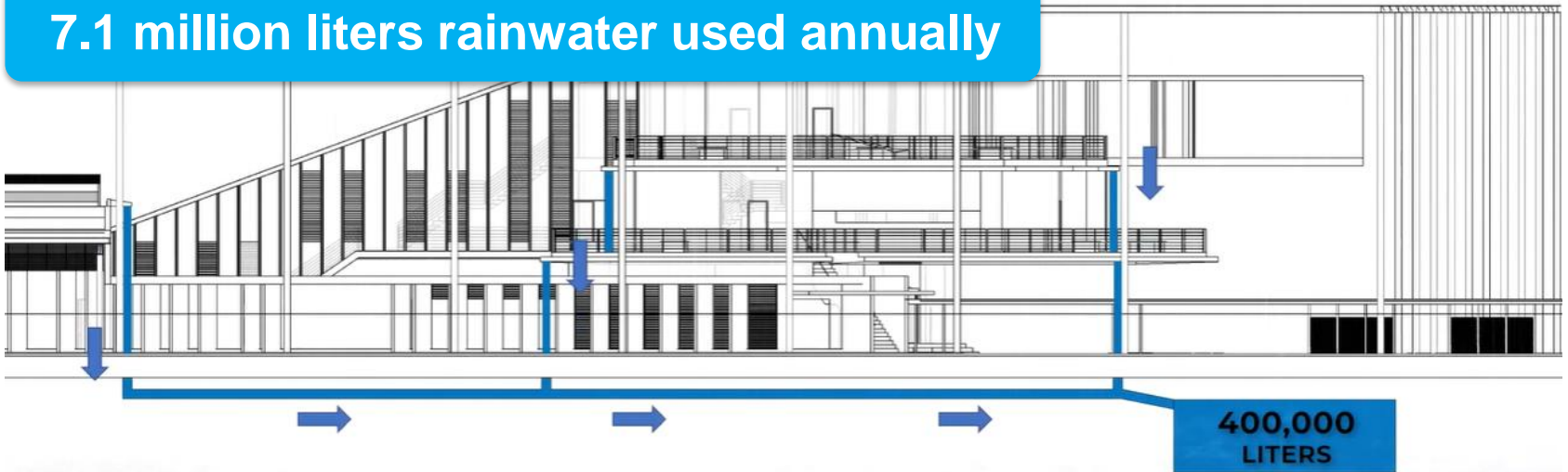


# Ecopuncture principle #1

Acts of design that create  
a surplus of life-sustaining resources and capitals



**7.1 million liters rainwater used annually**



Rainwater cascades from roofs highlighting the tropical climate



# Ecopuncture principle #2

Regeneration of lost or degraded ecosystems,  
human-made and natural



**Before**



**After**



# Ecopuncture principle #2

Regeneration of lost or degraded ecosystems,  
human-made and natural



Courtyard / cafe



# Ecopuncture principle #2

Regeneration of lost or degraded ecosystems,  
human-made and natural





# Ecopuncture principle #2

Regeneration of lost or degraded ecosystems,  
human-made and natural





# Ecopuncture principle #2

Regeneration of lost or degraded ecosystems,  
human-made and natural





# Ecopuncture principle #3

A whole-systems approach  
that seeks connectedness and reciprocity



- Most spaces are daylight
- All spaces have view to Nature



# Ecopuncture principle #3

A whole-systems approach  
that seeks connectedness and reciprocity



Old factory



New factory

**90% of Occupants**  
prefer the New Factory to the Old Factory

Some of the 144 replies to anonymous occupant survey  
**"What do you like about the building?":**

- 1) Its the best place i worked.. The greenery around the factory is simply amazing.. It give us a peaceful feeling..
- 2) Very green, light and healthy
- 3) Give a balance and serene feel (able to reduce stress). Work place = 2nd HOME
- 4) I like the environment of this building that have been surround by tress. Comfortable. Outstanding from others building.
- 5) The beauty of the natural, de-stress while working



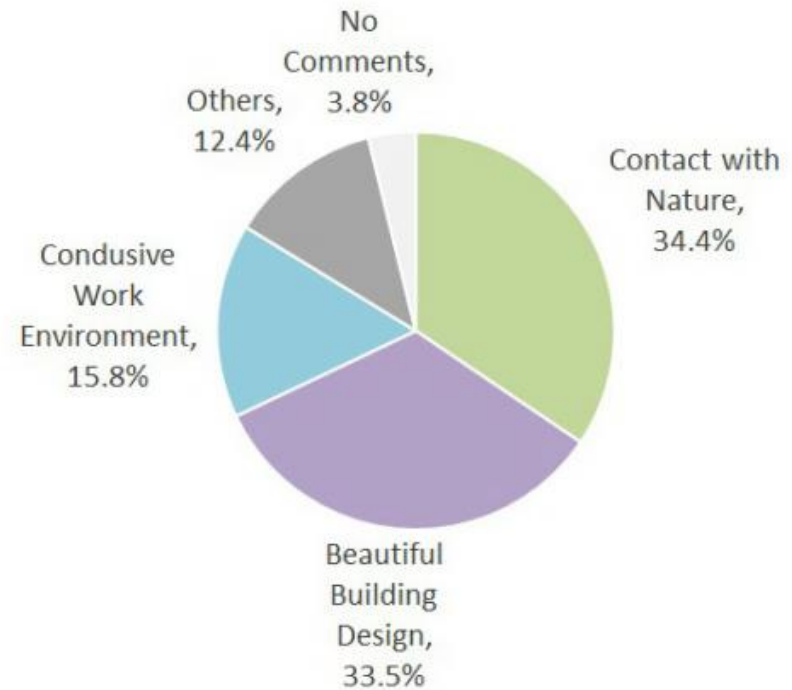
# Ecopuncture principle #3

A whole-systems approach  
that seeks connectedness and reciprocity

Results of 144 replies to  
anonymous post occupant survey



"What do you like about the building?"





# IN SUMMARY

## Did the Client get what he wanted?

1. Energy Efficient Building with Low Operating Costs [YES]
2. Healthy, Sustainable & High-Performance Building [YES]
3. Environmental Showpiece Factory for others to follow [HOPEFULLY]

## Were the Ecopuncture principles adhered to?

Yes, to a fair extent



### More inspiration here:

3-minute VIDEO, Paramit Design Features Video

### Award Winning

1. RIBA International List 2018, aka "Best New Building in the World"
2. Winner : Best of Category Commercial. A&D Trophy Awards 2019
3. Winner : ABB LEAF AWARD Winner: Commercial Building of the Year 2017
4. Nominated for Aga Khan Award for Architecture
5. Runner Up: National Energy Award, Energy Efficiency Category
6. Winner : FUTURARC Green Leadership Award 2018. Commercial
7. ASEAN Energy Awards 2019, 1st Runner-Up

Play video: <https://youtu.be/CZQBWMEf50>





# Thank you

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