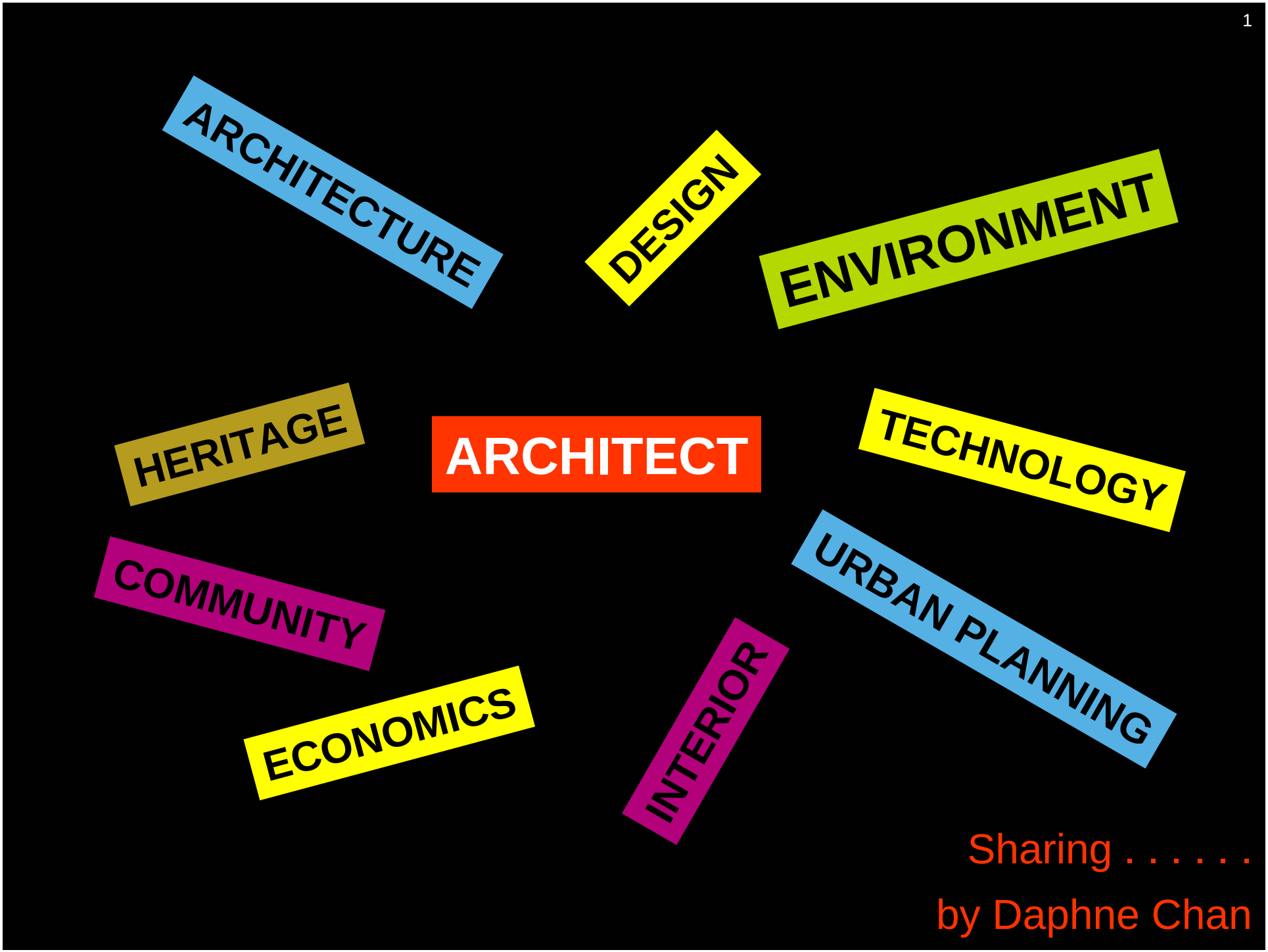


Sharing . . . . . .

by Daphne Chan

Architecture,

an utilitarian art which embraces both Humanities + Science

Design,

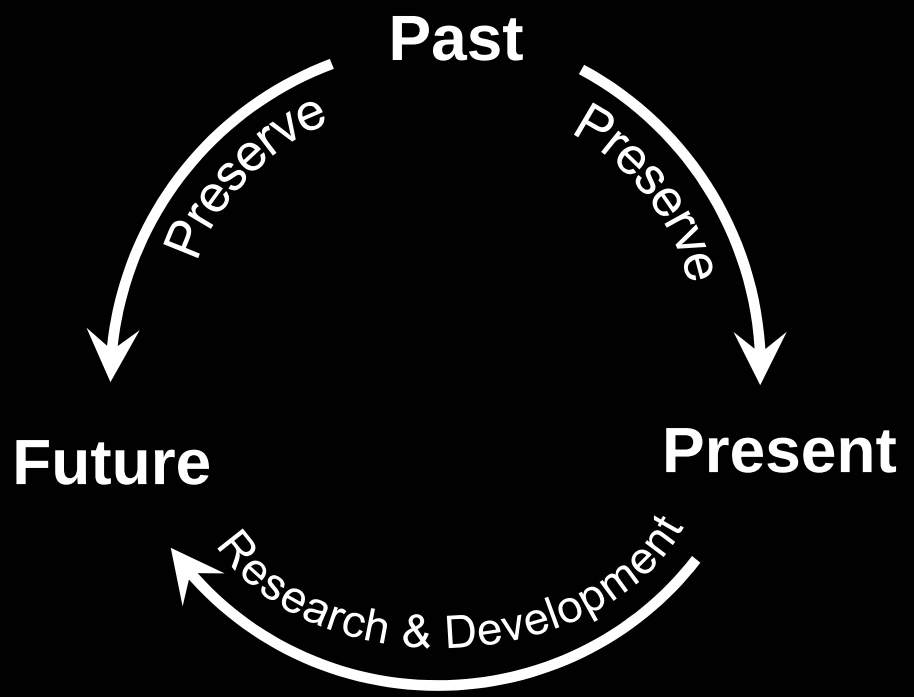
problem solving

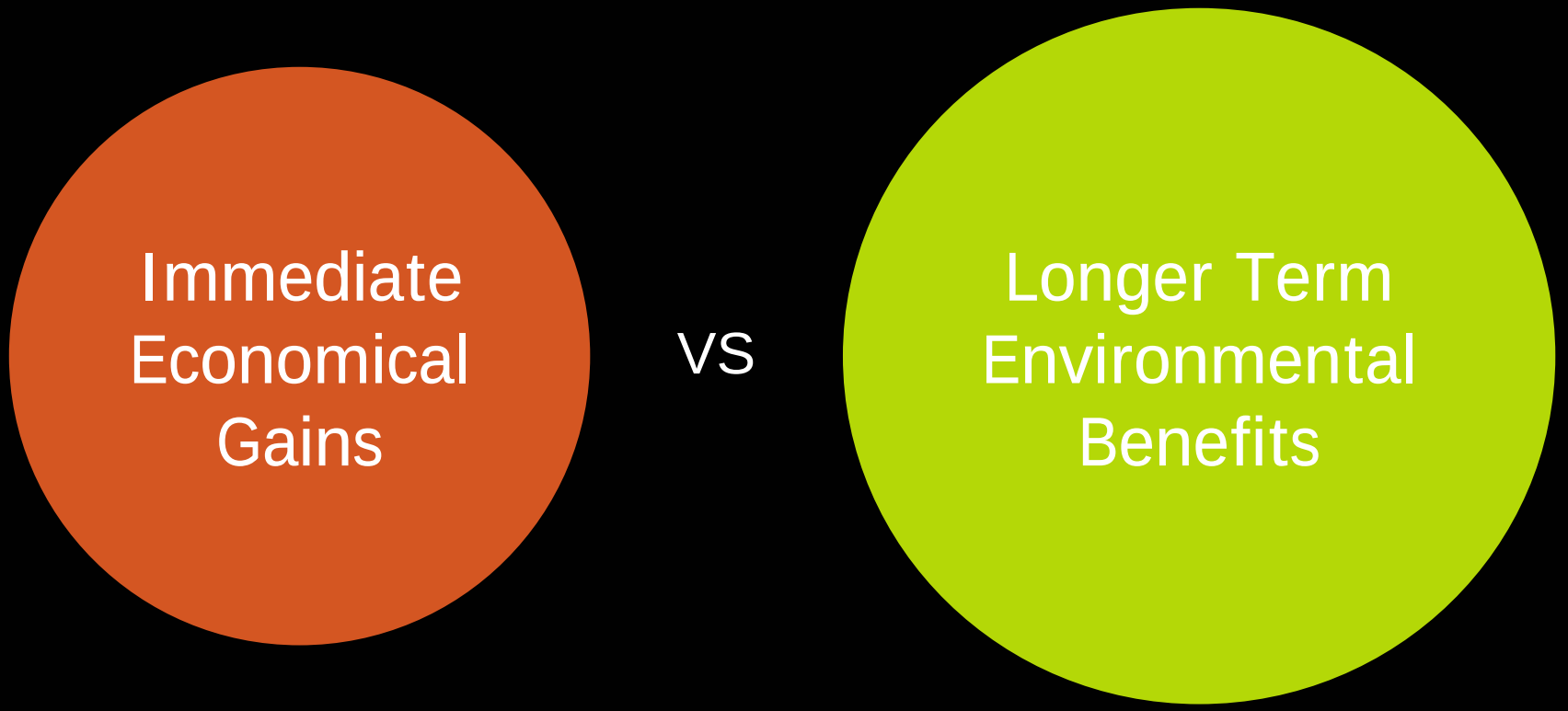
Architects,

apply their design skills creatively in different arenas, in particular our built environment

Imminent Problem & Challenge

Sustainability



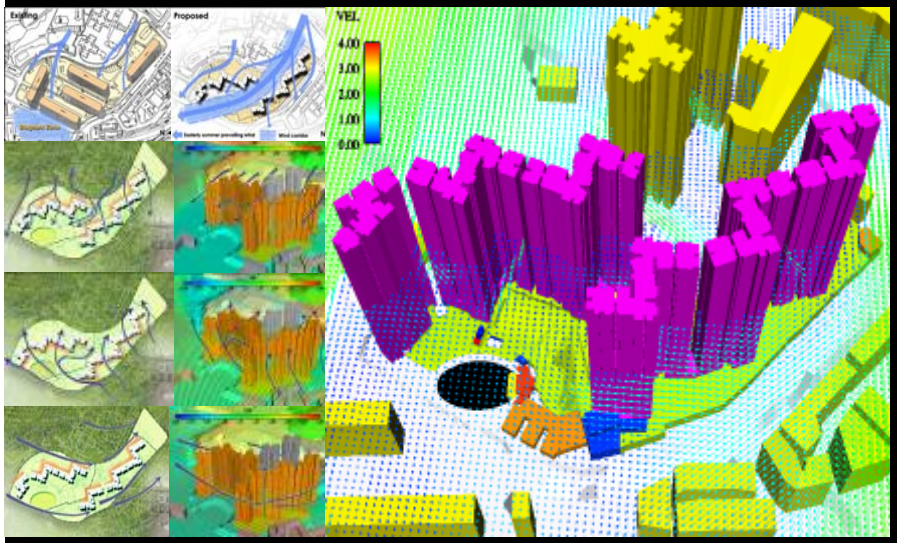

Immediate Economical Gains
VS
Longer Term Environmental Benefits

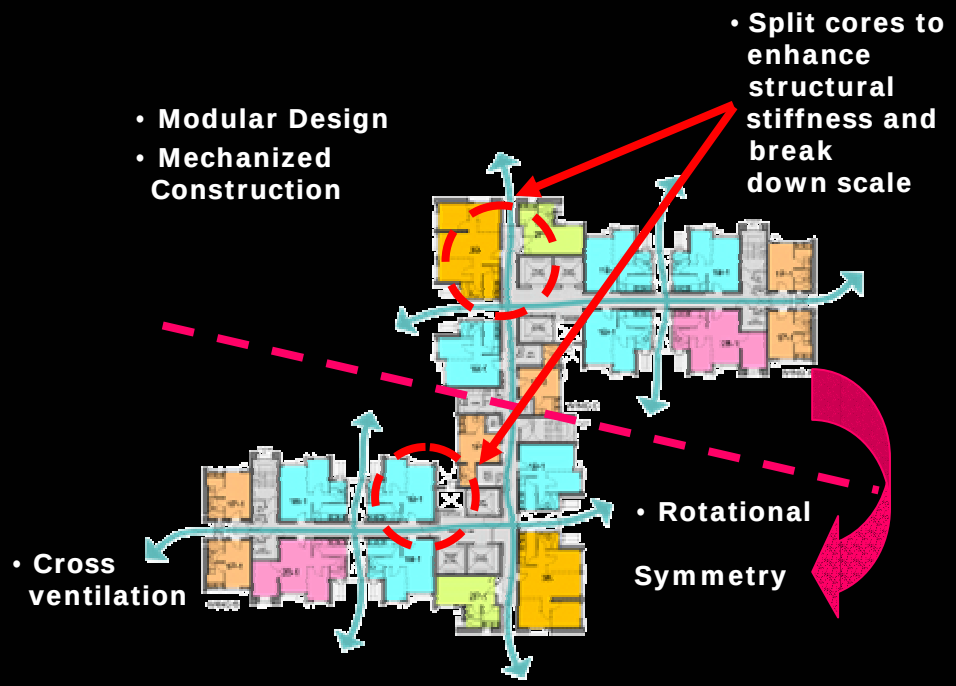
Paradigm Shift for Better Future

- value on longer time perspective
  i.e. whole life cycle of building of 50 years +
- Research & Development on sustainability
- application of technology and sensitivities

Environmental Sustainability

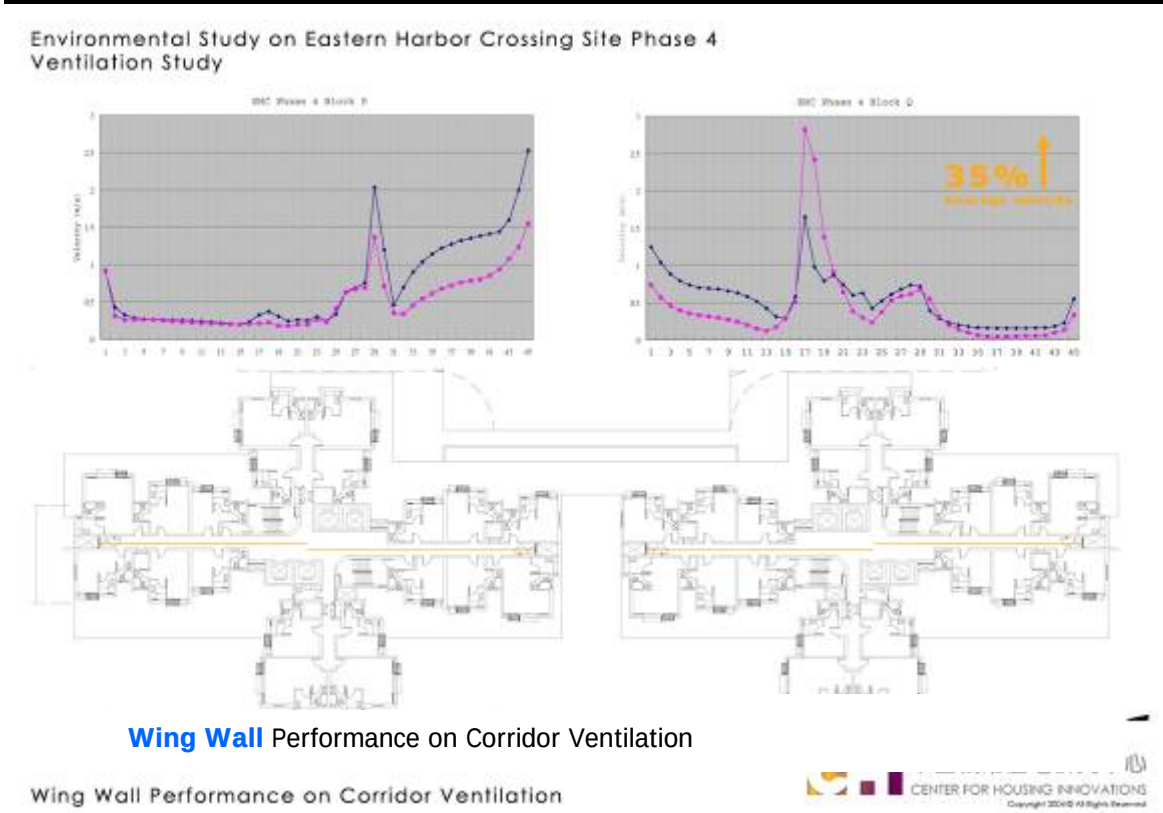
- environmental comfort
- energy saving





Ventilation Performance at UNTK

Wing Wall Performance



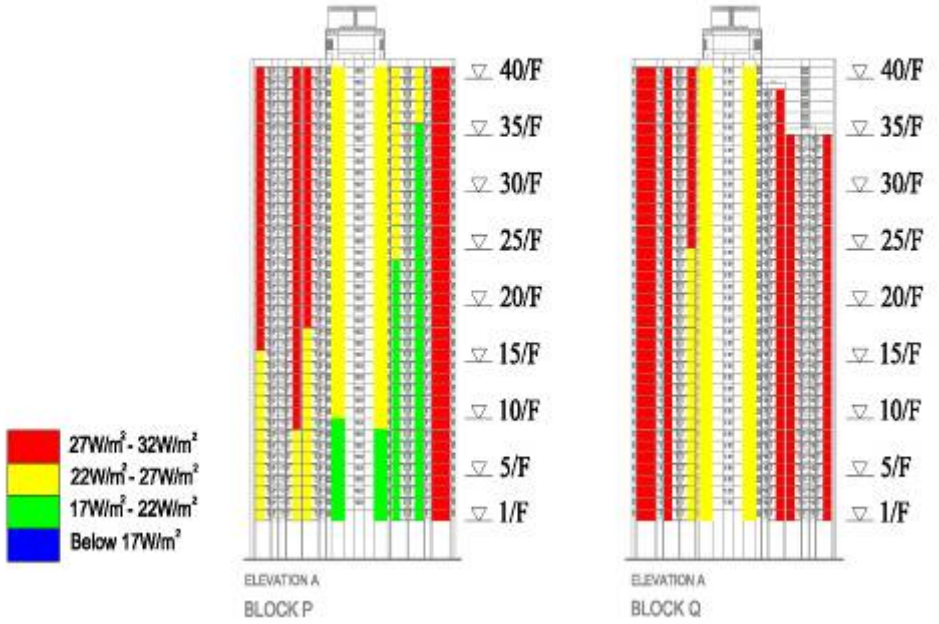
Wing Wall Performance on Corridor Ventilation

Proposed Wing Wall

Internal Environment - Ventilation Performance at EHC

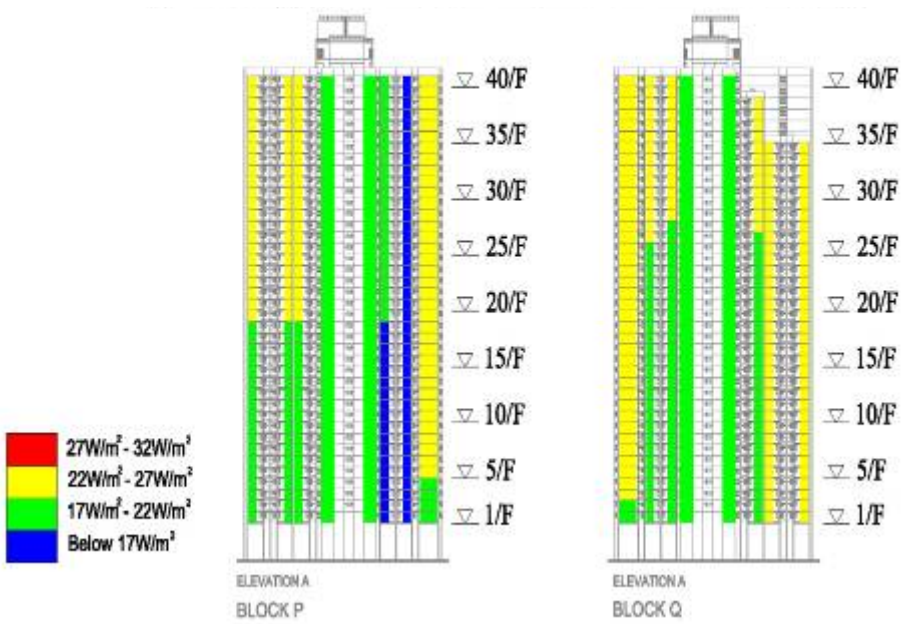
Clear glass with no overhang

Average Heat Gain for the West Envelopes of Block P & Q
(Clear glass window with no overhang)



Tinted glass with overhang

Average Heat Gain for the West Envelopes of Block P & Q
(Tinted glass window with 575mm overhang)

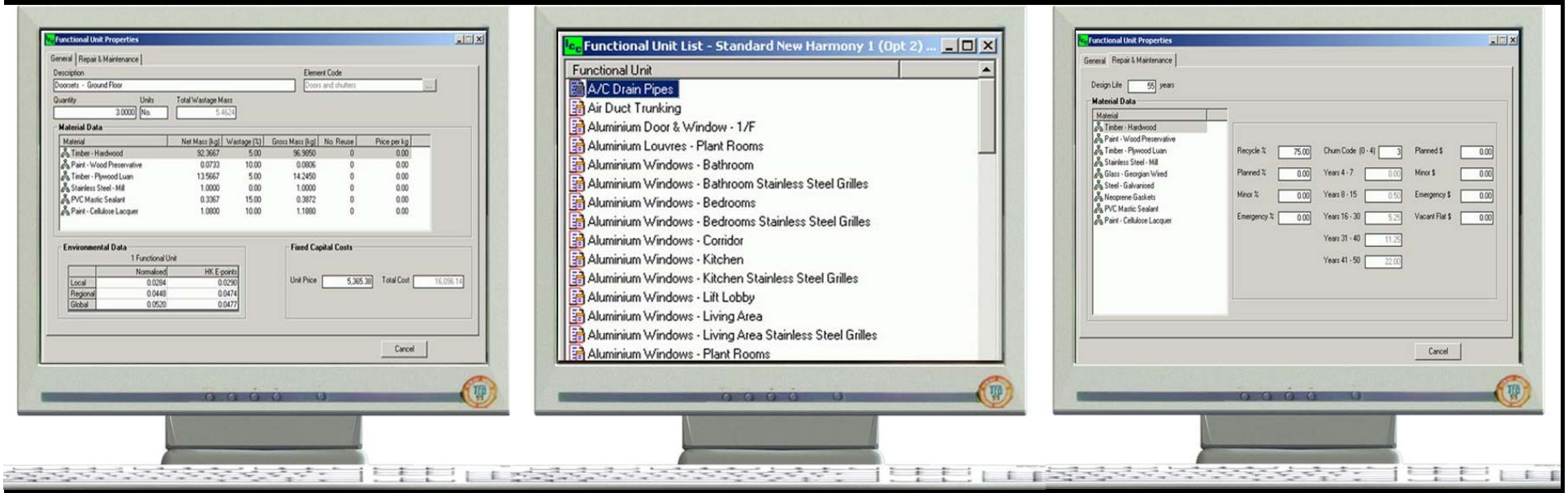


Resultant Application -

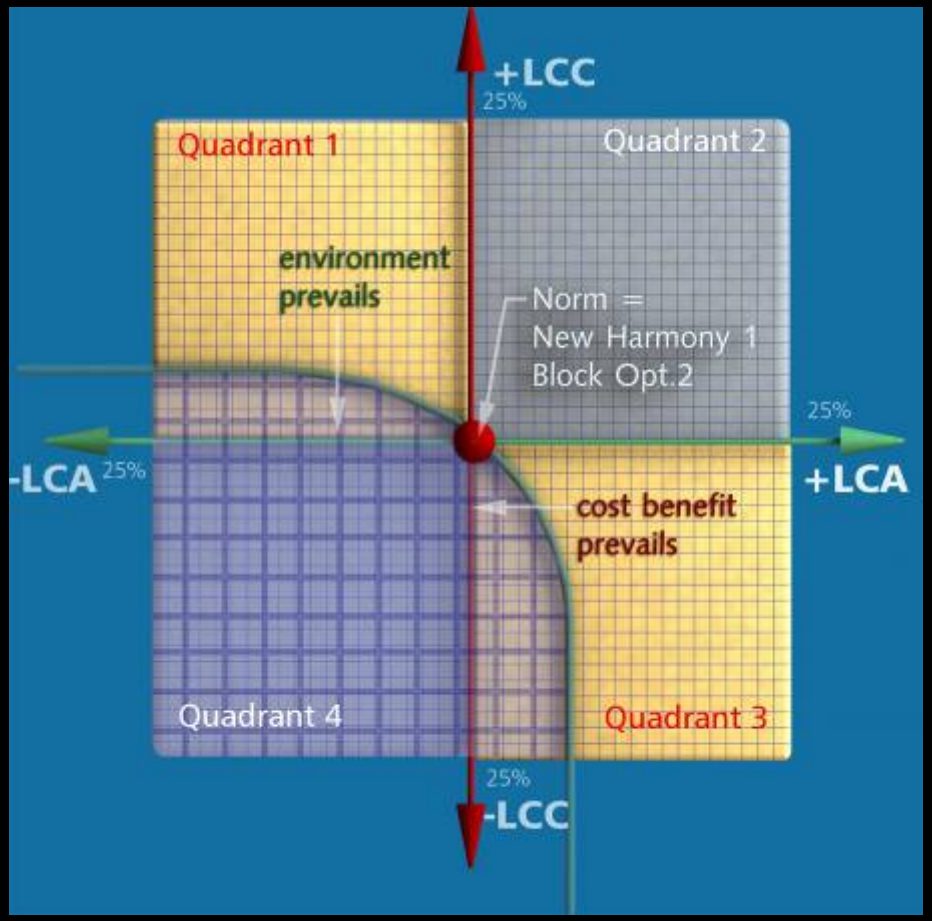
- 575mm overhang and 6mm tinted glass used in west facing facade

Environmental & Economical Sustainability

Research Study of Building Materials Life Cycle Assessment (LCA) and Life Cycle Costing (LCC) Tool



LCA & LCC Decision Supporting Tool



area of acceptability

1 Quadrant: decrease in environmental impacts but increase in cost. DIFFICULT DECISION.

2 Quadrant: increase in cost & environmental impacts **to be avoided.**

3 Quadrant: increase in environmental impacts but decrease in cost. DIFFICULT DECISION.

4 Quadrant: decrease both in cost & environmental impacts. EASY DECISION.

Application of the LCA/LCC Tool

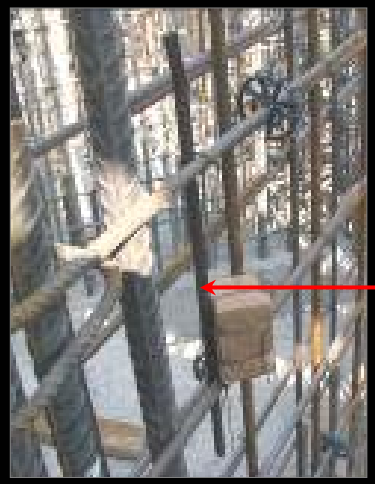
Ceramic tiles replaced by textured acrylic paint at lift lobby

Application of the LCA/LCC Tool

Door with soft wood instead of hard wood core

Application of the LCA/LCC Tool

Fibre glass in lieu of stainless steel laundry pole and curtain rail in bathroom



Extra metal bar normally required for earth bonding

Social Sustainability

Community engagement






History, Culture and Identity

Heritage building's reconstruction and adaptive use

- historical value
- architectural merit
- rarity

In Need of Conservation Policies

For built heritage

For natural heritage

Initiatives from Private Philanthropists

Lui San Chun

Tiger Balm Garden

Dragon Garden

Try to imagine

Future

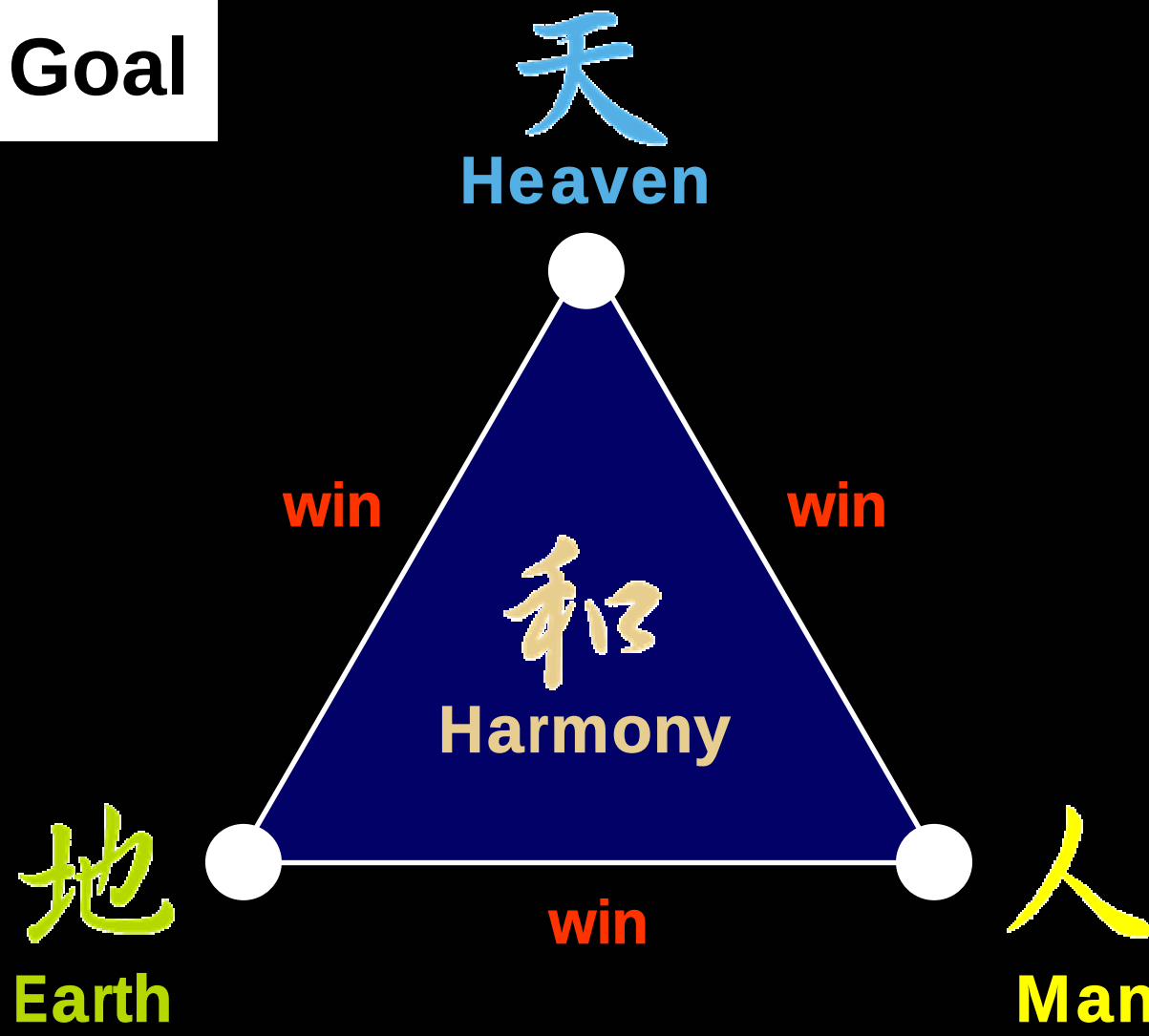
The goal of sustainability still requires

- enhanced public awareness
- heightened social conscience
- + corresponding government policies

Now

Building practitioners to exercise their professional skills with sensitivity to create and preserve more humanistic environments

Dream Goal



. . . . . the end . . .