Urban Thinkers Campus Series 5:

Healthy Environments through Architecture

Challenges In Reshaping Build Environment For Healthy Future Pandemic-Proof Buildings

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Date: 24 October 2020
The Challenges During PANDEMIC:

• Takes time to change our old addicted “as usual” habits.
• People desperate to get together for social interaction.
• Realized spaces for movement & emergency use are limited/not enough!
• Congested community in cities, esp. slums areas & workers squatters/flats.
How is a pandemic or post-pandemic healthy building / build environment look like?

• Future living /habitable area reflects current needs for a contactless environment and social distancing.
• Prefer stay on landed property instead of high-rise buildings.
• Opt. to stay away from congested cities; move to rural areas.
• Incorporate flexibility into design build environment without making Covid-19 the focus of a project.
• Automatic doors, touch-free faucets, plenty of outdoors space, extra bicycle provisions and state-of-the-art ventilation systems were a must.
- Shorter construction duration and fast delivery & more efficient.
- Easy construct during pandemic
- Easy to dismantle after pandemic
- Able to be recycled & Reused after sanitized the entire system
- (Ex: Built of temporary hospitals for pandemic)

**KOTKO Design Concept** – use as emergency pandemic health facilities support.
- This is a special module that consisted of CNC-MEM health care technologies.
- Completion duration = within 1 day
- Flexible to form any shape to suit the needs and safer
Two (2) Main Key Trends:

1. Need for workspace at home
2. Extra privacy (Spending more time in homes)

An environmental approach is also key within the new normal world

Serve as the “Autonomous Residence” equip essential facilities: -

- Solar PV on top of roof
- Rain Water Harvesting System & Purification System
- Water harvested and after purified will store in 2 tanks for: 1) daily use water, 2) Cooling/heating building

Perhaps an option to promote and further explore to offer now and future where emergency pandemic require social distancing and segregation
Hospital normal wards, private homes, nursing homes, and hotels; and quickly constructed alternative locations such as vacant office buildings, prisons, and parking lots are all becoming temporary spaces for less critical patients of COVID-19.

Living home becomes workspace.

Originally buildings and spaces are designed for their own functionality and purpose. However, due to this pandemic, everything seems to be mess up and become uncertain.

- More flexible & workable multipurpose spaces
- More energy saving for space resources
- Avoiding & reducing over expenditure & cost.
- Improving and strengthening the society's resilience

**Flexibility of Space Usage Module**
Independent Community Module

One building consists of:-
- School,
- Offices & Co-working spaces
- Residential
- Hospital & Health Care
- Soilless Farms
- Green Spaces

Fully-equip & Self-Sustaining System:
- Solar PV & Wind harvest energy system - Generate electricity
- Rain Water Harvesting System - Irrigation for Planting
- Greenery vegetation/plantation - Cooling effects / act as sunshade and acoustic
  - soften and beautify the environment
  - improve health lifestyle

An independent, self-sustain community module building not only able to adapt emergency lockdown during pandemic but also flexible to become a free and open community after pandemic.
Flexible Plug-In Sustainable Flying Cities & Community

CONCEPT:

- Cities elevated from ground
- Allow forestry below cities
- Each Tower = Independent city
- Each individual/family in auto-mobile self-sustain capsule
- Plug-in concept for each ‘flying capsule’ - offer flexibility & freedom.
Looking forward to a different kind of pressure: the pressure to loosen our grip on old habits and model new behaviors to be more mobile, tech-savvy, remotely capable, and healthy.’