

# CONTRIBUTION OF GREEN CONDOMINIUMS IN DECARBONIZATION

BY Romolo V. Nati

**How much real  
estate  
accounts for  
CO2  
production?**

- The real estate industry makes up to 49% of global carbon emissions
- South East Asia's air-conditioning accounts for up to 60% of overall electricity demand in urban areas.
- Around 75% of Southeast Asia's energy still comes from **non-renewable energy sources**.
- In South East Asia, the **UHI\*** (Urban Heat Island effect) is adding an **average of 4.1 Celsius Degrees** (from 0.5 to 11 Celsius Degrees). This create a vicious cycle.

\* Human activities make urban areas much warmer

# Any Solutions?

# Passive Green Buildings

- **Green Design Strategies** are **relatively** easy and cheap to be implemented and maintain.
- Green real estate **must be affordable** in order to reach a **massive adaption** to have an impact on the environment.
- **Passive Green Design** uses natural elements such as wind, sun, rain etc. to reduce buildings environmental impact while reducing construction and maintenance costs.
- **Traditional and vernacular** design practices in the region are the best role models to follow



## Head Office Location

Unit 28C BPI Philamlife Building,  
Ayala Ave., Makati City 1226

## Primavera Sales Office

P.N. Roa Sr. Avenue Upper Carmen  
Cagayan de Oro City

## Miramonti Sales Office

No.1 Millenium Drive, RFM Science Park,  
LISP III Bgy. San Rafael, Sto. Tomas,  
Batangas



WE ARE A DESIGN-DRIVEN DEVELOPER OF SUSTAINABLE PROPERTIES  
FOCUSED ON EMERGING CITIES IN THE PHILIPPINES





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# AWARDS AND RECOGNITIONS





# UNIQUE VALUE PROPOSITIONS

# PASSIVE GREEN DESIGN



**RAISING MIDDLE CLASS**



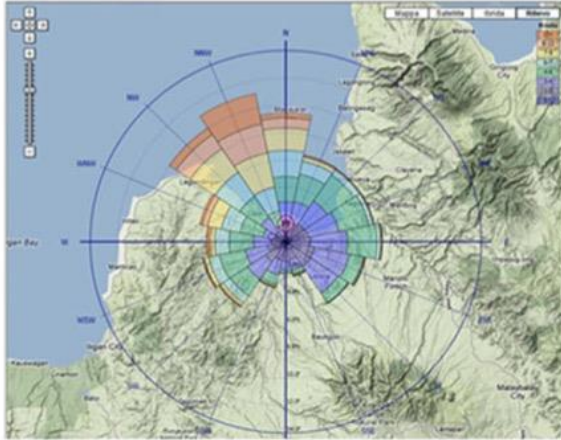
**EMERGING CITIES**

# PASSIVE GREEN DESIGN

TAKING ADVANTAGE OF THE CLIMATE TO REDUCE  
DRASTICALLY POWER AND WATER CONSUMPTION

# CLIMATE DATA GATHERING

DATA ABOUT RAIN, SUN PATH, WIND SPEED AND DIRECTION ARE ACQUIRED



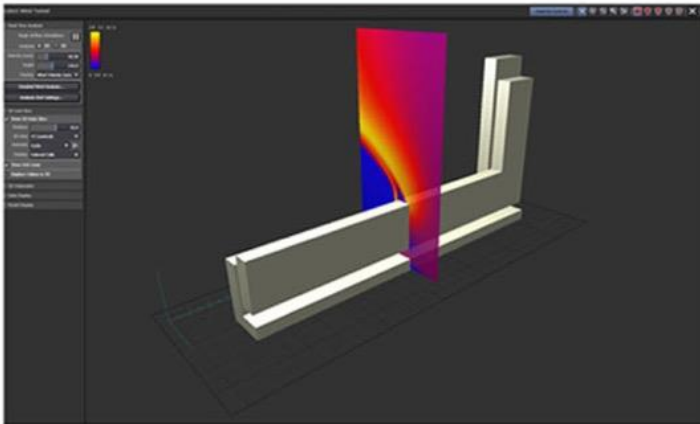
## WIND DATA

Windrose indicating wind strengths and frequency in CDO

## TEMPERATURE DATA

Annual temperature distribution chart in CDO

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak high °C	37	38	39	39	39	39	38	38	36	37	39	37
Average high °C	30	31	31	32	33	32	32	32	32	32	31	31
Average low °C	23	23	24	25	26	25	24	24	24	24	24	24
Peak low °C	18	18	19	20	22	19	18	22	22	19	20	19

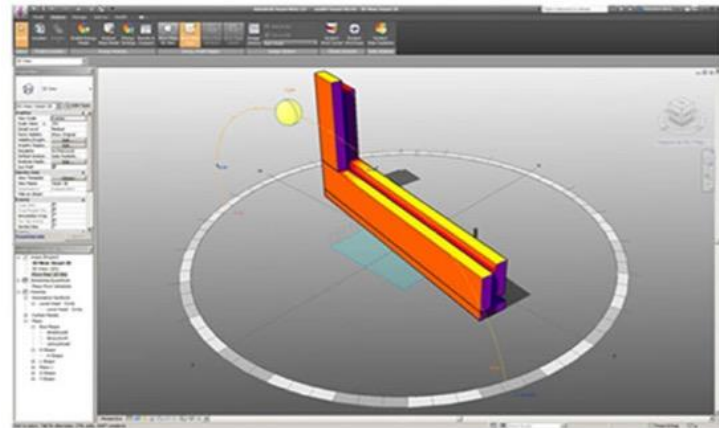


## VENTILATION ANALYSIS

Air flow simulations caused by local breeze in the internal court of the building

## SHAPE PERFORMANCES

Simulations of the sun's movement around the building for the best layout for solar panels



Software utilized: **ENERGYPLUS** and **RADIANCE**

# Santo Tomas -Batangas Eco friendly mixed use development

Environmental simulations - Performative based design



# PROJECTS OVERVIEW



www.primaveraresidences.com



Actual Building Photo

## PRIMAVERA RESIDENCES

Cagayan de Oro, Mis. Or.

- No. of towers: 2
- No. of floors: 10
- Gross Area: Approx. 19,000 sq.m.
- No. of units: 327
- Residential: 298
- Commercial/Office: 29
- Parking: 28



www.primaveracity.com



Artistic Rendering of Building

## PRIMAVERA CITY

Cagayan de Oro, Mis. Or.

- No. of towers: 7 (4 Phases)
- No. of floors: 12 (first 1<sup>st</sup>—6<sup>th</sup>), 32 (7<sup>th</sup>)
- Gross Area: Approx. 80,000 sq.m. (7 towers)
- Total # of units: 1,400 (parking included)
- PHASE 1:**
- Floor Area: Approx. 18,600 sq.m.
- # of units: Residential - 291  
Commercial/Office - 38



www.miramontiph.com



Artistic Rendering of Building

## MIRAMONTI

Sto. Tomas, Batangas

- No. of towers: 3 (2 Phases)
- No. of floors: 21
- Gross Area: Approx. 55,000 sq.m. (3 towers)
- Total # of units: 1,100 (parking included)
- PHASE 1:**
- Floor Area: Approx. 22,350 sq.m.
- # of units: Residential - 362  
Commercial/Office - 12

# COMPLETED PROJECTS



ASIA PACIFIC  
PROPERTY  
AWARDS  
DEVELOPMENT

in association with



★★★★★

BEST MIXED-USE  
DEVELOPMENT  
PHILIPPINES

Primavera Residences  
by Itaipinas Euroasian  
Design and  
Eco-Development  
Corporation (ITPI Corp.)

2014-2015

# Primavera™

GREEN RESIDENCES IN CDO

## 5 REASONS TO INVEST IN CDO

- ▶ Gateway of Northern Mindanao
- ▶ World Class International sea port and airport
- ▶ Among the Fastest Growing Cities in the country
- ▶ 300,000 housing gap
- ▶ Home of 22,000 OFWS
- ▶ Presence of multi-national companies such as Del Monte, Nestle, Coca-cola, Hanjin etc



*Primavera*  
RESIDENCES

CAGAYAN DE ORO

### SOURCES

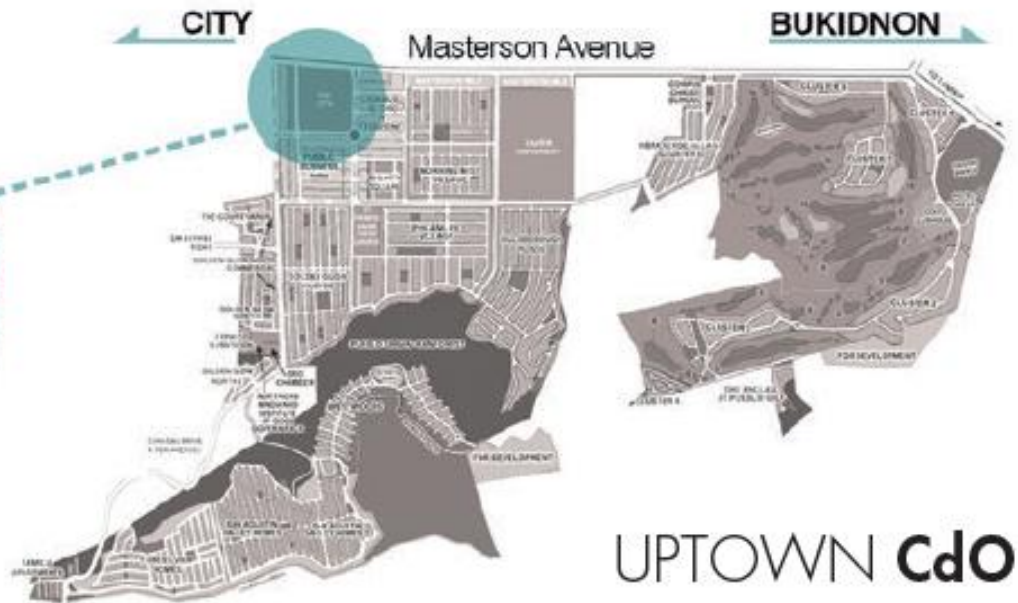
<http://www.cagayandeoro.gov.ph>  
<http://lifestyle.inquirer.net/160399/why-un-habitat-named-cdo-an-emerging-city-of-tomorrow/>  
<http://www.cdodev.com/2017/08/17/cagayan-de-oro-is-10th-most-competitive-city-in-2017/>  
<http://worldpopulationreview.com/countries/philippines-population/cities/>

*Primavera*  
GREEN RESIDENCES IN CDO

**IDC** <sup>TV</sup> Itaipinas  
Development  
Corporation  
LIVING BY DESIGN  
EST. 2009

# LOCATION

AT THE CENTER OF GRAVITY FOR BUSINESS AND LEISURE





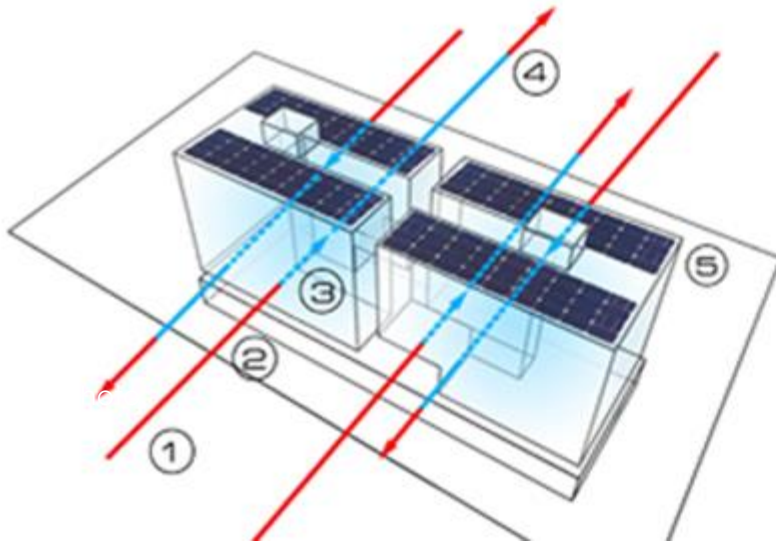
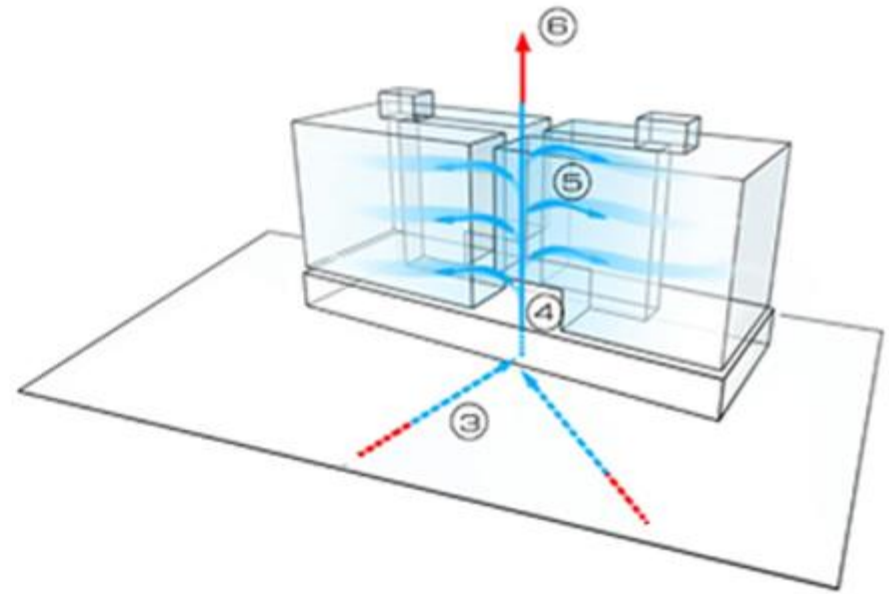
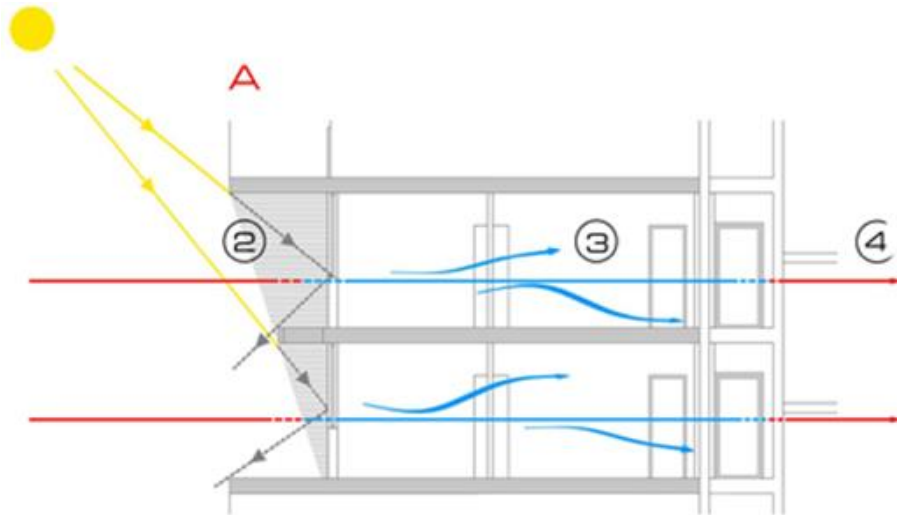


Actual Photo

Building Details	No. of Towers : 2 No. of Floors : 10 Gross Area : Approx. 19,000sq.m.
Total No. of Units	Residential: 298 Commercial / Office: 29 Parking: 28
Construction Stage	Completed (March 2016)
Sales Status	Sold Out – Turned Over
Actual Sales	Php740 Million



# PASSIVE GREEN STRATEGIES



## SHADOW-COOLING SYSTEM + PHOTOVOLTAIC SYSTEM

- 1- NATURAL WARM AIR FLUXES;
- 2- SHADED FACADES FOR AIR COOLING;
- 3- APARTMENTS CROSS VENTILATION;
- 4- HOT AIR EXPULSION.
- 5- ROOF SHADOWING SOLAR PANELS.





Actual Photo





Actual Photo





Actual Photo





Actual Photo



Actual Photo





Actual Photo

# ONGOING PROJECTS



ASIA PACIFIC  
PROPERTY  
AWARDS  
DEVELOPMENT

AWARD WINNER

MIXED-USE  
DEVELOPMENT  
PHILIPPINES

Primavera City  
by Itaipinas Development  
Corporation

2017-2018



**City**  
*Primavera*<sup>TM</sup>  
*Move into Italian style*





*City*  
*Primavera*  
*Move into Italian style*

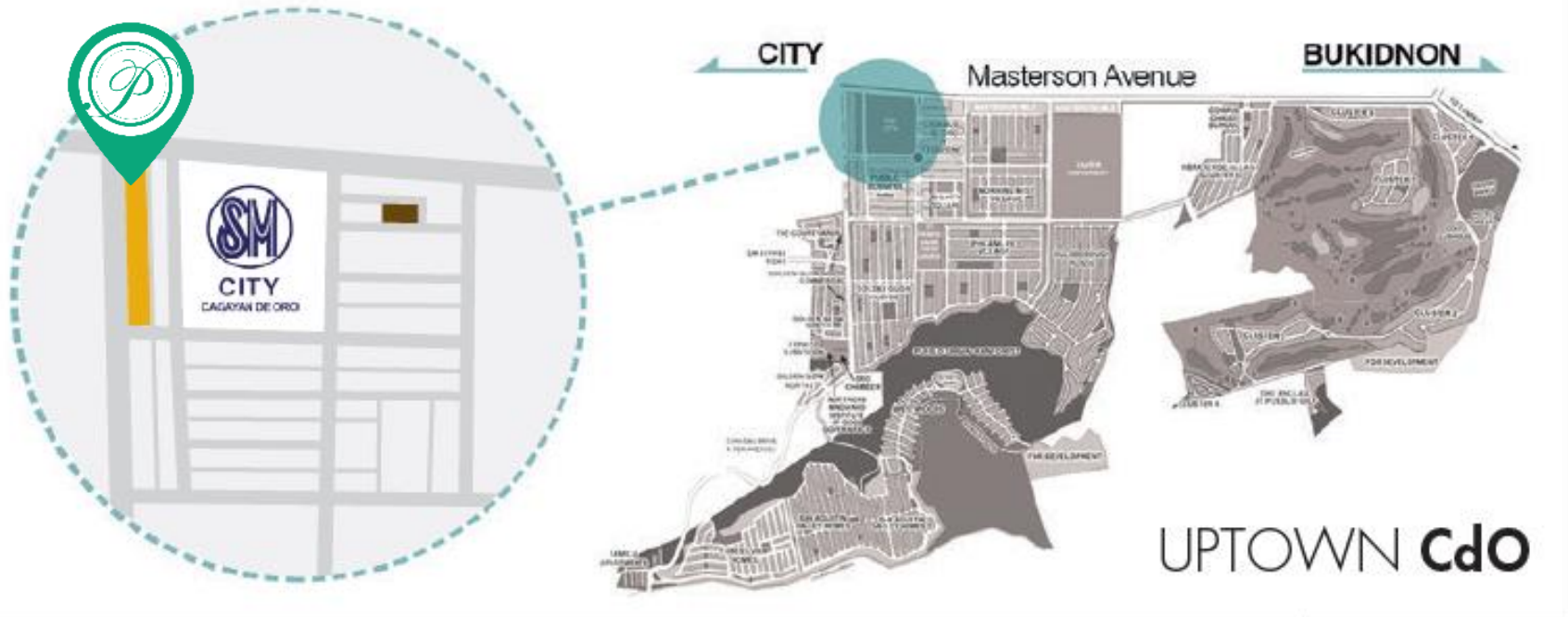
CAGAYAN DE ORO

*City*  
*Primavera*  
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# LOCATION

AT THE CENTER OF GRAVITY FOR BUSINESS AND LEISURE



# CittàAlta

(Planned to start by  
1st Quarter of 2021)

## CittàVerde

(ongoing construction)

## CittàBella

(Planned to start by  
1st Quarter of 2020)

## CittàGrande

(Planned to start by  
1st Quarter of 2021)



### Project Details

Floor Area	Gross Area : Approx. 82,556sq.m. (7 Towers)
No. of Units	1,455
Residential	1142
Commercial	179
Parking	134
No. of Towers	7 (4 Phases)
No. of Floors	12 (First 1st – 6th), 32 (7th)

*City*  
*Primavera*  
Move into Italian style

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ASIA PACIFIC  
PROPERTY  
AWARDS  
DEVELOPMENT

In association with

*American  
Standard*

**AWARD WINNER**

MIXED-USE DEVELOPMENT  
PHILIPPINES

Miramonti Green residences  
by IDC - Itaipinas  
Development Corporation

2019-2020



M I R A M O N T I  
STO. TOMAS | BATANGAS

# 5 REASONS TO INVEST IN STO TOMAS

- ▶ Presence of Industrial Parks (PEZA)
- ▶ Around 100,000 industrial parks' employees
- ▶ High hotels occupancy and still growing (lack of condos, condotel and hotels )
- ▶ OFWs from Calabarzon is the highest in the country (21%)
- ▶ Highest Population Growth in Batangas Province



MIRAMONTI  
S. O. TOMAS | BATANGAS

STO. TOMAS

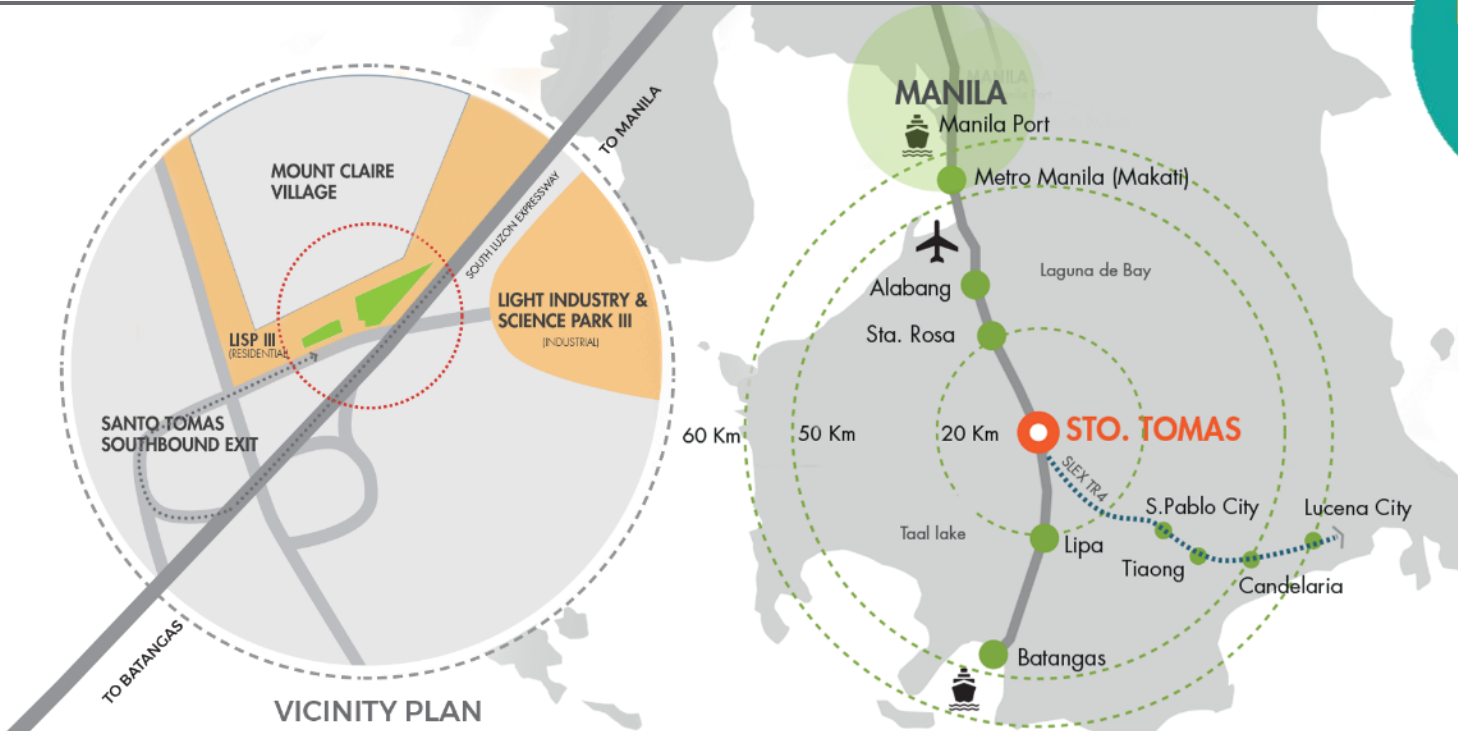
## SOURCES

<http://stotomasbatangas.gov.ph/brief-profile/>  
<https://psa.gov.ph/content/total-number-ofws-estimated-22-million-results-2016-survey-overseas-filipino>



# LOCATION

AT THE CENTER OF GRAVITY FOR BUSINESS AND LEISURE







Artist's Illustration

**Project Details**

Floor Area	Gross Area : Approx. 55,000sq.m. (3 Towers)
No. of Units	1,208
Residential	928
Commercial	41
Parking	239
No. of Towers	3 (2 Phases)
No. of Floors	21









**NEW PRODUCT**



DISCLAIMER  
This project hasn't been disclosed yet with SEC and PSE



# | Location Map and Use of Space



Vicinity Map







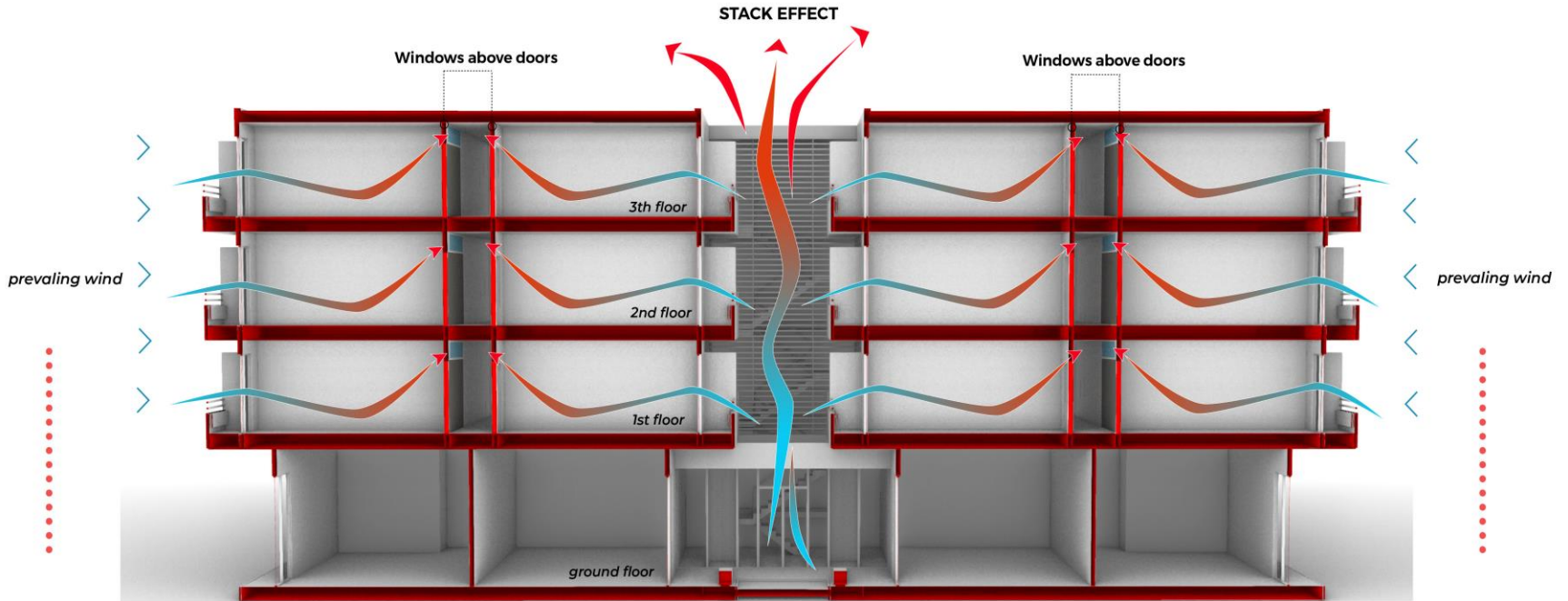






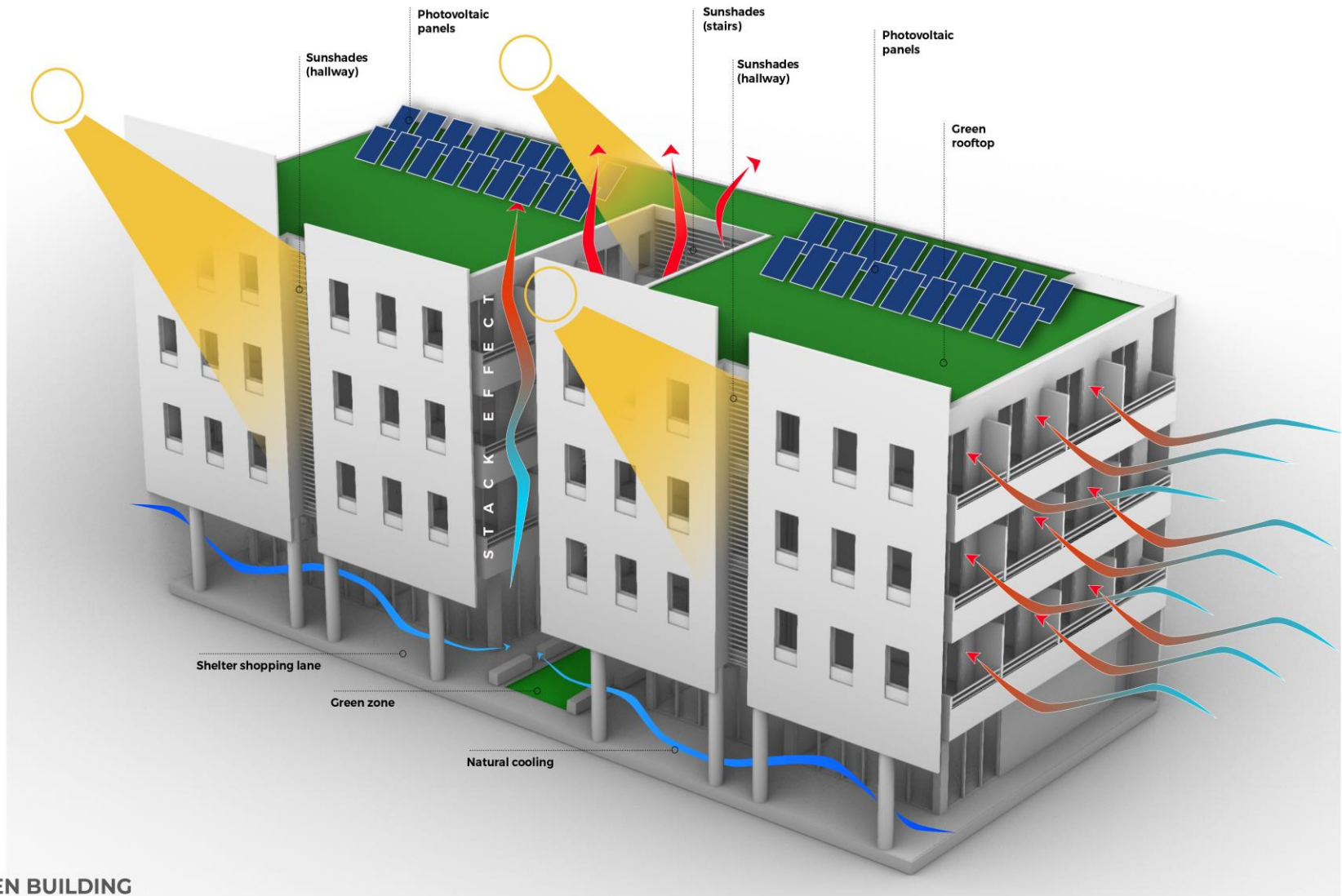


# Innovative Technology



PASSIVE COOLING SCHEME

# Innovative Technology



GREEN BUILDING

GRAZIE  
SALAMAT