

SUSTAINABLE DEVELOPMENTS LEADING TO SMART CITIES AND COMMUNITIES

PRESENTED BY:

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CHAIRMAN- PHIL GREEN BUILDING COUNCIL

PRESENTATION OUTLINE

CLIMATE CHANGE AND THE HARSH REALITIES

GREEN BUILDINGS AND SUSTAINABILITY

BERDE CERTIFIED GREEN BUILDING FEATURES

THE PHIL GREEN BUILDING COUNCIL AND BERDE PROMOTION

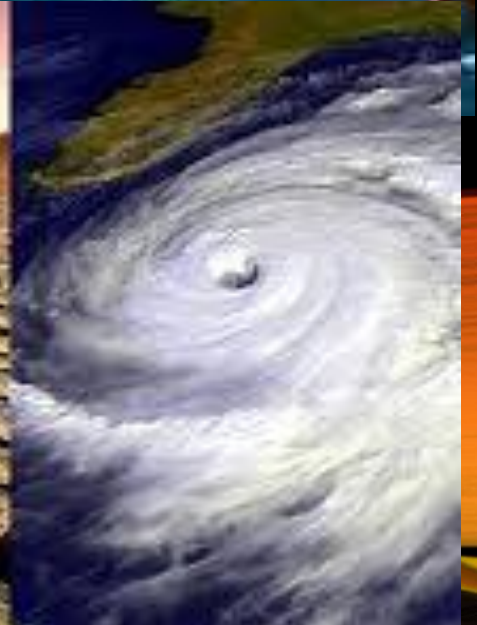
GREENING THE LOCAL GOVERNMENT UNITS

THE APPROACH TO SMARTER CITIES AND COMMUNITIES

CLIMATE CHANGE- THE HARSH REALITIES



A DROP IN THE OCEAN, WHAT CAN IT DO?



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EFFECTS OF CLIMATE CHANGE



ONDOY



PEPING



SENDONG



YOLANDA

CONTRIBUTORS TO GLOBAL WARMING



BUILDINGS TAKE UP SO MUCH ENERGY, WATER AND RESOURCES AND DUMP SO MUCH IN THE LANDFILL



GREEN BUILDINGS AND SUSTAINABLE DEVELOPMENTS



LEED Credit Categories



GREEN BUILDING CONCEPTS

https://www.facebook.com/PHILGBC/photos/pb.361498927261.-2207520000.1544839203./10157008054852262/?type=3&theater

New Tab



Build with the People and the Environment in Mind.
Go for Greener Buildings.

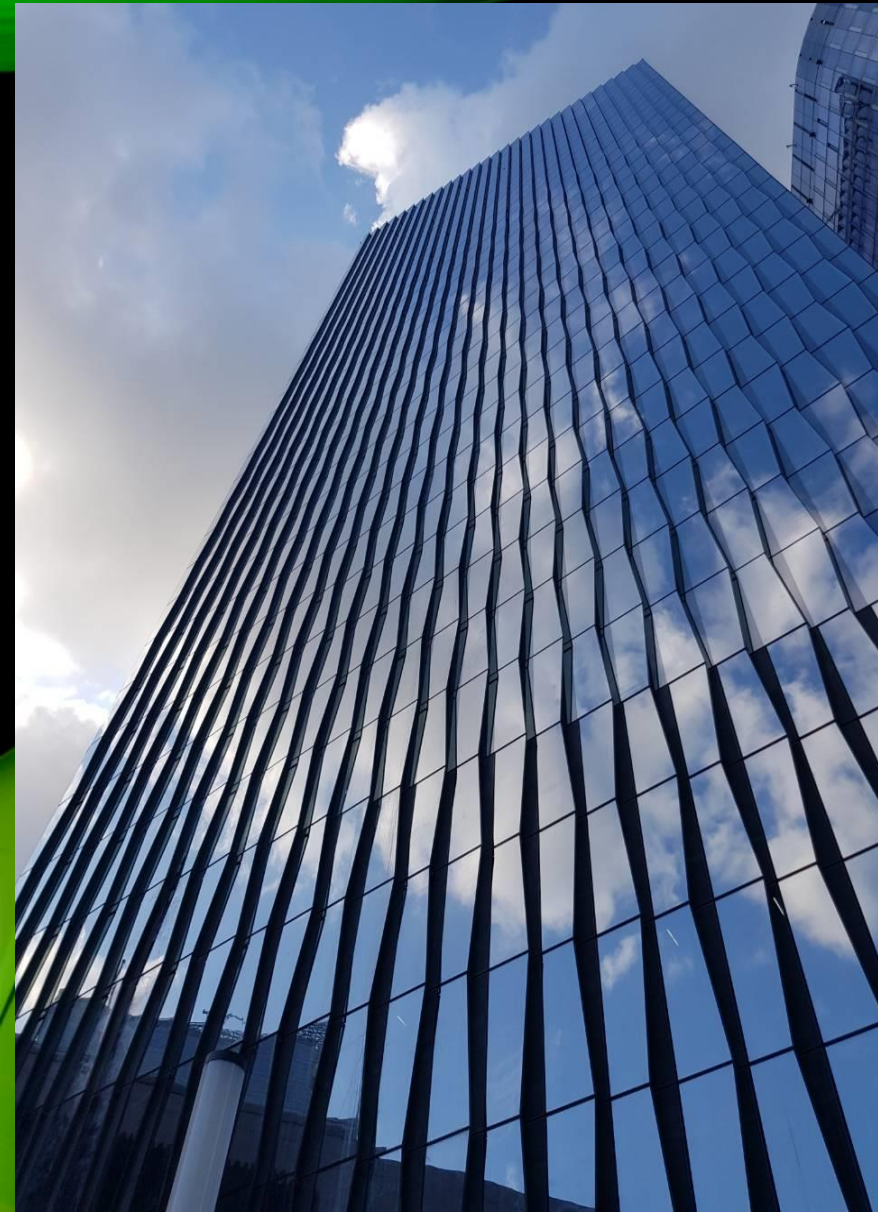
Download free copies of the BERDE GBRs, User Guide and other tools at <http://berdeonline.org>

ARTHALAND CORP. ARYA RESIDENCES- BERDE 4 STAR, LEED GOLD

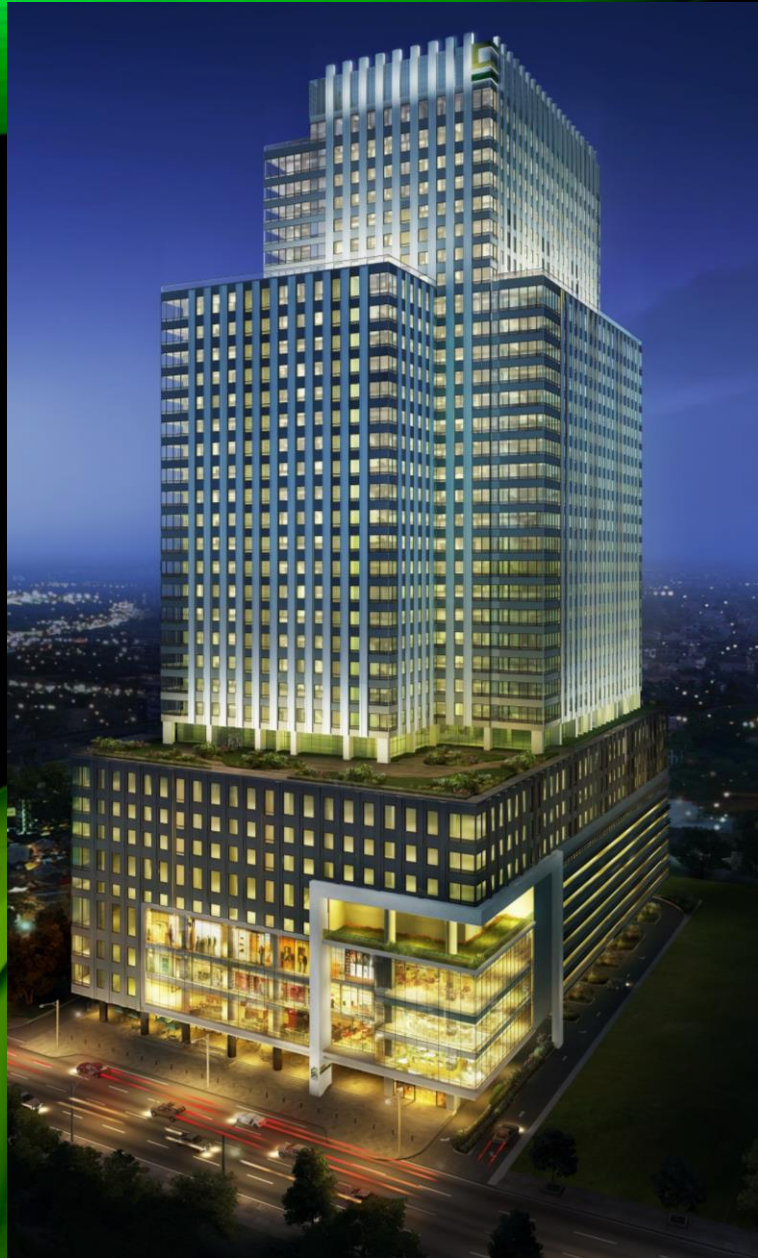


ARTHALAND CENTURY PACIFIC TOWER

LEED PLATINUM ,BERDE "5" STAR, EDGE NET ZERO CARBON



CEBU EXCHANGE- AIMING FOR LEED GOLD AND BERDE 5 STARS



Environmentally Sustainable & Resource Efficient Design Features

Efficient Air Conditioning

Energy consumption of air conditioning system is reduced without compromising the comfort of building occupants.

Low-Emitting, Fuel-Efficient Vehicles (LEFEV) Parking

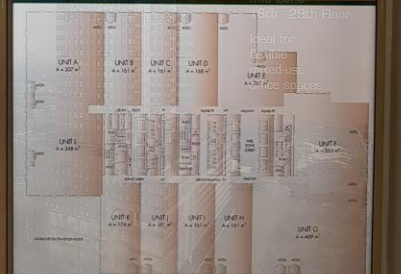
Select parking slots in the building are especially dedicated to eco-friendly, low-emitting, and fuel-efficient vehicles.

Community Connectivity

Located within an urban community, the building is closely located to key establishments like schools, hospitals, banks, restaurants, shopping malls, hotels, among others. It is within a 250 to 800-meter radius from these institutions.



Mid Zone Office (artist's perspective) Floor Space



Typical Floor Plan

GREEN BUILDING FEATURES

The background of the slide is a solid black field. It is decorated with several large, flowing, abstract shapes. In the top left, a bright green wave-like shape curves across the top. In the bottom left, there are more green, leaf-like or wave-like shapes. On the right side, a large, flowing shape transitions from yellow to orange, curving upwards and then downwards. The overall effect is a modern, organic, and dynamic aesthetic.

BERDE RATING- A TOOL FOR GREENNESS

- 1. MANAGEMENT**
- 2. LAND USE AND ECOLOGY**
- 3. WATER EFFICIENCY AND CONSERVATION**
- 4. ENERGY EFFICIENCY AND CONSERVATION**
- 5. TRANSPORTATION**
- 6. INDOOR ENVIRONMENT QUALITY**
- 7. GREEN MATERIALS**
- 8. EMISSIONS**
- 9. WASTE MANAGEMENT**
- 10. ELECTIVES- INNOVATION, CULTURE, HERITAGE PRESERVATION**

GREEN BUILDING FEATURES



GREEN BUILDING FEATURES- MANAGEMENT, LAND USE AND ECOLOGY

LAND USE AND ECOLOGY



STAKEHOLDER'S CONSULTATION

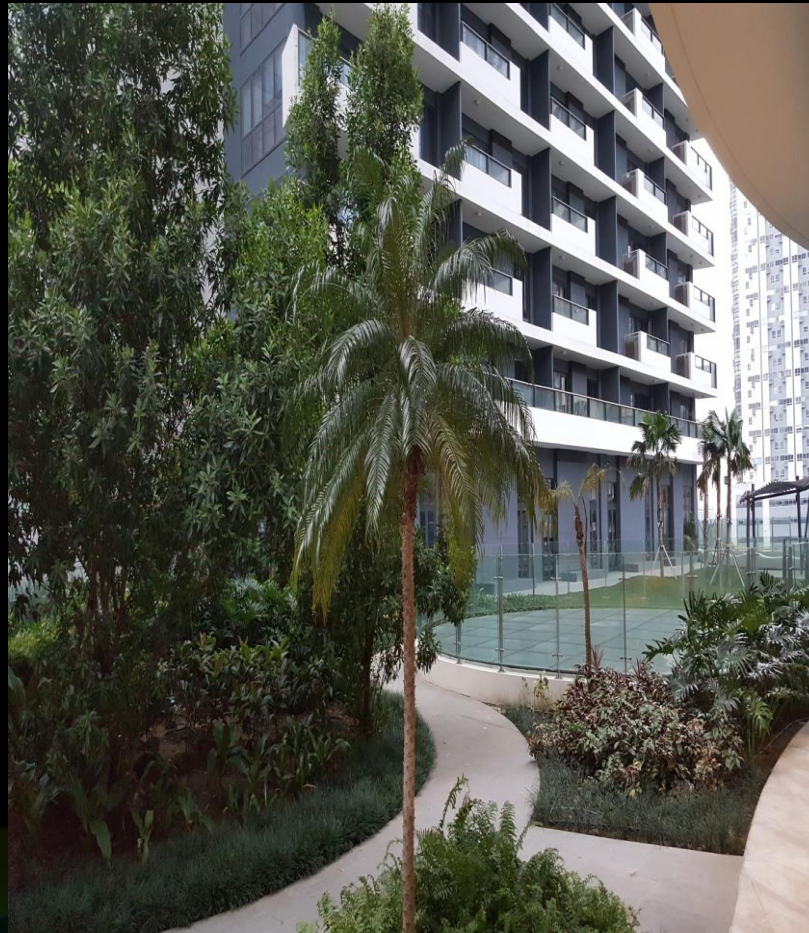


GREEN BUILDING FEATURES- WATER EFFICIENCY



NATIVE AND ADAPTIVE PLANTS

USE OF NON POTABLE WATER



USE OF DRIP IRRIGATION

GREEN BUILDING FEATURES- ENERGY EFFICIENCY



GREEN BUILDING FEATURES- MATERIAL RESOURCE



GREEN BUILDING FEATURES- INDOOR AIR QUALITY



SPREADING THE GREEN BLDG AWARENESS



REASONS FOR THE DEMAND SIDE FOR GREENER BLDGS

20

- 1. DEVELOPERS REALIZED ITS FULL BENEFITS
- 2. THIS IS THE WAY TO GO
- 3. INCREASED PUBLIC AWARENESS
- 4. TANGIBLE AND MEASURABLE BENEFITS
- 5. GREEN BLDGS SECURE HIGHER DEMAND FROM MULTINATIONAL TENANTS
- 6. MORE GREEN SUPPLIERS NOW ABOUND
- 7. STAFF AND TEAM ARE REASSURED OF A HIGH QUALITY WORKS



BERDE CERTIFIED BUILDINGS



Laguna Lake Development Authority Building

Laguna Lake Development Authority
Diliman, Quezon City



Net Lima

The Net Group Bonifacio Global City, Taguig
City



BERDE CERTIFIED BUILDINGS- OPERATIONS



Net One Center
Net Quad



Net Square
Net Plaza



Net Cube

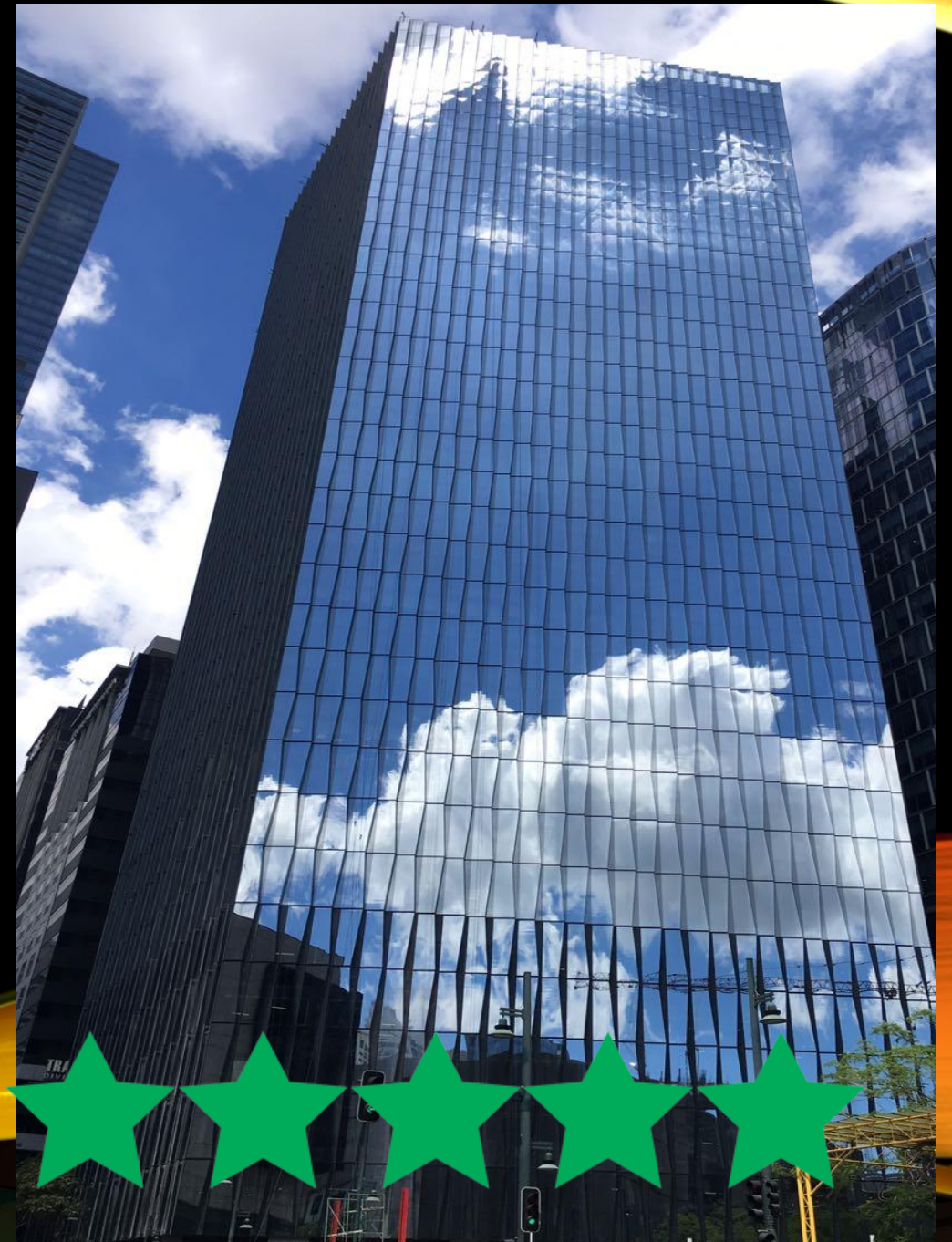


The Net Group
Bonifacio Global City, Taguig City



BERDE 5-Stars Certified
BERDE GBRS – Operations – v1.0.0

BERDE CERTIFIED BUILDINGS-



BERDE CERTIFIED BUILDINGS

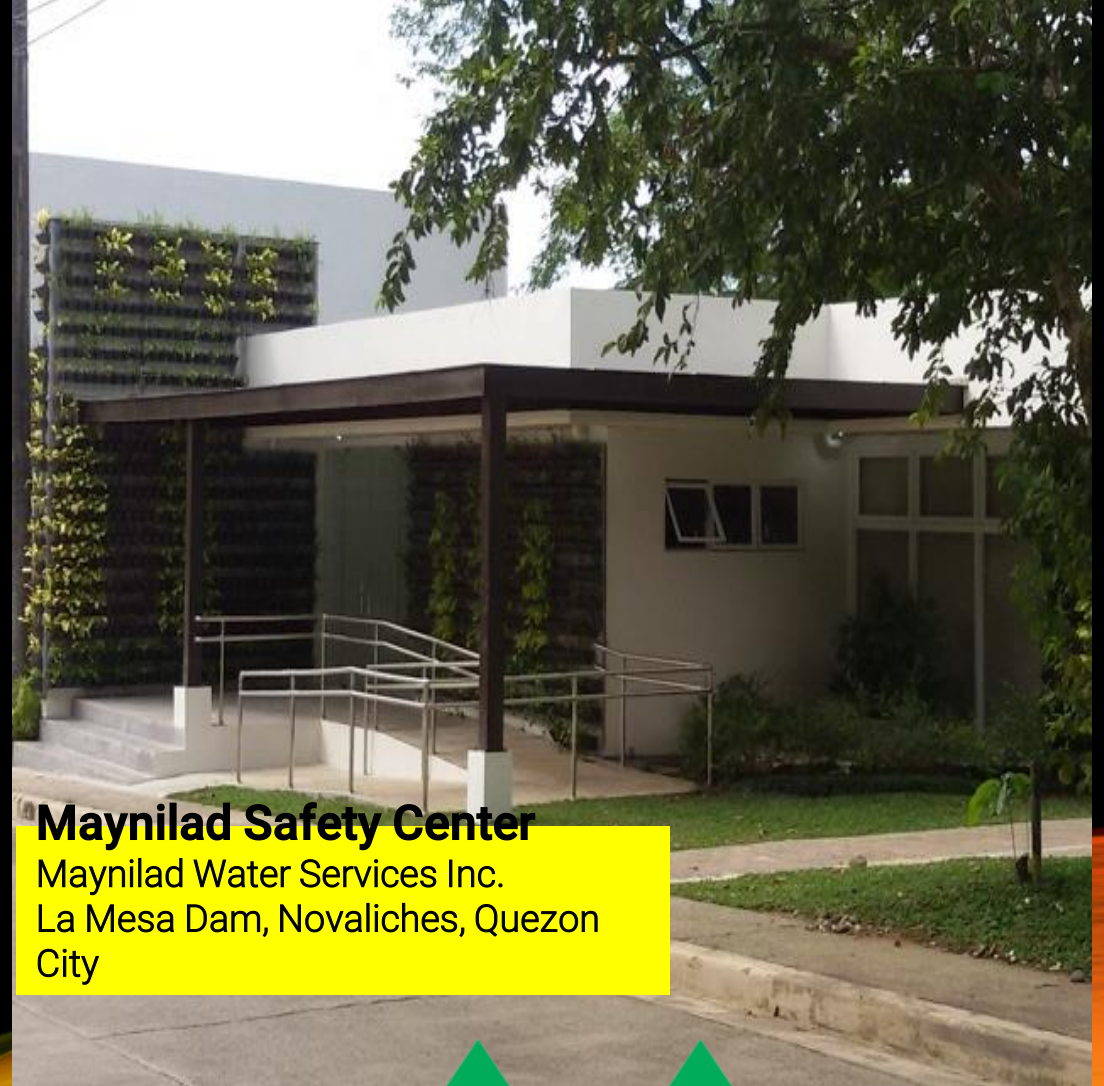


BERDE CERTIFIED BUILDINGS



Net Park

The Net Group
Bonifacio Global City,
Taguig City



Maynilad Safety Center

Maynilad Water Services Inc.
La Mesa Dam, Novaliches, Quezon
City



PHILIPPINE GREEN BUILDING COUNCIL



PHILGBC facilitates the sharing of knowledge on green buildings in the real estate and building industry to ensure a sustainable development.

An ESTABLISHED MEMBER of the World Green Building Council



300 corporate MEMBERS and alliance partners, both from the national, local government AND INTERNATIONAL ORGANIZATIONS

International partners come from organizations such as UN, ILO, World Bank, ADB, USAID, Austrade and the EU

5 MAIN OBJECTIVES OF PHIL GREEN BLDG. COUNCIL

1. Educate and establish knowledge-sharing platforms such as conference and seminars to provide technical exchange among public and private building sector
2. Provide business networking opportunities to facilitate learning and green trade in the property sector
3. Shape and influence the local government policy agenda on smart and green development by providing support and insight on tax and incentives strategic planning, land use and zoning
4. Support local government in implementing BERDE as a technical tool to facilitate greening of communities through guidance, monitoring and verification.
5. Provide certification services to the property sector to ensure integrity in green and smart building activities. This should help inspire confidence and build trust in the green market

BERDE RATING TOOL



1,878,735 SM
TOTAL GROSS FLOOR AREA FOR
ALL REGISTERED PROJECTS

500 BERDE CERTIFIED
PROFESSIONALS

47 BERDE
REGISTERED
PROJECTS

59 CERTIFIED
BERDE
ASSESSORS



PHIL GREEN BUILDING COUNCIL- MEMBERSHIP MEETING



PHIL GREEN BLDG COUNCIL -PRODUCT SPOTLIGHT



PHILGBC AND BERDE



SEVERAL COMMITTEE CHAIRS ON VOLUNTEERED TIME, SIT TO DISCUSS ISSUES AND SPECIFIC AGENDA WITHIN THE COUNCIL FROM THE BERDE COMMITTEE, MEMBERSHIP, FINANCE, NATIONAL CONVENTION, SPECIAL PROJECTS, INTERNAL POLICY, LEGISLATIVE, YOUTH, PUBLIC RELATIONS, WAYS AND MEANS AND AWARDS

GREEN BUILDING POLICIES BY LOCAL GOVERNMENTS

(1/4)

Local governments are authorized to develop policies to address the local priorities within their jurisdiction.

LGUs with green building policies:

- **Cebu Province**
- **Quezon City**
- **Mandaluyong City**
- **Pasig City**
- **Mandaue City**

GREEN BUILDING POLICIES BY LOCAL GOVERNMENTS

(4/4)

City of Mandaue

- The City of Mandaue is implementing their *Green Building Ordinance*. The policy promotes green building, whether public or private, in design, construction, renovation, and operations of buildings, and provides incentives for green buildings.
 - All public buildings must to be designed, built, and operated as green buildings.
 - Private projects in Planned Unit Development (PUD) areas in the city are required to have green building certification under the *BERDE*.
 - Heritage or cultural buildings and post-disaster shelters and structures are exempted from the ordinance.
- The city adopted *BERDE* as the tool to verify the performance of projects.



City of Mandaue. (2015, September 23). *Ordinance No. 13-2015-1047 – The Green Building Ordinance of Mandaue City*.

City of Mandaue. (2016, May 2). *Executive Order No. 17 Series of 2016 – An order adopting the implementing rules and regulations for Ordinance No. 13-2015-1047 also known as the Green Building Code of Mandaue*.

City of Mandaue. (2015, December 22). *Ordinance No. 02-2015-1973 – New Comprehensive Investment Code of Mandaue City*.



Workshop on the Drafting with IRR with Internal Stakeholders



Investment Package Writeshop with Internal Stakeholders



Workshop on the Drafting of the IRR with External Stakeholders



Green Building Training with Internal Stakeholders



Meeting with City Mayor Jonas Cortes



Green Building Training with External Stakeholders





Development of the Green Building Program for the City of Mandaue. Oct 2014 to September 2015.

GREEN BUILDING POLICIES BY LOCAL GOVERNMENTS

(2/4)

Province of Cebu

- The Cebu Provincial Government has committed to the design, construction and operations of green and disaster-resilient buildings.
- The program is voluntary for private buildings, and buildings by cities and municipalities. On the other hand, the program is mandatory for all new buildings, and existing buildings under renovation, retrofitting or operations owned and constructed by or on behalf of the provincial government.
- The policy recognized *BERDE* as the tool to measure the performance of buildings above and beyond existing local environmental regulations and standards.



Province of Cebu. (2014, April 7). *Provincial Ordinance No. 2014-02 – Implementing the “Province of Cebu Green and Disaster-Resilient Building Program.”* Retrieved from <http://www.cebuprov.gov.ph/wp-content/uploads/2015/02/%E2%80%9CPROVINCE-OF-CEBU-GREEN-AND-DISASTER-RESILIENT-BUILDING-PROGRAM%E2%80%9D.pdf>

GREEN BUILDING POLICIES BY LOCAL GOVERNMENTS

(3/4)

City of Pasig

- The City of Pasig promotes green building through its **Green Building Ordinance**. The city promotes green building for existing and new buildings in the city.
 - Mandatory for all buildings above 10,000 sq.m. floor area in planned unit development (PUD) areas.
 - Voluntary for public and private buildings below 10,000 sq.m.
 - Heritage or cultural buildings and post-disaster shelters and structures are exempted from the ordinance.
- The city adopted **BERDE** as the tool to verify the performance of projects.



City of Pasig. (2016).
**Ordinance No. 2016-06 – An
Ordinance Establishing the
Green Building Ordinance of
Pasig City.**

ISSUES AND CHALLENGES

1. Current trends in urban development echoes urban sprawl in developed cities in the Phils
2. Cities are experiencing environmental issues brought about by urban growth and increase in density
3. Cities are developing ad hoc
4. Cities experience difficulties in implementing environmental laws, regulations and ordinances
5. There is a need to harmonize provincial, city and municipal environmental and building laws, ordinances and regulations
6. There is a need to identify solutions that are environmentally beneficial and have a wider financial and social benefits

CHALLENGES TO SMARTER DEVELOPMENTS

Traffic congestion

Sprawling unregulated developments

Willful lack of substantive measures to tackle energy consumptions and resource management

Grow cities economically

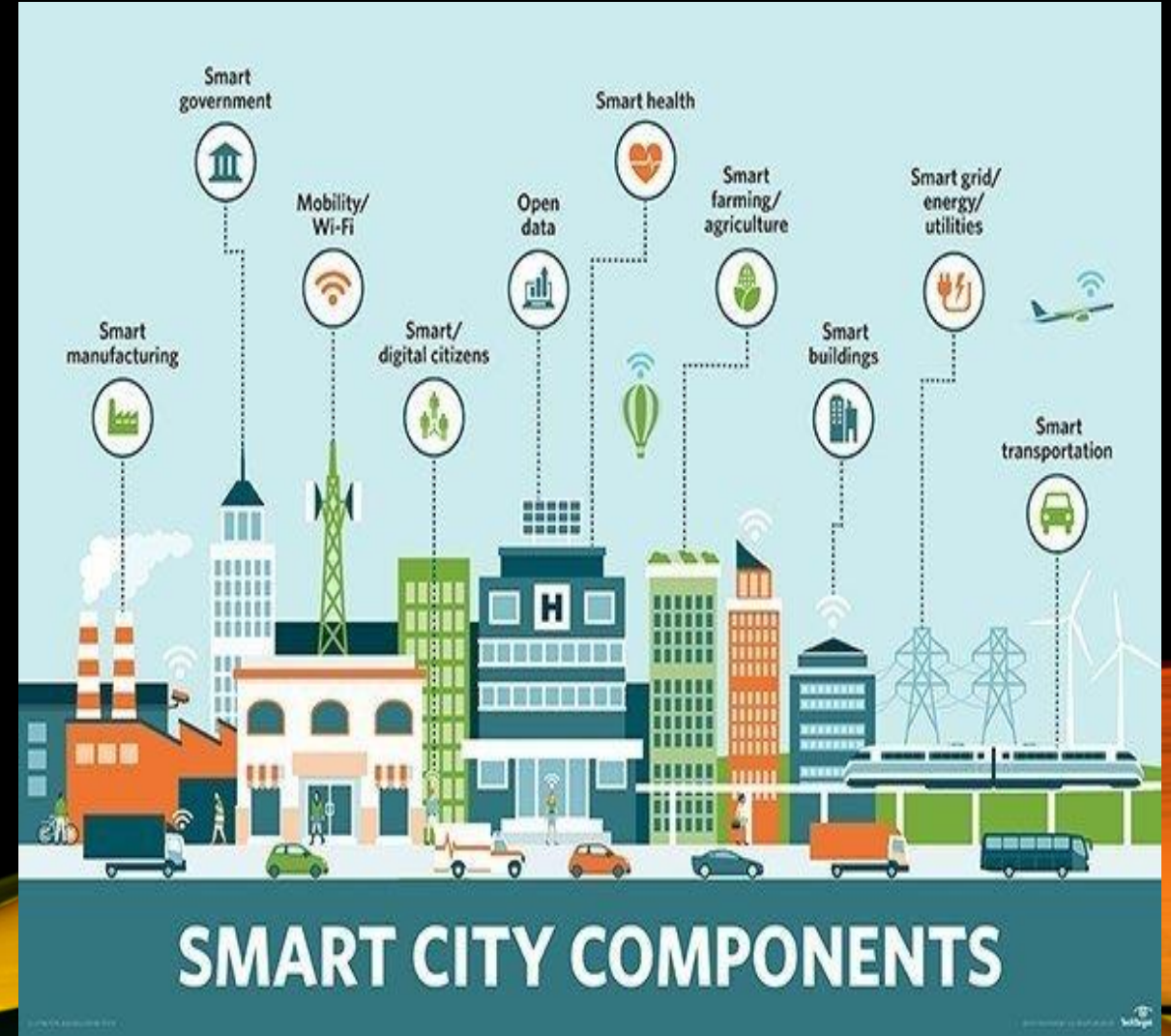
Preserve natural resources

Offer livable green environments

MORE COLLABORATION WITH THE LOCAL AND NATIONAL GOVT



GREEN BUILDINGS TO SMART CITIES



WHERE ARE WE IN THE SMART CITY DEVELOPMENT?

FROM AN AUSTRALIA STUDY RELEASED IN OCT 2018

- 1. PHILIP GOVERNMENT HAS DEFINED SMART CITY BASED ON SIX KEY PILLARS:
GOVERNANCE, LIVING, MOBILITY, PEOPLE, ECONOMY AND ENVIRONMENT**
- 2. THESE KEY PILLARS AIM TO ADDRESS THE THREE MAIN URBAN CHALLENGES:
CONGESTION, POLLUTION AND CLIMATE CHANGE**

DEVELOPER-DRIVEN SMART CITY PROJECTS

MOST OF THE **SMART CITY DEVELOPMENTS** IN THE PHILIPPINES ARE DRIVEN BY PRIVATE PROPERTY DEVELOPERS IN BOTH BROWN AND GREENFIELD PROJECTS:

NEW CLARK CITY-BCDA

CLARK GLOBAL CITY-

METRO CLARK

CITY OF PEARL

FROM THE PRIVATE REAL ESTATE DEVELOPERS:

AYALA LAND- ARCA SOUTH

MEGAWORLD-DAVAO PARK DISTRICT

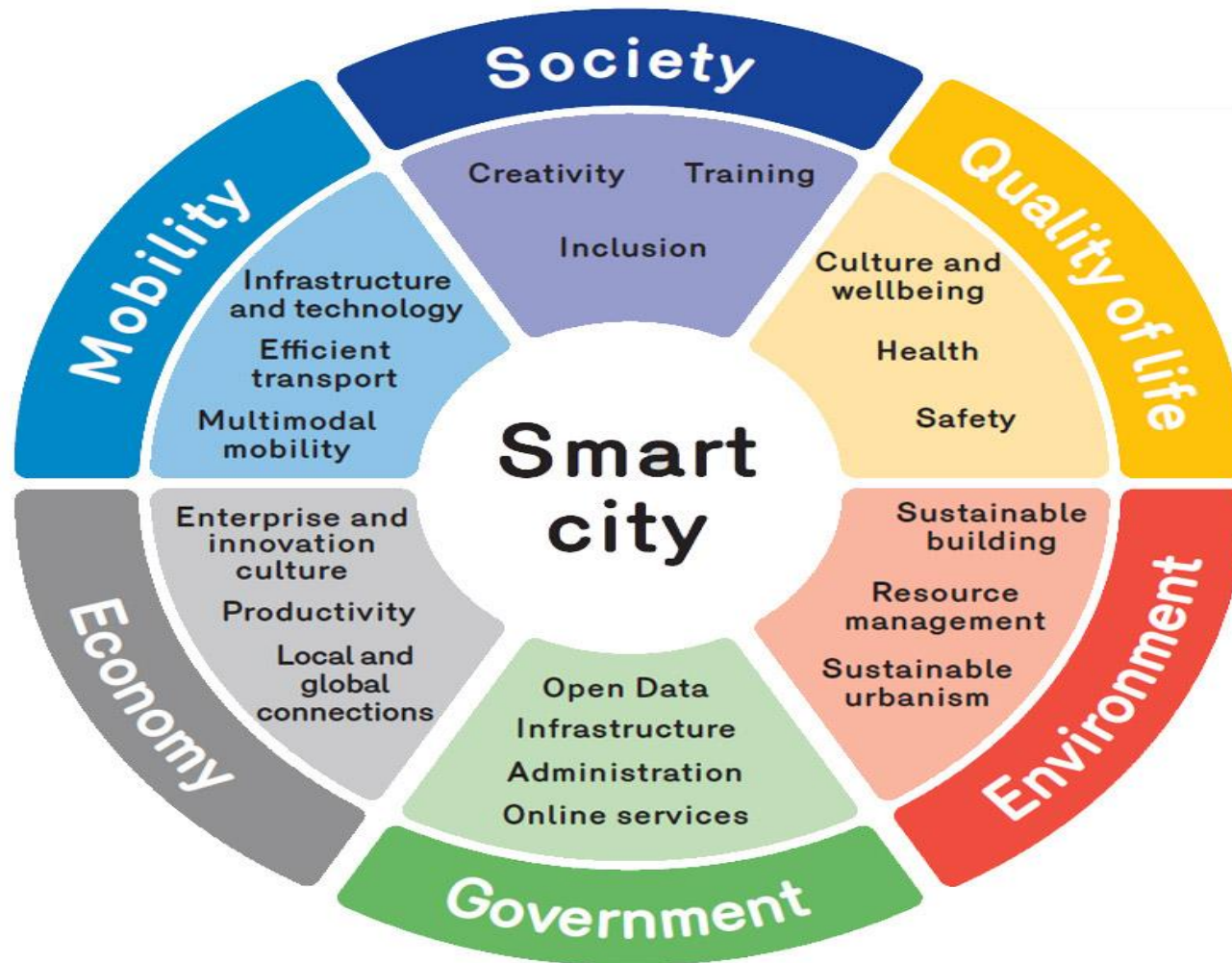
FILINVEST CITY- FILINVEST DEV CORP

ARTHALAND CORP- SEVINA PARK, LAGUNA

SMART CITIES



SMART CITY FROM A SUSTAINABLE DEVELOPMENT



A GREEN BUILDING IS A SUSTAINABLE DEVELOPMENT THAT CONSERVES ENERGY, WATER AND MATERIAL RESOURCE, ALLOWING THE TENANTS OR DWELLERS TO HAVE EFFICIENT CONNECTIVITY TO ACCESS BASIC NECESSITIES MAKING THEM PRODUCTIVE AT WORK OR LIVING CONVENIENTLY IN THEIR HOMES, GIVING THEM A SENSE OF SECURITY, WELFARE, GOOD HEALTH AND WELL BEING, ALLOWING THEM TO HAVE A QUALITY OF LIFE THAT CREATES A SOCIETY THAT CONTRIBUTES TO THE OVERALL ECONOMIC IMPROVEMENT OF THE CITY, WHILE PRESERVING THE ENVIRONMENT

WE ALL HAVE A ROLE TO PLAY..



5



SIMPLE COMMITMENTS



THANK YOU !

