

CENTRALPATTANA

THE BETTER FUTURE IS NOW

Uthaiwan Anuchitanukul

Executive Vice President

Excellence and Sustainable Development Division

42 years of success and leadership we have been pioneering



38

Shopping
centers



10

Office
buildings



2

Hotels



22

Residential
projects



17

Community
malls

Because there is no planet B

OUR CORPORATE-LEVEL ESG COMMITMENTS TOWARD 2050

50% GHG Reduction

Mainly from Energy reduction



50% RENEWABLE RESOURCES

Sustainovation technology



100% GREEN BLDG.

Portfolio certification



ZERO WASTE

Divert waste from landfill



1 MILLION TREES

Planting & Protect biodiversity



**NET ZERO
CARBON**
by 2050

BETTER PLANET

BETTER PEOPLE

**EQUALITY
& WEALTH**
by 2030



HUMAN RIGHTS

Beyond legal req. & Zero Accident



PUBLIC SPACE

2% of Total Visitation



WEALTH CREATION

Income back to the community
equals to 10% of Total Revenue



LOCAL ESSENCE

50% of Procurement Value

**CENTRAL
PATTANA**

The journey to
**NET
ZERO**

Member of
**Dow Jones
Sustainability Indices**
Powered by the S&P Global CSA

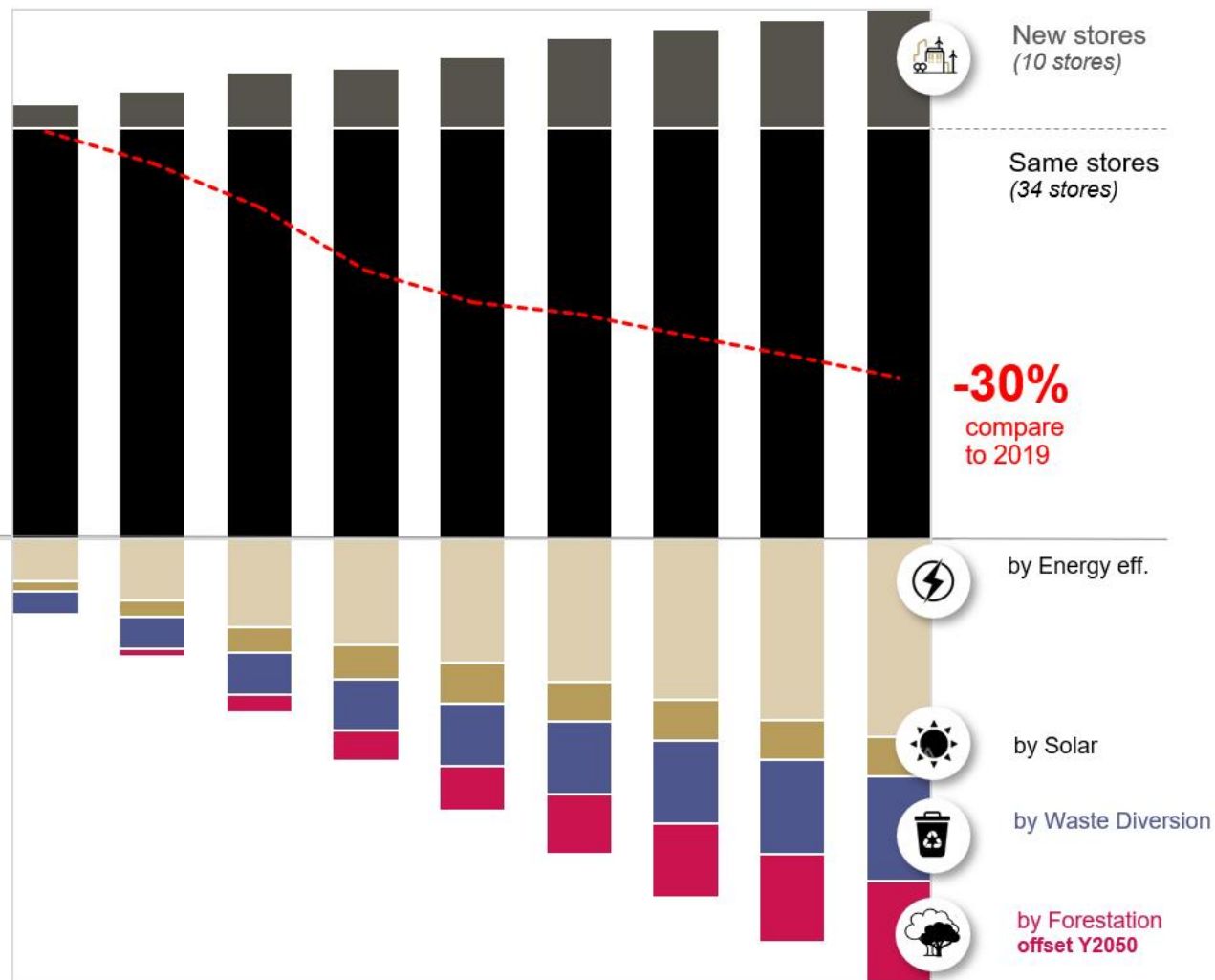
 **GRESB**
REAL ESTATE

 **LEED**
TGBI

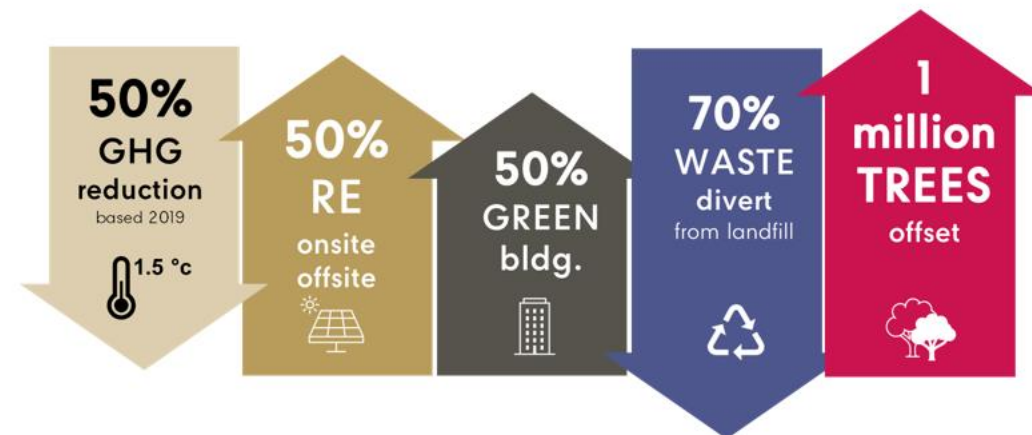
Global verification, certification and assessment

YEAR 2022 2023 2024 2025 2026 2027 2028 2029 2030

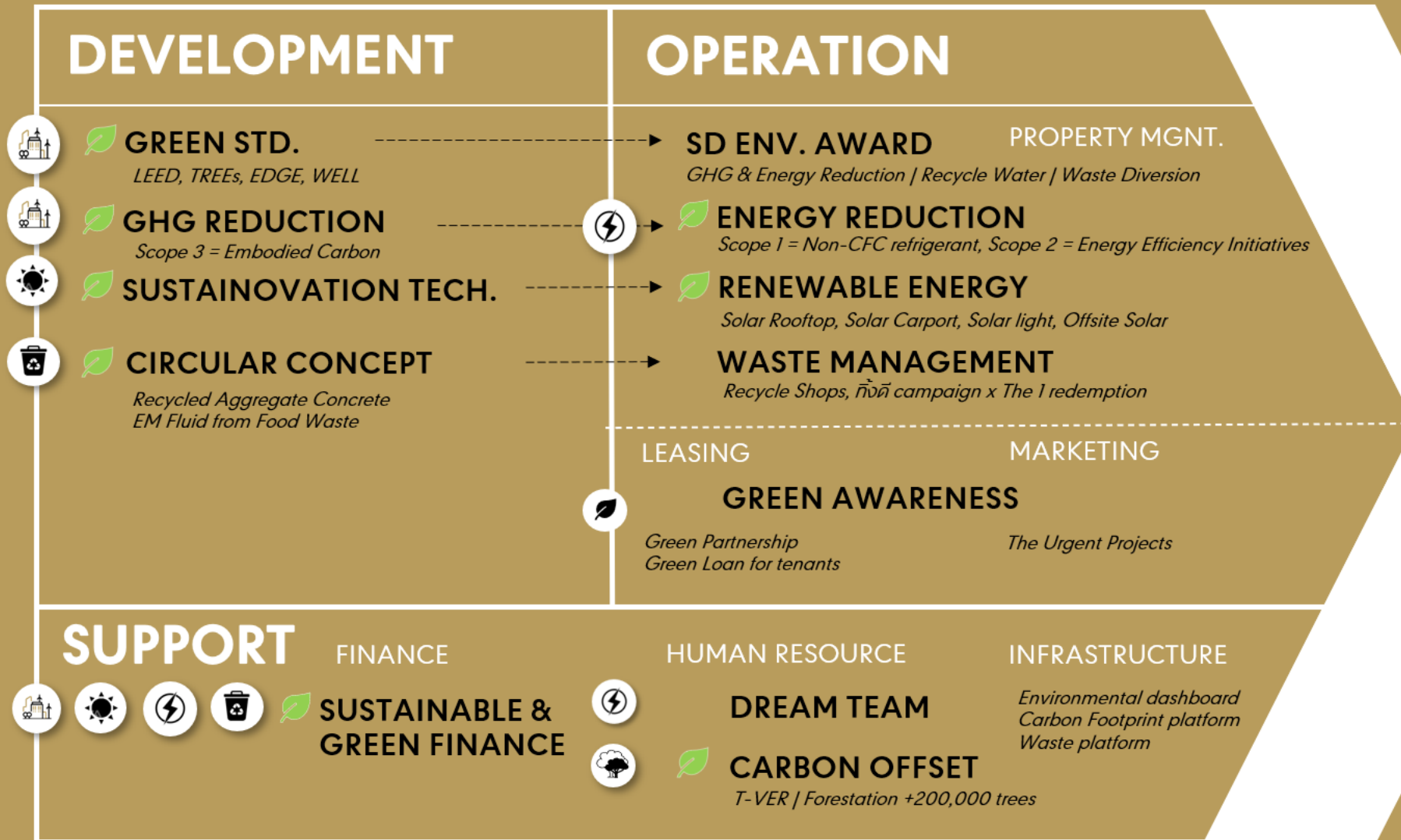
Unit: Ton CO₂-e



- Commitment to **NET ZERO in 2050** and interim plan by 2030
- Reduce Energy consumption and GHG down 30%– mainly electricity by 2030 and 50% by 2050
- Increase Renewable energy 20% of total consumption by 2030 and 50% by 2050
- Adopt Green building standard 20% of portfolio by 2030 (all new asset build after 2022) and 50% by 2050
- Reduce waste to landfill 50% by 2030 and 100% by 2050
- Plant 1 million trees by 2030



Integrate ESG in value chain and SET TARGET as corporate commitment



The use of proceeds of Green bond

Manage and capitalize on CLIMATE RISKS and opportunities in line with business as usual

CENTRAL
PATTANA

The journey to
**NET
ZERO**
REDUCE • REUSE • RECYCLE

Green Bond

เพื่ออนุรักษ์สิ่งแวดล้อม
รายแรกของวงการ
อสังหาริมทรัพย์ และ
ค้าปลีกไทย

เซ็นทรัลพัฒนา พับยูเอบี และ ADB
เปิดตัวหุ้นกู้เพื่ออนุรักษ์สิ่งแวดล้อม
ต้นฉบับขึ้นเคสอิมิกซ์ยูเอสและอาคารสีเขียว
ในไทยและต่างประเทศ

อาคารสีเขียว
(Green buildings)

การจัดการน้ำ
และน้ำเสีย
อย่างยั่งยืน
(Sustainable water
& wastewater management)

การควบคุม
และป้องกันมลภาวะ
(Pollution prevention & control)

ประสิทธิภาพ
การใช้พลังงาน
(Energy efficiency)

การขนส่ง
แบบสะอาด
(Clean transportation)

การจัดการ
ทรัพยากรธรรมชาติ
ที่มีชีวิตและการใช้ที่ดิน
อย่างยั่งยืน
(Environmentally sustainable
management of living natural
resources and land use)

พลังงาน
หมุนเวียน
(Renewable Energy)

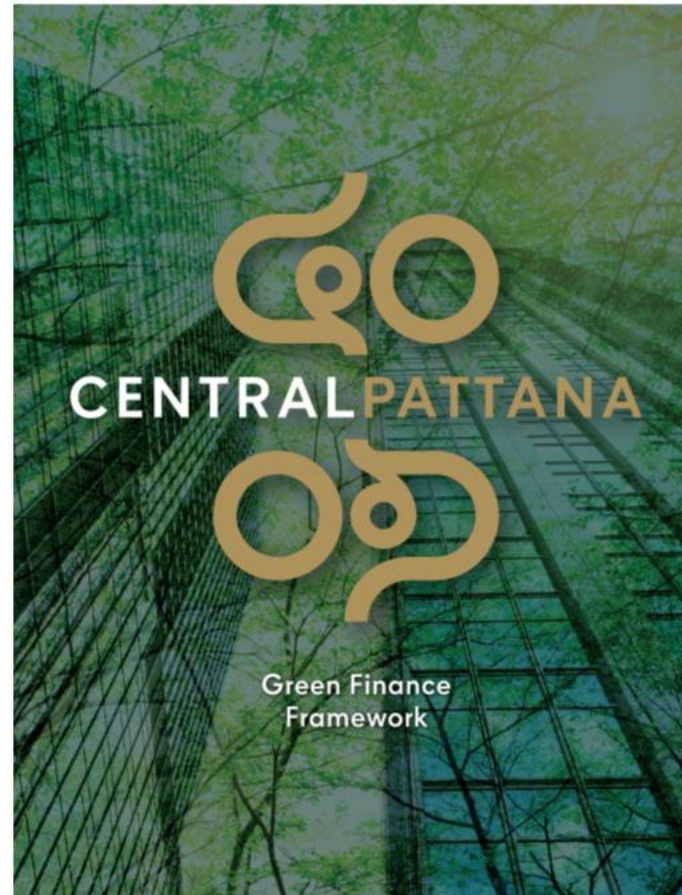
เศรษฐกิจ
แบบหมุนเวียน
(Circular Economy)

เป็นไปตามเกณฑ์การประเมินผลกระทบสิ่งแวดล้อมที่เข้มงวด (Green Finance Framework)
เป็นไปตามมาตรฐาน ASEAN Green Bond Standards (ASEAN GBS)

เซ็นทรัลพัฒนา ตั้งเป้าเป็นองค์กร
Mixed-use Developer รายแรกของไทย
ด้วยแผนระยะยาว เป็น
Net Zero Company
ให้ได้ ภายในปี 2050

- ลดการปล่อยก๊าซเรือนกระจกสุทธิเป็นศูนย์ และ แผลงจากพลังงานทดแทน
ในอาคารพาณิชย์ 100% ภายในปี 2050 และ อาคารสำนักงาน และ โรงแรม 50% ต่อ
- ลดการปล่อยมลพิษ PM2.5 50%
- ลดการใช้ GHG และสารทำความเย็นในอาคาร
- ลดการปล่อยมลพิษจากอาคารสีเขียว Clean Energy 100% 50%
- ส่งเสริมการปลูกต้นไม้ในพื้นที่สีเขียวของอาคารและสวนสาธารณะ
ให้ได้ 1 ล้านต้นขึ้นไป

The Journey to
**NET
ZERO**



1st ever Green Bond
in Real Estate Sector
in Thailand

| GBF Eligible Categories | Colors and Sample Projects | UN SDGs Contribution |
|-------------------------|--|--|
| Green buildings | Every angle new asset class including shopping center, office and hotel that achieve TREES - That's Rating of Energy and Environmental Sustainability, LEED - Leadership in Energy and Environmental Design, EDGE certificate, WELL Building Standard and/or other relevant green building standard. The green buildings will achieve at least Gold or Platinum certification or equivalent for TREES and LEED standards. Property upgrade projects, including on-site renewable energy and energy efficiency investments, that achieve a minimum carbon emissions reduction (agGCO2em) of 30% for each property relative to a business-as-usual baseline in 2019. | <div>7</div> <div>11</div> <div>13</div> |
| Energy efficiency | Energy distribution, measures, management and advanced automation technology to optimize energy performance of every asset class. LED lighting in all shops and back of house areas, including smart metering to improve energy efficiency of every asset class. These investments include: <ul style="list-style-type: none"> Operational savings from the commissioning of advanced automation technology to integrate the Building Management System data, including Dashboard development Upgrade HVAC (heating, ventilation, and air-conditioning) systems Use of high efficiency chiller with low GWP systems Installation of AC Control Installation of variable Speed Drive (VSD) Installation of high efficiency motor pumps Cooling tower system upgrades and fit replacement Installation of temperature & humidity sensors Improving maintenance and operation of shopping center HVAC systems to optimize efficiency and better respond to their load fluctuations | <div>7</div> <div>11</div> <div>13</div> |
| Renewable energy | Installation of renewable energy facilities such as solar PV generation, battery storage and control systems, and smart grids. The solar PV investment may not include fossil fuel power generation which will produce more than 15% of electricity by kWh. Purchase of renewable energy from renewable energy sources installed on CPN's and/or Central Group's affiliated premises for use in shopping centers. Transmission and support infrastructure for renewable energy systems for Solar rooftop, solar carports and solar lighting. <ul style="list-style-type: none"> Large-scale rooftop PV Solar roll-out | <div>7</div> |

| Sample Projects | UN SDGs Contribution |
|--|----------------------------|
| air-recycle projects, Sustainable urban systems within mixed-use developments, within shopping center developments, this include: <ul style="list-style-type: none"> recycling Station Reactor, where carbon foot-print occurs in the same bank 11 reactions, in place of primary to | <div>6</div> |
| reduction, recycling, transforming and creating Net programs for instance the Air Aggregate (PAC) from crushed sludge. The reduced transportation of sludge also creating a positive impact on air quality and GHG reduction. | <div>12</div> <div>3</div> |
| air pollution prevention and control standard at minimum MEV 7 | <div>13</div> |
| use of natural landscapes including conservation, wetland restoration, agriculture, designed by UNESCO, etc., wildlife, sea life and nature | <div>15</div> |
| use the study to achieving No Net Loss has been required to achieve Net | |

| | Positive impact | UN SDGs Contribution |
|----------------------|--|----------------------|
| Clean transportation | Charging stations and supporting infrastructure for electric vehicles, Transportation hub, bus stop and shuttle bus infrastructure | <div>11</div> |
| Circular Economy | Circular economy adapted products, production technologies and processes such as the design and introduction of reusable, recyclable and refurbished materials, components and products; circular tools and services. All initiatives under "Journey to Zero" programs including pollution prevention and control (including reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, and waste recycling) | <div>12</div> |



Green Bond Development Timeline

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The journey to
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ZERO**
REDUCE • REUSE • RECYCLE

Studied and formed
the Team
(Finance and SD)

1 month

Project identification

Indicative list of projects and assets for inclusion within any CPN GFT identified by team from CPN.

CPN GFT Review

CPN Sustainable Finance Working Group (SFWG) reviews indicative eligible project and assets portfolio for compliance with Framework.

ASEAN GBS Approval

Review and approval of proposed eligible projects by ASEAN GBS/ or GBP/ GLP framework. Also consult with CPN-CGSD Committee on material decisions.

Add to register

Project/s added to Sustainable Finance Projects register.

4 months

1 month

Monitoring & Reporting

CPN GFT monitoring and reporting implemented.
Annual publication of CPN Sustainable Financing Report including external review by Assurance provider available on website.

Annual review

Annual Compliance/ Assurance Review by external reviewer for compliance with the Framework.

Pre-issuance assurance

Verification Agent completes pre-issuance verification audit (for GBS certified green bond) and/or completes external review of Framework and produces Second Party Opinion.

1 month

CENTRAL AYUTTHAYA

IMAGINING BETTER FUTURES FOR ALL

มุ่งสร้างสรรค์สิ่งที่ดี เพื่ออนาคตที่ยั่งยืนสำหรับทุกคน