Chapter

Sustainable Development

Sustainable **Development**

Member of

Dow Jones Sustainability Indices

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Sustainability Yearbook

Member 2021

S&P Global



Central Pattana operates six business groups including: 1) Shopping Centers and related businesses, which account for over 81% of the Company's total revenue, 2) Office Buildings, 3) Hotels, 4) Residential Projects, 5) Food Centers and 6) Investment in Property Fund and REIT (Real Estate Investment Trust). At Central Pattana, we are committed to good governance and place a strong emphasis on transparency, accountability and stakeholder engagement in all three dimensions of sustainable development including economic, social and environmental. Aligning our business with the UN Sustainable Development Goals (SDGs), we aim to create change across our value chain - from development and construction to management of shopping centers and properties we own. Find out more about our approach to sustainability here: www.centralpattana.co.th/sustainability/ sustainability-strategy/at-a-glance.

Central Pattana has been listed as a member of the Dow Jones Sustainability Indices-World Index (DJSI World) in Real Estate sector for the third consecutive year; the Dow Jones Sustainability-Emerging Markets Index (DJSI Emerging Markets) for the seventh consecutive year; and the SAM Sustainability Yearbook for the fourth consecutive year.



Engagement and Stewardship of Key Stakeholders

Central Pattana classifies our stakeholders into nine key stakeholder groups and each group is supported by a dedicated stakeholder engagement team who work collaboratively with the stakeholders to address their needs and expectations in an effective and timely manner as well as make sure that their views and insights feed to our company's decision-making process. Learn more about how we engage with our stakeholders here: www.centralpattana.co.th/en/sustainability/sustainability-strategy/framework/stakeholders-engagement. Below are the additional stakeholder communication and engagement activities undertaken by Central Pattana in 2020.

Stakeholders	Engagement by Type and Frequency	Additional Actions during the COVID-19 Outbreak	Further Details
Customers	 Engaged external consultants to conduct a customer behavior survey for new developments (one project) Suspended online customer satisfaction surveys for 2020 	 Added communication and online shopping feautres to Central Eats and Chat&Shop on Line Official Account Conducted a pre- and post- service satisfaction survey of COVID measures 	2. Transforming Shopping Centers into the Center of Life
Tenants	 Arranged a tenant meeting during the last quarter of 2020 Suspended online tenant satisfaction surveys for 2020 	 Communicated with tenants via CPN Serve Suspended some entrepreneurship development programs Suspended tenant relationship activities 	3.1 Tenant Management and Development
Employees	Conducted the CG Individual Assessment with employees Conducted 360-degree performance reviews with supervisory level employees Conducted the annual employee engagement survey or CG Voice Conducted Town Hall Day	 Held meetings through video conferencing Provided capacity building and leadership training via online platforms Added communication features to Workplace and Workchat applications Conducted two employee engagement surveys (Pulse Surveys) Suspended off-site employee engagement activities Conducted "HC We Care" employee engagement activities by employee group with appropriate channel 	3.2 Employee Management and Engagement

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Stakeholders	Engagement by Type and Frequency	Additional Actions during the COVID-19 Outbreak	Further Details
Suppliers	Held supplier meetings on circular business model development with each supplier taking turns hosting	Suspended the biannual supplier meeting	3.3 Supply Chain Management
Communities	Organized 84 volunteering activities including development of green spaces in select provinces	Suspended site visit in shopping centers	3.4 Corporate Responsibility and Community Development
Public Sector, Education Sector, Independent Organizations and other Organizations	Participated in ordinary meetings with state agencies	Participated in meetings with state agencies to develop prevention and remediation measures	Chapter 23 Corporate Governance
Shareholders	Conducted a shareholder survey on key sustainability issues	Limited the number of shareholders participate in Annual General meeting 2020	Risk Management and Diversification and New Business Ecosystem Development and Chapter 23 Corporate Governance
Competitors	Conducted a meeting with competitors to ensure alignment with government policy and legislation through video conferencing	 Submitted four open letters to Prime Minister, state agencies and relevant organizations Represented the Thai Shopping Centers Association (TSCA) at two Visionary Meetings with Prime Minister 	Chapter 23 Corporate Governance
Creditors	Conducted Opportunity Day (quarterly)	Held meetings through video conferencing	Chapter 23 Corporate Governance

Materiality Assessment

In 2020, Central Pattana revisited our vision to define the company's purpose: "Imagining Better Futures for All" and developed a new five-year sustainable business strategy, which now includes a more robust materiality assessment process. Below are the changes we have made to improve our materiality assessment process:

Materiality Assessment

Identification and Prioritization

Validation and Reporting

We conducted our materiality assessment with inputs from:

- 2014-2019 Sustainable Business Strategy "Growth with Purpose"
- · Analysis of external factors
- Dow Jones Sustainability Indices: DJSI
- Feedback reports on sustainable development from research houses
- UN Sustainable Development Goals: UN SDGs
- Emerging trends from the COVID-19 outbreak

Together with trends and material issues, we evaluated emerging risks and the views of stakeholders gathered from the Annual Management Meeting to identify priority issues, which were ranked based on leadership expectations and corporate purpose (4 beliefs) gathered from Brand Purpose Workshop and clustered into challenges/opportunities and key sustainability issues.

The Corporate Governance and Sustainable Development Committee approved key sustainability issues and plans, continued to monitor the process and approved the disclosure by applying relevant international standards. Our materiality process was externally assured by independent organizations as shown on page 238-239.

Strategies for Sustainable Development

In 2020, Central Pattana used the outcomes of the materiality process to develop our five-year Sustainable Development Strategies 2021-2025 as well as aligned long-term social and environmental targets with the UN SDGs. Sustainability performance indicators are set at corporate, department and division levels and progress is tracked through ongoing performance monitoring and Corporate Governance and Sustainable Development Committee meetings as well as through conducting the Impact Valuation studies.



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Mega Trends	Challenges / Opportunities	Key Sustainability Issues	Approach and Reporting
 Digital disruption Consumer lifestyle changes Shift in demographics and the boom of Changing consumer behavio Hyper Connected Customers are less patient than before and want convenience and nothing less than the best. 	Enterprise risk management	Risk Management and Diversification and New Business Ecosystem page 101-102 GRI 103 Management approach GRI 102-15 Key impacts, risks and opportunities	
silver age Globalization and urbanization Slow and volatile economic Intensified competition	Experience-seeking and more environmentally conscious, these consumers put great emphasis on well-being, health and hygiene and privacy and data protection (Personal	ResilienceTechnology and innovationCustomer experience	2. Transforming Shopping Centers into the Center of Life page 103-113 GRI 103 Management approach GRI 102-43 Approach to stakeholder engagement GRI 203-1 Infrastructure and service supported
	 Tenant engagement and development Employee development and engagement Supply chain management and development Community and social responsibility 	3. Stakeholder engagement 3.1 Tenant Management and Development page 114-119 GRI 103 Management approach GRI 414 Supplier social assessment 3.2 Employee Management and Engagement page 119-131 GRI 103 Management approach GRI 401 Employment GRI 404 Training and education 3.3 Supply Chain Management page 132-135 GRI 103 Management approach GRI 204 Procurement practices GRI 414 Supplier social assessment 3.4 Corporate Responsibility and Community Development page 136-142	
	Maintaining business continuity in the face of social and environmental threats From climate change and environmental problems such as droughts, floods, storms, dust, smoke and PM2.5 dust particles to civic movements and political unrest, these external factors affect not only customers' lives but the entire business sector as well as how we manage our resources.	Resource and environmental management Corporate governance and culture	GRI 103 Management approach GRI 413 Local communities 4. Resource and Environmental Management Excellence page 143-159 GRI 103 Management approach GRI 302-306 Energy, water, biodiversity emissions and waste Chapter 23 Corporate Governance page 188-199 GRI 103 Management approach GRI 102 Governance ethic and integrity GRI 205 Anti-corruption

Our Sustainability Targets

	, 3			
	SDGs	Targets for 2021-2025	Targets for 2020	
Economi	Economic, Social and Community Impact			
8 BECONDING GROWTH	8.3.1 Support productive activities, job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises	 Maintain an average annual growth rate of 10%. Allocate 10% of total space for community use. 	 85% customer satisfaction 80% tenant satisfaction 21 innovation destinations 75% employee engagement score 	
10 REDUCED INEQUALITIES	Promote and support growth in household spending of the bottom 40 per cent of the population at a rate higher than the national average	 10% of suppliers are small and local businesses. Achieve 80% employee engagement score. 	10,000 employee volunteer hours	
11 SUSTAINABLE CITIES AND COMMUNITIES	11.7.1 Provide access to safe, inclusive and accessible, green and public spaces			
Environm	nental Impact			
6 CLEANWAITER AND SANITATION 7 AFFORDABLE AND CLEAN WRITER 7 AFFORDABLE AND CLEAN WRITER AND PRODUCTION AND PRODUCTION	6.a.1 Support to developing water- and sanitation-related activities and programs, including water harvesting, water efficiency, wastewater treatment, recycling and reuse technologies 7.2.1 & 7.3.1 Increase the share of renewable energy in the energy mix and improvement in energy efficiency. 12.3.1 & 12.5.1 Halve per capita global food waste at the retail	Reduce energy consumption by 20% (compared to 2015). Reduce Scope 2 GHG emissions by 20% (compared to 2015). Increase the use of recycled water to 20% of total water consumption across shopping centers. Reduce waste sent to	 Reduce energy consumption in 2021 by 4% (compared to 2019). Reduce Scope 1 GHG emissions intensity by 15% (compared to 2015). Reduce waste sent to landfill by 10%. Increase the use of recycled water to 5% of total water 	
13 SUMATE ACTION	and consumer levels. Substantially reduce waste generation through prevention, reduction, recycling and reuse. 13.2.2 Integrate climate change measures into national policies, strategies and planning	landfill by 50% of total waste.	consumption across shopping centers.	

About this Sustainability Report Section

For a eighth year, Central Pattana has incorporated the Sustainable Development (SD) Report with the annual report to showcase its economic, social, and environmental performance by applying the Global Reporting Initiative (GRI) Standards-Core option approach, the International Integrated Reporting Committee (IIRC)'s report scope, the ISO 26000:201 Guidance on Social Responsibility, and the United Nations Global Compact (UNGC), linked to the performance in line with Sustainable Development Goals (SDGs).

Reporting Scope and Boundary

The report embraces the performance of Central Pattana and its subsidiaries in Thailand, excluding sustainability performance abroad, from January 1 to December 31, 2020, with economic, social, and environmental updates and performances under the sustainable business management strategy. The scope of business and sustainable development covers only assets under Central Pattana's administration, namely the 34 shopping centers in Thailand (Central Phuket project is accounted for two shopping centers: Central Phuket Festival and Central Phuket Floresta), 7 office buildings, and downstream mutually supporting businesses of Central Pattana operating in Thailand, as reported in the Chapter 12 Nature of Business and Assets under Management. An exception is for environmental reporting, which excludes some office buildings' outcomes: The Ninth Towers, Unilever House and G Tower; hotel; and residential projects. Note that the report on the supply chain excludes the operation of subsidiary CPN Residence Co., Ltd.

Central Pattana's implementation of sustainable development values the engagement of all stakeholders, namely shareholders, tenants, customers, business partners, creditors, employees, business competitors, society, communities and the environment, the public sector, independent organizations and related social organizations. The contents and details in this report disclose the performance outcomes of the Company and its subsidiaries and associates (whose 50% shares are held by Central Pattana or where Central Pattana can exercise management authority), including the companies that need to disclose information.

Report Quality Control

The Sustainable Development Department, Excellence and Sustainable Development Division, the focal point that controls the report quality to ensure its completion and accuracy. The Annual report working team is responsible for preparing the annual report completion and review information dissemination.

Independent Assurance

For credible and transparent reports guided by GRI Sustainable Reporting Standards, Central Pattana organized report certification for some key performance indicators by a third party well-versed in certification and independent assurance in the field of real estate business as detailed in the certification of assurance on page 238-239. Additional Information on SD Report and GRI Content Index have been disclosed at www.centralpattana.co.th/en/sustainability/sustainability/reporting-library.

In line with Central Pattana's climate and environment policy, no hard copies have been printed. This report and previous editions are available online at www.centralpattana.co.th/en/investor-relations/publications/report/annual-report.

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Based on the analysis of corporate risks and challenges, Central Pattana has established sustainability action plans for adapting to changing consumer behavior, increasing resilience and maintaining business continuity amid environmental and social challenges, which are embedded in the annual strategic plan. Performance is tracked in five dimensions including: 1) company growth, 2) brand value creation, 3) efficiency improvement, 4) internal process and 5) human resources, in line with the UN-SDGs and

Central Pattana's five-year sustainable business strategy. Our management approaches and sustainability performance are reported in four focus areas as follows:

- Risk Management and Diversification and New Business Ecosystem Development
- 2. Transforming Shopping Centers into the Center of Life
- 3. Engagement and Stewardship of Stakeholders
- 4. Resource and Environmental Management Excellence

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Diversification of Investment Risks and Creation of a New Business Ecosystem

Central Pattana prioritizes the retention of strong and sustainable business growth through a five-year business plan (2021-2025) with a compounded average growth rate (CAGR) in revenue of about 10% per annum. To achieve such target, it establishes a business growth direction by diversifying the business base of property development and management through a variety of approaches as seen below:

1.1 Geographic Business Expansion and Types of Properties



Central Pattana has historically developed and managed its properties through new shopping malls in high-potential areas, starting with Bangkok and periphery and expanding to provincial cities that have strong and stable economic growth and are regional centers. It deployed this strategy to diversify concentration risks and create opportunities together with participation in the regional business drive. As of present, Central Pattana has 15 shopping malls in Bangkok and periphery, 18 shopping malls in the provinces, and one in Malaysia. Before launching project development, the Company prudently selects the best location within an area that is conveniently accessible by customers, tourists, and tenants. Through the concept of "Center of Life", the Company's shopping malls are uniquely designed to suit the locality of each area by offering a complete range of products and services, as well as creating new areas for lifestyles and activities in response to changes in consumers' behavior. Moreover, each shopping mall is designed with a unique identity harmonious with the local communities and promoted their pride, including attracting visitors, stimulating the economy, distributing income, and fostering benefit and value-added for all stakeholders, thus leading to national economic development.

With a vision to be the regional leader in property development and enjoy sustainable long-term growth, the Company expandsthe business to Southeast Asian countries, particularly those with strong and stable economic growth, such as Malaysia and Vietnam. Its business execution aims to diversify the business base and reduce dependency on a single domestic market. It expands investment into an integrated property development under the strategic direction of mixed-use development. These investments include shopping complexes, residences, office buildings, and hotels to maximize the value of the core shopping-mall business and use land for maximum benefit. Each business in the area can also complement one another. Since 2016, Central Pattana has developed condominium projects located in the same areas as its shopping malls. To date, Central Pattana has launched 18 condominium projects, including 15 high-rise condominium projects and 5 low-rise projects - single detached house, twin-home and townhouse. Most projects are located near shopping malls and well-responded by the customers. Moreover, the Company is preparing to launch 4-5 residential projects per year and studied opportunities for developing other types of properties as planned.

1.2 Joint Investment with Business Partners



Central Pattana's property development and management go beyond proprietary investments. It is open to jointly investing with potential business partners that bring invaluable property development business experiences and know-how to share with and support one another.

- The Company entered a joint investment partnership with Dusit Thani Public Company Limited ("DTC") to invest in a mixed-use development project comprising a hotel, a residence, a shopping mall and an office building on the land at the corner of Silom Road and Rama 4 Road. The Company has an 85% investment stake in the shopping mall business and a 100% stake in the office building business, both within its domain of expertise, whereas it has a 40% stake in the hotel and residential businesses, both of which are of DTC's expertise.
- The Company, in cooperation with IKEA, launched "IKEA Bangyai," a new IKEA style that allows customers to shop and pay on any floor. It is the first branch that has all entrances connected with Central Westgate. This cooperation added the element of Super Regional Mall to Central Westgate.
- The Company and Right Man Limited entered into a 50:50
 joint investment under the Phenomenon Creation Limited
 to launch Tribhum: adventurous theme park innovation as
 the new World-Class Attractions in Phuket and a world
 tourist attraction. It will increase the tourism and economic
 potential of Phuket to compete with natural attractions in
 other countries.
- The Company formed a joint venture with Common Ground Group, a reputable co-working space business from Malaysia to set up Common Ground Thailand. Central Pattana holds a 51% stake in the joint venture;

- Common Ground Group, 49%. This partnership aims to expand the co-working space business in Thailand, connecting shopping malls with office buildings to be the workplaces of new entrepreneurs, support SMEs and startups, and strengthen national economic growth.
- Central Pattana formed a joint venture with Central Retail Corporation Public Company Limited to invest in Grab Thailand, with a 33% investment stake to expand customer services via a digital channel. Grab is a leading service provider of transportation, food delivery, and logistics on a mobile application. As the key partner of the Company and Central Group, it will enhance the Group's potential to become an omni-channel. The partners will jointly create a new ecosystem to serve customers' way of life in an era when offline and online channels become more integrated.
- The Company collaborated with a subsidiary of the Hong Kong Land Group in studying guidelines for mixed-use development projects in Thailand. Hong Kong Land Group has excellent expertise and experience in commercial property development projects in Hong Kong and overseas, including Thailand.
- Finally, Central Pattana entered a joint investment partnership of the Central Village project with the world's leading outlet developer like Mitsubishi Estate Asia (MEA), which successfully runs nine outlet projects in Japan, such as Gotemba, Rinku, and Shisui. MEA holds a 30% investment stake (while the Company holds 70%). This collaboration will raise the efficiency of customer service and strengthen the project by offering world-class brands in the outlet. It will also upgrade the Central Village project as the real leader of luxury outlets in Southeast Asia.

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02

Transforming Shopping Centers into the Center of Life

Management Approach

01



02



03



Customer Centric Product and Service Development

for everyone and every lifestyle

Service Excellence

elevating service standards through stakeholder engagement with strong emphasis on convenience and safety and security

Technology and Innovation

enhancing communications, service and convenience

2.1 Customer Centric Shopping Center Development for Every Lifestyle



Findings from quantitative and qualitative studies with potential and current customers

Combined with analysis and forecast of future customer demand based on demographics, research and big data anglytics from internal knowledge management

Are used to improve and develop annual business plans and create product inovation plans

In implementing our annual business plan, in 2020, Central Pattana launched 3 new developments including Central Ayutthaya and Central Si Racha, which are 38% and 30% complete, respectively, and Central Chanthaburi, which is in the mobilization process; completed the renovation of

3 shopping centers including Central Pattaya Beach, Central Rama 2 and Central Phuket; and has undertaken 8 partial renovation projects, which are 50% complete. As part of our Destination&Attraction plan, product innovations were implemented as follows:

Product Innovation Destination&Attraction plan

1. Family Destination

Central Pattana, in partnership with business partners, launched new learning and kids zones including the 10,000 sq.m. indoor playground Mega Harborland Westgate at Central Westgate, Fun Planet at Central Chonburi and Kidzoona at Central Rama 2.





Indoor Playgrounds to promote learning outside the classroom - 34 playgrounds available at 25 projects



Kids' Restrooms to encourage self-reliance in small children - 72 restrooms available at 24 projects



Family Dining Zones set up in 26 of 30 Food Parks and the Food Centers under the Company management

2. Food Destination - Destination for Dining

Central Pattana has renovated the Food Parks and introduced more dining options based on consumer lifestyles including best street food, local street food, restaurants for tourists and brand new restaurants. At centralwOrld, the Company has launched "Food Bible", (www.centralworld.co.th/kindee/) a comprehensive guide to endless dining possibilities organized into 8 lifestyles: 1) Thai, 2) International, 3) Michelin Stars and Michelin Guide, 4) Quick Eats, 5) Shabu and Grill, 6) Café-Desserts, 7) Party and Hangout, and 8) Creative Cooking. A cashless payment service has also been rolled out at the shopping center's Food Park, offering diners different cashless payment options – the first food court in Thailand to offer such service.

3. Fashion Destination Destination for Fashion Lovers

In addition to updating Fashion Plus Zone with modern touches, new retail formats are being rolled out. For instance, physical stores have been launched by online brands and large vacant retail spaces have been subdivided into

smaller units for small retailers to test the market at Central Salaya and Central Ubon. Building on last year's success, the pop-up store concept has now been adopted by local and global brands including Tory Burch, Longines and Tag Heuer. To date, there are 754 brands in Fashion Plus Zones across 24 shoopping centers and 67 pop-up brand stores (include brands in all product categories).

4. Lifestyle Destination Destination for New Lifestyle

Seeking to bring together people with similar interests and lifestyles, Central Pattana, throughout the year, held themed events and roadshows across shopping centers such as:

- Dessert lovers: "Signature Sweets 2020" at 11 shopping centers from June to December 2020
- Classical music fans: 1) Live contemporary Thai music performance by Mahidol Symphony Orchestra broadcast via the panOramix screen on the façade of centralwOrld as part of "Music Heals 2020" from August to September 2020; 2) "The Grand Christmas Concert 2020" - a free concert held at centralwOrld

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Square in December 2020; and 3) "Music in the garden" - a musical event featuring Suranaree Girls Wind Symphony at Sang Chan Waterfall Square, Central Korat in November and December 2020

- Gardeners and plant lovers: Urban Garden, Tropical Garden, Green Market, Garden on Ground and Butterfly Green Market and Cactus
- Coffee and tea drinkers: coffeewOrld, Coffeelism and Northern coffee
- "Stadium talk" at centralwOrld a public event where photographers, fashion gurus, filmmakers, music composers, and conductors were invited to share inspirational stories and experiences
- Evening and weekend outdoor markets to suit customers' lifestyles and in compliance with social distancing rules
- Pet Lover Zones: 1) a new destination at Central Rattanathibet; 2) a pet playground and dedicated pet shops at Central Korat, and 3) pet wellness pop up stores at Central Eastville providing services such as pet health checks, pet wellness consultancy, pet dermatology, pet preventative care, animal behavior health care, bathing & grooming care and pet spa and massage

Sport Destination -Destination for Health Lovers

To promote physical activities and sports, Central Pattana has turned outdoor activity squares in front of shopping centers into: 1) an extreme sports park at Central Chiangmai and 2) running tracks at Central Phitsanulok and 3) added a 1,000 sq.m. fitness area at Central Korat as well as 4) transformed convention halls into sports arenas hosting events such as Toyota Youth Badminton Super Series 2020 at Chaengwattana Hall, Central Chaengwattana, and at Korat Hall, Central Korat, in partnership with the Badminton Association of Thailand Under Royal Patronage of His Majesty the King; Thailand Open Master Game at Rama 2 Hall, Central Rama 2; Thai Chess Tournament Championship 2020, in partnership with Thai Sport Association of Thailand Under Royal Patronage of His Majesty the King; and Thailand 3x3 Basketball Princess Maha Chakri Sirindhorn's Cup at Chaengwattana Hall, Central Chaengwattana, in partnership with 3 x 3 Basketball Association.

Central Pattana aims to make our shopping centers the destination for tourists and support development of local tourism. Together with Mae Pah Luang Foundation under Royal Patronage, we held a cross event "Seesan Doi Tung x Central Chiangrai" at Central Chiangrai turning the space into Doi Tung Park to give tourists a little taste of what Doi Tung has to offer. The old Lampang Horse Carriage Station, located in front of Central Lampang, has been transformed into the province's newest check-in spot; on Central Phuket skywalk, decorated with flower walls, there is a DJ to entertain tourists; and in front of Central Chaingmai, the up-in-the-sky artificial staircase has become a popular photo destination. Meanwhile, Central Samui, Central Pattaya Beach, Central Rayong and Central Village have been revamped as a photo spot for avid photographers and selfie-lovers.





7. Center of Community

- 2 new Government Centers at Central Phitsanulok and Central Udonthani, taking the total number to 14 centers across the country
- 6 passport offices at Central Westgate, Central Korat, Central Udon, Central Nakhon Si, Central Phitsanulok and Central Festival Phuket
- 3 more Jing Jai Farmer's Market have been set up to provide local organic farmers a direct channel to sell products to consumers. This brings the total number to 12 markets under the Company's management.
- Rollout of small store formats at all branches including Shop in shop and Multi brand store to provide small retail spaces for small and local entrepreneurs looking to sell community products or popular souvenirs. The initiative currently supports 266 entrepreneurs.

2.2 Service Excellence



Conduct quarterly online surveys to gather customer feedback in 2 respects:

1) the importance level of factors affecting customer satisfaction: and 2) the satisfaction level towards each factor

Report survey results to relevant teams on a quarterly basis, and use the findings to re-assess and improve Service Excellence plans to keep pace with evolving customer needs Material issues are addressed through cross-functional collaboration between Business and Project Development functions and Asset Management

In line with the annual business plan, in 2020, Central Pattana focused our efforts on elevating customer satisfaction and offering frictionless journey and convenience in 4 key areas described below:

1. Traffic and Parking Management

Traffic Management

teams are designated for traffic management planning and assignment of staff, substitutes, and controllers and traffic control plans have been developed for 4 different situations: 1) normal, 2) slow, 3) congested, and

4) accidents. In addition to training relevant staff including procurement employees across 33 shopping centers on traffic management, the Company has trialed new technologies to enhance services including realtime traffic display at 2 shopping centers - centerlwOrld and Central Ladprao. Compared to the previous system, the automated car park ticketing system and License Plate Recognition - LPR, piloted in 2019, have improved vehicle entry/exit flow by 70%. In response to COVID-19, parking cards are cleaned and disinfected after every use to keep our customers safe and worry-free.

Parking Services to Serve Every Lifestyle

Priority parking, available at all project



765

Supercar parking, available at 29 projects



213 slots

Bicycle parking, available at 25 projects



2,205

Lady Parking, available at 33 projects



2,947 slots

Family parking, available at 4 projects



36 slots

EV Charger parking, available at 21 projects



49 slots

Big bike parking, available at 20 projects



493

Valet parking, available at 7 projects



242 slots

Quick parking, a separate parking zone for



30 minute to 2 hours parking

- Carpool parking (for vehicles carrying more than 4 passengers) 54 slots available at 3 projects
- Intelligence parking system 45,404 slots available at 17 projects
- Transportation hub available at 4 projects
- Shuttle bus available at 14 projects
- Reserved parking at centralwOrld
- Food delivery parking

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2. Service Amenities Based on Customer's Lifestyle

Families



Nursing room

rooms available at 28 projects



Baby changing room (for diaper)

rooms available at 26 projects



Kids' restroom

available at 24 projects



Kids' dining zone in Food Park available at

26 projects



Baby stoller

stoller available at 33 projects





Happy train

trains available at 25 projects



Wheelchair

387

wheelchairs available at 33 projects



cars available

at 32 projects



Accessible restroom

room available at all projects

Tourists



Group counter

counters available at 9 projects



Tourist information center

centers available at 12 projects



Luggage storage and delivery (paid service) at

projects

Others



Muslim prayer rooms

room available at 19 projects



Free wifi available at

projects



Rest area

locations at 23 projects



Charging station

stations available at 29 projects



Rest hub with electrical charging slots

locations at 27 projects



Free powerbank rental

powerbanks available at all projects

In 2020, the Company has added more service amenities, which are arranged based on lifestyles and user groups including currency exchange centers, free sim card rental, car rentral, travel agencies, free powerbank rental, luggage delivery, personal shoppers and porter service, and home/ hotel delivery.

3. Safety and Security

Central Pattana's safety and security measures take into consideration the safety of our customers as well as their possessions and are developed in accordance with ISO 45001 Occupational Health and Safety, with daily site security plans as well as plans for emergency response training and drills and exercises in place. Our public safety and security management approach is divided into 3 areas: management and participation, prevention, and operation.

Management and Participation

There are Committees on Safety, Occupational Health and Environment at the corporate and branch levels, who are responsible for ensuring safety and health standards are consistently implemented across the company. Progress reports are submitted on a regular basis to the Risk Management Committee and the People Development Committee. In 2020, changes have been made to on-site auditing, which used to be conducted by the operation audit team. Now, audits are carried out within a defined timeframe by designated on-site staff using a standard checklist. Audit reports from every project are submitted to the central team for review and recurring problems are handled promptly, while structural issues will be addressed through meetings.

Prevention

Loss Prevention (LP) department is responsible for handling, monitoring and minimizing losses in shopping centers as well as supervising security guards from security service companies that meet the requirements set out by the Business Security Act, B.E. 2558 including providing equal employment opportunities to ethnic minorities. In 2020, Central Pattana has revised the standards for prevention and security and introduced new measures to prevent the transmission of infectious and communicable diseases, which include stepping up cleaning procedures, limiting stakeholders' access to buildings, and requiring relevant employees to complete an online training on service standard.

Standards for installing Closed Circuit Television/CCTV cameras have also been rolled out at all projects. In addition to 7,542 CCTV cameras (unchanged from 2019), 2,302 Call Points have been set up across all parking lots (except at Central Village, which has outdoor parking) to enhance customer safety and there are now 217 security bases available at all projects.

Operation

Since 2019, the Company has begun using the revised safety and security manual, which makes safety and security part of the criteria for supplier selection, mandates subcontractor assessment during construction and after handover, and adds safety and security to the list of operational risks requiring oversight and mitigation.

Central Pattana uses Color-Code Condition 5* to monitor the situation and assess crisis severity with 4 partners responsible for the operation including company employees, state officials, security experts from outside the company and Central Group. The overall situation in 2020 remained largely Blue or Guarded except for the project in Hat Yai city, which was Orange or High - meaning there were risks of explosive attack, terrorism and other threats.

In the event of an unforeseen accident or event, there are preparedness measures in place, for example, 33 AEDs (Automated External Defibrillator) have been installed across all projects. Central Pattana also has insurance plans including Industrial All Risks (IAR), business interruption coverage and public liability insurance and provides additional training to employees involved in providing rehabilitation care to survivors.

Remark: * The Color-Code Condition 5, which has 5 levels including Low-Green, Blue-Guarded, Yellow-Elevated, Orange-High and Red-Severe, has been rolled out to improve communications and ensure speedy and coordinated implementation. In the event of a crisis, the Company's crisis command center committee and their counterpart at Central Group will, together with state officials and security experts from outside the Company and Central Group, closely monitor and assess the situation.

4. Service Standard

Our standards, adapted from ISO 9000, are aligned with ISO 9001 Quality Management System (QMS) principles, which include continuous process improvement to ensure consistent delivery of quality products and services and reduce complaints and recurring issues. Guided by our service philosophy, "Service with the heart", the Company seeks to help our employees develop the skills necessary to satisfy customer needs. In 2020, the Company carried out the following:

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- Established process standards for selecting and evaluating security guards, housekeepers and customer service staff, which include Customer Satisfaction Survey (conducted after the national lockdown order had been lifted in July 2020) and "Mystery Shopper" a checklist-based evaluation conducted by company employees from another branch to measure service standard at each touchpoint. The results showed that, compared to the year before, complaints about staff fell by 32%.
- Conducted "Service with the heart" trainings for all customer-facing and service-related employees including:
 - Basic Training on personality and appearance: greeting-smiling, eye contact and distancing, saluting and Wai, and pronoun use when interacting with a customer
 - Functional Training: on how to approach customers to offer assistance, providing assistance in parking facilities, door etiquette, temperature check, and proactive service

In addition, the Company established the "Central Clean and Safe" masterplan to boost customer confidence when accessing services during the pandemic with measures covering 5 key areas - screening, distancing, tracing, cleaning and touchless experience - and provided customer relations employees with additional training on communications, customer service, adapting to the "new normal" and COVID-19 preparedness and response.

 Established standards for conducting 360-degree feedback including checklist-based in-branch self-assessment, site assessment by corporate, "Mystery Shopper" and online customer surveys. The results and analysis will help inform the Company on how our customers can be better served.

- Developed training formats and post-training assessments that would be suitable for frontline functions including "The CS Professional" contest, an intensive training for customer relations employees via videoconferencing with senior staff coaching and mentoring junior staff and sharing with them real-world knowledge and experiences; 5 CS Online training courses, which included basic marketing, English for customer relations, Chinese for customer service, SOP and handling of complaints; trainings for housekeepers and security guards from security service companies, which were conducted with corporate training materials and led by Branch Service Trainers; self-paced videos training course; and coaching program for frontline functions.
- Rolled out new technologies to enhance service delivery such as "i-booking" - a booking system for kiddy cars, and wheelchairs at shopping centers and reserved parking via @Centrallife OA. Both are being trialled at centralwOrld.
- Adopted ISO 20121 Event Sustainability Management System in managing convention halls and sought ISO 20121 certification for Changwattana Hall at Central Changwattana. To date, 8 of our 10 convention halls have been ISO 20121 certified. In addition, the Company has submitted 9 projects for TMVS (Thailand MICE Venue Standard) certification under Meeting Room category and 4 projects for TMVS and one pilot project for AMVS (ASEAN MICE Venue Standard) under Exhibition category. All certifications are issued by the TCEB (The Thailand Convention and Exhibition Bureau). The certification's assessment components include Physical Component, Technology Component, Service Component and Sustainability Component.

2.3 Technology and Innovation

Central Pattana seeks to develop new technologies and solutions to provide the best experience for stakeholders, in particular, our customers, tenants, employees and suppliers, including in IT infrastructure management and customer analytics and implements our plan as follows:

Digital Customer Experience

- Touch screen digital directory where customers can scan and download direction maps onto their phones, available now at every branch
- Direct communication channel via Line application with Line ID: @central Life, which offers 4 key features:
 - "Store Locator" helps customers find their desired store and get directions from their starting point by tapping on "Get Direction"
 - "Special Privilege for The 1 members" allows users to check and redeem The 1 points, book a parking space at centralwOrld, and access e-coupons from within the app
 - "Central Eats" responds to changing consumer behavior during COVID-19 by enabling customers to place orders for delivery from their favorite restaurants at the shopping centers operated by the Company via the application and Grab. The initiative was rolled out at 12 projects with more than 210 shops and 30 Food Parks participating. Based on the Company analysis, "Central Eats" has a higher close ratio than Grab service.
 - Communications and promotions in the wake of the COVID-19 pandamic - the Company has launched Chat & Shop, One call one click, and Deliver & Drive thru services to enable customers to shop and access service even during lockdown.
- E-wallets at 35 Food Parks operated by the Company, accept PromptPay, Rabbit Card, Line Pay, TrueMoney Wallet, Dolfin, WeChat Pay and AliPay. E-wallets now represent 10% of all transactions in every branch and 35% of all transactions in some branches such as fOOdwOrld @centralwOrld.



 Digital service for tenants via CPN Serve, an all-in-one platform for internal communications, information lookup, maintenance request, rent payment, and rewards programs. The app, which has built-in sales and promotions function, provides tenants with a free Customer Relationship Management (CRM) system. To date, the adoption rate among targeted tenants has surpassed 50%.

Digital Service for Residents via "CPN Residence Family"

Where users can look up reservation information and installment payment, receive project news and updates, and book a viewing appointment.

Infrastructure and Customer Analytics through Utilizing's Big Data for Customer Analytics

For example, the number of customers and sales data are utilized in circulation planning and store layout design to deliver better service to our tenants as well as customers.

Our cybersecurity prevention plan is implemented under the guidance of the Risk Management Committee. A working group on cybersecurity and Personal Data Protection Act (PDPA) chaired by the head of Information Technology function and reporting directly to the Committee, has been formed and a study was conducted to explore how ISO 27001 - Information Security Management Systems (ISMS) can be applied across the company by 2020. To build preparedness, the Company has updated the Disaster Recovery Plan (DRP) to take into account changing circumstances and technologies for the testing of the annual Business Continuity Plan (BCP) and scouted for appropriate monitoring and evaluation tools to assess the effectiveness of our cybersecurity measures.

Our COVID-19 Pandamic Response

เซ็นทรัลพัฒนา

ผู้นำ สะอาด มั่นใจ ในทุกตารางเมตร สรปไฮไลต์ 'แผนแม่บท 5 ข้อ'

กว่า 75 มาตรการ

ทุกศูนย์ ทุกจุด ไม่ว่าร้านไหน บริการใด ไร้กังวล

ส่งเสริมให้คนไทย 'อยู่บ้าน หยุดเชื้อ เพื่อชาติ' ช่วยกันป้องกัน อยู่ร่วมกันปลอดภัย

EXTRA SCREENING คัดกรองเข้มงวด



SOCIAL DISTANCING งดความแออัด



SAFETY TRACKING ติดตามให้มั่นใจ



EXTRA CLEANING สะอาดทุกจุดในเชิงรุก



TOUCHLESS EXPERIENCE ลดการสัมผัส





Five Core Criteria of CENTRAL'S HYGIENE **AND SAFETY Master Plan**

For a worry-free environment in our shopping centers

EXTRA SCREENING



3 SAFETY TRACKING



- All customers and employees must wear face masks at all times. Face masks are available for sole if customers don't have a complex of the sole is available throughout the shopping.
 A somitzer get is available throughout the shopping.
 Serveyone must measure their body temperature before entering, the shopping centers. If body temperature of customers or staffs exceeds 375° C. temperature of customers or staffs exceeds 37.5° C, they will not permit to enter the shopping centers.

 4. Disinfectant doormat will be placed at the
- entrances.

 5. Stringent additional measures for delivery staffs such as at the entrances, waiting areas, specific parking space and disinfectant spraying services on gloves and vehicles.



and stores
5. Apply 4 Shields: Face Shield – Food Shield – Table Shield - Counter Shield.
6. Increase awareness and emphasize practical guidelines to employees.



- Track employees' health and travel records for the past 14 days and to complete an assessment form prior to opening and before storting work daily.

 For tokeway food, the restaurant name and branch must be labeled on the package.





- 1. Clean every touch point every 30 minutes, all day, envidory in the shopping centers and every store.

 2. Apply disinfection on air condition system everydory.

 2. Apply disinfection on air condition system everydory centers.

 3. Use disinfection solution after the shopping centers close or night.

 4. Implement or Big Cleaning for the whole shopping center every week.

- center every week.

 5. Provide UV-C disinfecting devices on shopping bags

- 5. Provide UV-C disinfecting devices on shopping bags for customers.
 6. Clean food park cord / ponking card before and ofter use.
 Provide disinfectant at load park
 Spray disinfectant on parking cards before handing to
 Spray disinfectant on parking cards before handing to
 Spray disinfectant on every 30 minutes
 Clean bathrooms every 30 minutes
 Provided disinfectant in every 10 total for customers to
 clean sanitaryware before use
 Ensure hand soop dispenser and hand towel are
 ovaliable in the tolet at all times
 Ensure hands soof minutes of the surface of th

5 TOUCHLESS EXPERIENCE



Encourage the use of cashless payments and e-payments.
 Give customers their change in clear bags.
 Provide doorpersons at shopping centers and retail stores.
 A. Assign staff to press elevator buttons for customers (buttonless).



Chapter 19

During the COVID-19 pandamic, the Company launched the "Central Clean and Safe" masterplan to boost customer confidence when accessing service at shopping centers and office buildings, with measures covering 5 key areas including screening, distancing, tracing, cleaning and touchless experience. The masterplan, praised internationally and by Thailand's shopping center industry, has been adopted and adapted by the Thai Shopping Center Association, the Department of Health and other state agencies.

Despite the crisis, the Company kept pushing innovation forward and collaborated with suppliers to, for example, roll out cleaning and sanitation solutions to enhance convenience and keep our customers as well as employees safe.

- Protective shields at Information Counters
- Automatic alcohol dispensers in elevators
- Social distancing warning sensors at main escalators
- UV-C for AHU filters and UV-C cabinets for shoppers to sterilize purchased items and shopping bags
- Touchless lifts and automatic handrail sterilizers

Touchless lifts













UV-C sterilizers

Doormat with disinfectant alcohol

Sustainability Performance: Transforming Shopping Centers into the Center of Life

Topic	2020 Performance	Plan for 2021
Sustainability Indicator	 With the ongoing pandemic, there were external factors that could affect customer satisfaction. For this reason, "Shopper Satisfaction" was removed from our 2020 performance indicators. Calibrated the weights of some indicators in shopper and tenant satisfaction surveys to ensure better alignment and integration. 	Establish "Shopper Satisfaction" as a performance indicator and target to achieve shopping satisfaction scores of 80 in 2021 and 85 in 2025.
Transforming Shopping Centers into the Center of Life	 Carried out project development as planned. New development projects are 34% complete and partial renovation projects are 50% complete. Carried out the Product Innovation - Destination & Attraction plan, successfully developing 62% of 21 target destinations in accordance with the adjusted work plan following the COVID-19 outbreak. 	 Implement the project development plan, which includes construction of 2 projects, renovation of 4 projects and partial renovation of eight projects. Develop 15 new destinations.
Service Excellence	 Implemented traffic and parking management plans at all branches including 12 additional branches in 2020 and set up new transportation hubs in 4 branches. New parking lot signage has also been trialled at 2 shopping centers including centralwOrld and Central Ladprao. Delayed applying for ISO 45001 Occupational Health and Safety certification. 	Implement customer and tenant satisfaction plans in accordance with the annual strategic plan on new customer experiences and service amenities.
Technology and innovation	 Provided digital customer experience and strengthened O2O business model (online to office) via Line official account: @central Life, which has more than 3.3 million followers – a 30% increase from 2019. The Company also ran more than 59 O2O campaigns in 2020 and adopted Aumented Reality to enhance customer experiences. Implemented the annual strategic plan to provide digital tenant experience via "CPN Serve", which has a utilization rate of 40% (owners only) and is used by 15,000 users, including owners and shop assistants. 	Implement Product Innovation - Destination & Attraction plan.

Stakeholder Engagement

Sustainable Development

The Company places considerable emphasis on stakeholder engagement as we seek to create sustained value for everyone and achieve the greatest possible impact. We engage with our stakeholders in a number of ways as detailed on the website: www.centralpattana.co.th/en/sustainability/sustainability-strategy/framework/stakeholders-engagement. At the Company, our stakeholders are divided into two categories: primary stakeholders and secondary stakeholders. The Company prioritizes integrating the primary stakeholder engagement plan into the annual business plan.



Management Approach

01

Tenant Management and Development

- Small and new entrepreneur development
- Tenant development
- · Tenant engagement

03

Supply Chain Management

- Supplier selection and screening
- Co-Creating value and innovation
- Operational excellence to improving procurement process



02

Employee Management and Engagement

- · Recruitment and talent retention
- · Leadership development and capacity building
- High performance organization

04

Corporate Responsibility and Community Development



- · Reducing impact on communities and the environment
- Community engagement
- · Community development

3.1 Tenant Management and Development



Tenants are one of the Company's most valuable customers and every tenant's voice is important to us. At the Company, the tenant engagement team works under the supervision of Deputy CEO to support these direct customers in everything they need to grow together with us.



1. Small and New Entrepreneur Development

The Company offers a wide range of retail space options to meet every need of local and small businesses and fit all customer lifestyles and appetites as outlined below.



Pop-up Stores

Short-term leases for entrepreneurs to test the market in the common areas of shopping centers



Markets

The "Market Market" scheme provides spaces for vendors to sell products in front of shopping centers



Farmers Markets (Jing Jai Market)

Spaces for local organic farmers to sell agricultural products directly to customers



Retail Space for Gifts and Souvenirs

Premium souvenir and handicraft centers e.g.Kad Luang Airport, Northern Village and Sam Samut Market



Take Away and Delivery Zone

Take away and delivery outlets in Food Park Zone

In 2020, the Company made the ratio of local and small retailers to total tenants as one of our sustainability goals to further our commitment to supporting SME operators and entrepreneurs. The Company also expanded "Start-up Market," a scheme which now develops temporary retail spaces at shopping centers for local and small retailers and online businesses to test products and gain market insights.

The Company has established a plan to attract new entrepreneurs as part of the overall strategy to boost tenant occupancy by developing small store formats for small and local entrepreneurs such as "Local Hero" for graduates of CPN Retail Academy ready to expand their businesses into nearby provinces; "Shop in Shop" for entrepreneurs interested in renting a retail space of 10-20 sq.m., and "Multi brand store" for entrepreneurs wishing to get their products into stores but do not have a dedicated salesperson. In 2020, 266 new tenants have moved into 33 shopping centers, exceeding our target by 100%.

2. Tenant Development

The Company provides support to promising SMEs seeking to gain a competitive edge by offering two development programs to those new to the Company and existing tenants:

CPNIead (CPN Leading Entrepreneur Advanced Development Program)

Sustainable Development

is a program for the new generation of entrepreneurs who are looking to develop skills in modern trade. In addition to in-person classes, trainees also have an opportunity to test out business ideas at the "Younique market by CPNlead" event, held at Central Pattana's shopping centers. The program, now its fourth year, attracted 64 applicants in 2020 a 50% increase in application rate from 2019. This year's training, however, had to be put on hold due to COVID-19.

CPN Retail Academy

has been designed for small and local business owners who only have time to attend one or two-day training courses. The training, held in every region, is provided and facilitated by industry experts in the Company and Central Group with guest speakers including model entrepreneurs and businesses and aims to help trainees develop basic knowledge and skills in areas such as online marketing, customer relations, product development and visual merchandising mix design. In 2020, the program plan was divided into three trainings conducted for entrepreneurs in the southern and northeastern regions

between January and February 2020 and for entrepreneurs in Bangkok in December, which was broadcast to all branches. A total of 1,300 entrepreneurs took part in the program and the evaluation results showed a satisfaction score of 9.3 out of 10. In addition, the Company has developed "Train to be coach," a new program to be launched in 2021 which aims develop a team of coaches at each branch who will help advise tenants on store layout design and marketing. In 2021, the Company plans to conduct basic training in every region; monitor and select promising entrepreneurs who meet the requirements to join the program; and support their business expansion and foster long-term partnerships such as open shop under Local Hero program.

3. Tenant Engagement

The Company works closely with our tenants to help them grow their business through engagement opportunities such as joint strategic planning sessions, Exclusive Campaign @CPN, nationwide campaigns during holidays and special occasions and other tenant relations activities. In 2020, the Company had to make adjustments in response to COVID-19 including reducing the number of the Company's special marketing campaigns, cancelling off-site tenant relations activities, rolling out relief and rehabilitation measures to help shops and stores weather the crisis and organizing meetings with tenants to discuss marketing campaigns and activities to generate revenue and boost consumer spending.

Our Response to the Outbreak of Novel Coronavirus (COVID-19)

The outbreak of COVID-19 in Thailand and around the world has led to falling foot traffic at shopping centers since late February 2020. The Thai government, in its efforts to slow the spread of the virus in the country, announced a slate of public health measures including closure of shopping malls nationwide from March 22 - May 17, 2020. The 56-day closure affected more than 120,000 businesses in the shopping center industry including SME operators, retail stores, manufacturers, distributors and service providers. To support the company's tenants through these difficult times, four types of relief measures were rolled out:

1. Rents Waivers

during the temporary closure period and rent reductions for over 4,000 operators/stores.

2. Sales Channels

online shopping and delivery service via "Central Eats", "Chat & Shop", "One call one click" and "Deliver & Drive thru" platforms (as described in the Digital Customer Experience section of the 2020 Annual Report).

3. Ad Hoc COVID-19 Cross Functional Team

consisting of company staff from leasing, marketing and operations departments, the team held meetings with tenants and swiftly implemented relief measures under direct supervision of Deputy CEO. Tenant insights and views were presented at meetings with state agencies to inform decision-making about economic rehabilitation measures and programs.

4. Marketing and Sales Promotion included 3 types of activities:

- Storewide sale held four times instead of on a semi-annual basis under the campaign "Double Maga Sale" on double days including the 9.9, 10.10, 11.11 and 12.12, and marketing campaigns at select shopping centers e.g. Super Sale, Shop Duay Jai Thai Shuay Gun (Shopping new normal).
- Product-specific promotions for those hit hard by the crisis e.g. cosmetics, beauty clinics, sportswear with special offers from participating shops and prizes under the "60 Days 60 Exclusive item" campaign.
- Fashion brand promotions to help franchises clear excess inventory and boost sales during slower seasons through the "Greet Day Great Deal" campaign in which customers could redeem their 1 Card points for cash coupons to purchase products at participating brands.

Voices of Affected Businesses and Entrepreneurs – Food & Beverage



Nirada Chupotcharoen

Chief Financial Officer Food Passion Co. Ltd.

"Central Pattana has always been there for BBQ Plaza and we are truly grateful for the rent reduction. Thank you Central Pattana."



Kiatkong Kungwanwong

Senior Vice President MK Restaurant Group Public Company Limited

"Central Pattana has been a great partner to MK Group. Our company is doing our best and we are going to get through this together."



Noppadon Narittakurn

Owner Hong Bao TCP Company Limited

"Thank you Central Pattana for implementing a rent relief program from the very beginning of the pandemic."



Narong Puripipat

Owner Sushi Hiro

"These are difficult times for everyone so I'm very grateful for everything Central Pattana has been doing for us."



Nathapol Eksangkul Managing Director KOI The (Thailand) "On the behalf of KOI The, I would like to thank Central Pattana for the support, assistance and coordination throughout the crisis. Our partnership will continue to get stronger."

Sustainability Performance: Tenant Management and Development

Topic	2020 Performance	Plan for 2021
Sustainability Indicator	 With the ongoing pandemic, there are external factors that could affect tenant satisfaction. For this reason, "Tenant Satisfaction" was removed from our 2020 corporate performance indicators. Adjusted weighting of some indicators in shopper and tenant satisfaction surveys and aligned both questionnaires to be more. 	Establish "Tenant Satisfaction" as a corporate indicator and target to achieve the score of 80 in 2021 and 85 in 2025.
Tenant Engagement and Development	 Achieved recruiting new tenant at 50% from target in this difficult COVID-19 situation. Despite the postponement of CPNlead Class 4, the company continued to support the development of CPNlead Class 1-3 as planned and new business openings and expansions among trainees increased by 30%, compared to 2019. Implemented strategic promotional plans. 67 new pop-up stores were opened. Supported small and local entrepreneurs to operate 4,541 modern trade stores. (Data as of 31 December 2019 and include double counting of some stores) The 14% decline was largely due to the outbreak of COVID-19. 	 Recruit new tenant up 10% from 2020. Implement the strategic promotional plan and increase the number of pop-up stores by 90%. Target to increase the proportion of local businesses to 10% of tenants by 2022.

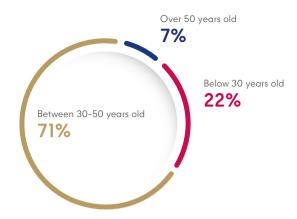
3.2 Employee Management and Engagement



We believe in creating an equal, fair and inclusive workplace where good governance and human rights principles are respected and upheld as described in Section "Corporate Governance" of the 2020 Annual Report. Our strategy for becoming an Employer of Choice is as follows:

1. Recruitment and Talent Acquisition

At Central Pattana, we provide equal opportunity for all applicants and employees without regard to gender, race, ethnicity or other differences as shown below from our age diverse workforce - 71% of whom are between the ages of 30 and 50.



In 2020, Due to the COVID-19 pandemic, the Company slowed recruiting and hiring for some roles and focused more on developing internal mobility for existing employees. This year, 16 employees asked for relocation.

There were 15 inter-company transfers within Central Pattana and Central Group including 2 employees moving to Central Group subsidiaries and 13 employees moving from other subsidiaries, which accounted for 13% and 87% of all employee transfers, respectively.

Recruitment and Manpower Planning

Project	2020 Performance
Work Integrated Learning or WIL combines classroom study with work experience through partnerships between industry and educational institutions enabling students to integrate theory and practice and gain real-world work experience. Students in the program receive stipend and the same health care coverage as full-time employees.	The three-year program has welcomed the second class of 14 students (August 2018 -July 2021) and to date, 64% of graduates have joined the Company. With declining interest among students, we are reviewing the program and will hold off on inviting new applications.
Central Group Management Associate (MA) is run by Central Group and aims to attract young talents to our company and subsidiaries.	With Central Group putting the program on a one-year pause, we launched the call for MA applications internally and externally and three persons were accepted into the program. In 2020, 90% of overall MA trainees participating in job rotation are still working with the Company.
General Manager Trainee or GM Trainee program which trains employees to become general managers in support of future business expansion. The course focuses on on-the-job learning and covers the fundamentals of a general manager's job, work process and leadership development with mentoring and coaching provided by current general managers.	To date, 20 trainees have continued work under the program, which is currently in its fourth year, and only 4% have dropped out.
Extension for Retirement offers employees nearing retirement 1- or 2-year employment extension upon mutual agreement and based on job function.	To date, 2 employees have participated in the program.

2. Leadership Development and Capacity Building

We recognize that people development is key to building and retaining a talented workforce as well as driving productivity and growth especially in today's hyper-competitive job market where recruitment, retention and development of employees must be an integrated process.

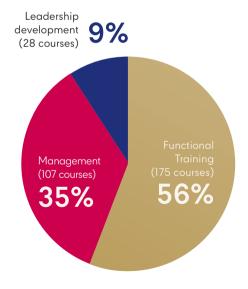
Leadership Development	2020 Performance
Key position identification and succession planning for successor.	In 2020, 100% of key C-Suite (n, n-1, n-2) positions have been identified.
Individual Career Development Plan: ICDP is for high-performing and outstanding employees. The initiative monitors employee progress on a quarterly basis.	The target for participation was met as 96% of target employees took part in the initiative (353 out of 369 employees).
People manager program builds capacity of employees at assistant manager level and higher helping them become an effective people manager who possesses seven key qualities as defined by our core values. To identify areas for improvement, participants will receive a 360-degree feedback from their supervisors, peers and subordinates.	In 2020, 52% of target employees (161 out of 310 employees) attended the training, which is offered as a microlearning and self-directed program via PacD.

Remark: 1 (1) Self-control (2) Allow others to shine (3) Be a good coach (4) Show appreciation (5) Listen well (6) Foster collaboration (7) Ability to adapt and adopt new technology

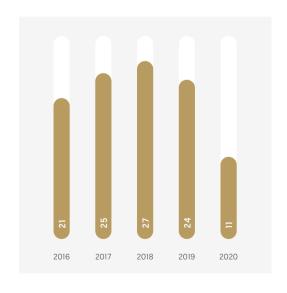


Leadership Development	2020 Performance
Competency development is based on the functional training roadmap with courses established for each unit and job role and monitoring and evaluation at specific times.	Started developing Functional Competency for core frontline functions beginning with Property Management in 2020 and followed by four more units in 2021.
Digital skills training prepares employees for digital disruption and transformation.	Trained employees on new systems to help them adapt to the digital transformation in the company including Construction online, ICON Residential, Preventive Maintenance and CPNServe. All employees also received online training on the new Human Resource Information System, "CneXt," ahead of its rollout. The digital skills trainings provided throughout the year covered 89% of the workforce.
Skills and ethics training aligns with our core values and focuses on corporate governance and occupational health and environment.	Conducted employee trainings on corporate governance with the focus on anti-corruption, human rights, PDPA and public safety e.g. 22 basic firefighting classes, training on maintenance of heavy equipment such as cranes, training on electrical system maintenance, training on operation and maintenance of wastewater treatment, fire alarm training, first-aid training, security training and ISO 45001 training. Throughout 2020, 18 trainings were conducted by internal and external trainers and attended by 487 participants (include employees attending more than one training), covering 10% of employees.

Employee Training Programs 2020



Average Training Hours (hours/person/year)



Our employees are provided with training and development opportunities according to the plan described above. With a shift to E-Learning during the COVID-19 pandemic. Throughout 2020, the Company conducted 67 training courses - an increase of 91% from 32 courses in 2019. The results of the course evaluation surveys showed that 92% of employees were satisfied with the trainings they received (unchanged from 2019). Our approach to employee development, which is based on the 70:20:10 Model for Learning and Development, emphasizes learning through experience and focuses on cross-functional learning and development during the pandemic. In 2020, our employees, on average, received 11 hours of training per year, which is 54% lower from 2019 as planned.



Employee Development through the GM Program

At present, the Company operates shopping centers both in and outside Thailand. Amid shifting business landscape, rising competition and changing customer behavior, our general managers must be big picture thinkers and are able to deliver profitable and sustainable growth despite challenges and, like CEOs or business owners, know how to best utilize data in managing the shopping centers. This requires business and commercial knowledge as well as analytical and management skills. The Company, therefore, have joined hands with Thammasat Consulting Networking and Coaching Center - CONC Thammasat to develop a flagship program to equip our general managers with the knowledge and skills they need to create sustainable business growth. The course consists of three parts including a 7-day intensive training, work assignment and on-the-job training and each trainee is required to submit a single business strategy and implement it at the shopping center under their management within a period of 5 months. In addition to one-on-one coaching sessions, trainees will have the opportunity to present their plans to management in 2021, which will be assessed based on the performance of the shopping centers they manage.

Additionally, the Company has established a two-year conditional grant program for employees looking to pursue a master's degree. After passing the first screening, applicants will be interviewed by the selection committee and the scholarships awarded based on attitude and commitment to the betterment of self and society. To date, the program, which was launched in 2016, has awarded scholarships to 17 employees including four employees in 2020.

At the Company, we encourage learning and innovation and have been organizing innovation challenges under the "Dreamteam Pro" and "Dreamteam Mini" projects, which are now in their tenth year to give our employees an opportunity to pitch ideas for process improvements, problem-based solutions and value creation under the quality management system framework. "Dreamteam pro" is a problem-solving competition based on the PDCA (Plan-Do-Check-Act) cycle and QC Story, while "Dreamteam mini" is a guick win challenge based on the Kaizen method reduce, eliminate and make changes for better results. Due to COVID-19, only "Dreamteam mini" was held this year. The competition received 133 project submissions, representing 10% employee participation and it is expected that their inventions would help lower operating costs by Baht 1.4 mn per year.

"Dream Team Mini" Contest Results: COVID-19 Edition

The Sound of Service by Central Westgate Team

During the pandemic, the Company issued a safety measure requiring customer relations employees to wear face masks and face shields and provide their service from behind acrylic counters to ensure employee and customer safety. The measure had an unintended effect causing communication issues, which affected both service quality and customer satisfaction. The Central Westgate Dreamteam, consisting of employees from customer services and systems engineering, came up with a simple solution to address the problem - setting up a speaker and a microphone at both sides of each customer service counter and a hidden on-off switch that would only be turned on when a customer starts talking. Low cost, effective and in compliance with the safety measure, the solution was a great success and was subsequently rolled out at all branches.







Customer counting device in fOOdwOrld



Escalator distance warning device

Visitor Counter for Food Parks and Proximity Sensor for Escalators by Central Hatyai Team

Due to the COVID-19 outbreak, many employees had to be assigned to screening tasks including temperature checks, asking customers to check in and check out with the contact tracing app "Thai Chana" or given a new role to carry out other safety measures such as monitoring the number of customers in the Food Parks and encouraging social distancing on escalators. This resulted in staff shortages and ineffective manpower utilization. To solve the problem, Central Hatyai Dreamteam, utilizing infrared sensor technology, developed a visitor counter and a proximity sensor for escalators. The infrared counter automatically counts customers entering and exiting the Food Parks with a screen displaying the number of people allowed inside. To promote social distancing on escalators, infrared sensors are set up on both sides of the escalators to detect customers and warn them to maintain physical distancing. Further refinements were made to increase visual appeal and ease of use after photos of the prototypes were shared with the COVID-19 Ad Hoc Team and the final versions of both devices were installed at every branch.

3. High Performance Organization

Performance Management

Continuing from 2019, the Company updated our job evaluation standards and responsibilities by using the tools and job family framework of Central Group. In addition to adding positions to the job structure, adjustments were also made to the employee performance review process. The new process follows 3 steps.

- Self-evaluation in which employees measure their performance against the goals and objectives laid out in the Individual Performance Management Plan, which is divided into four parts: 1) Shared corporate result; 2) Strategic result in four dimensions - G-Growth, B-Brand, E-Efficiency and S-System; 3) T-Team result; and 4) Special project result, which covers projects or special plans carried out with colleagues from different departments, divisions or outside the Company.
- 2) Supervisors will provide face-to-face feedback to employees.
- 3) The initial performance ratings will be collectively discussed at manager-level meetings in the calibration process, which is the last step. The final results are used to determine pay raise, annual bonus and promotion as well as create individual development plans for the following year. In 2020, the Company also began using 360-degree feedback to enable employees to feedback their supervisors through the People manager survey of which 96% of employees took part in the evaluation.

Enhancing Work Environment

Through the "Smart office" project, we are building a modern workspace to fit our employees' needs and changing lifestyles. Remodeling began in 2019 but, due to the COVID-19 pandemic, work models and office designs had to be re-adjusted to ensure workplace safety and health. A new communication channel via Workplace management application was also added to make facility support services more convenient for our employees.

Process Improvement

Aligning with good governance principles, the Company continues to improve human resource management to offer competitive employee benefits package. At the Company, compensation and promotion of employees are determined without regard to gender, race, ethnicity and disability. Using the same process, this year we focus on adjusting the benefit offerings to better accommodate changing lifestyles and needs. This includes supporting air travel for all staff, offering health insurance to employees' families, expanding health care coverage at partners hospitals and negotiating a special arrangement for COVID-19 insurance purchase. As part of modernizing the Company's job structure, layers of management have been reduced and the span of control increased giving employees greater job autonomy.

Digital Transformation

In addition to implementing smart systems for employeeemployer transactions, the Company, as part of our digital workforce development plan, launched a new Human Resource Information System "CneXt," which supports both self-service and work from home, to help speed up HR process. During Phase I of the system rollout, key functions performed by CneXt included Employee profile, Benefit & Payroll, Recruitment Management and Learning Management System. Ahead of the rollout, the Company implemented an online company-wide training program between May and June 2020 holding 344 classes, which were attended by 98% of the workforce or 4,848 employees. The success of the rollout was partly due to the deployment of CneXt Change Agent who helped employees in their departments and subgroups learn how to use the new system and passed on their comments and feedback to developers for improvement. As the Company accelerates towards digital HR transformation, in 2021 all HR operations including Performance management will be run through the CneXt system.

Employee Safety

We comply with safety and health legislation and have set up Occupational Safety and Health Committees (OSHC) at corporate and branch levels. The committees have 346 members - 186 members representing the employer and 160 members representing the employees – who represent 7% of the workforce (contract employees are not included). The responsibilities of the Corporate Occupational Safety and Health Committee now include conducting a safety walk on a quarterly basis and, if found, site incidents or hazards and risks needing corrections will be reported by scanning the QR Code on the Workplace Management application. The proactive efforts undertaken to prevent and reduce workplace incidents and occupational diseases and address unsafe environment led to improved safety performance, as detailed in "Sustainability Performance" on website at www.centralpattana.co.th/storage/download/ sustainability/reporting-library/en/20210429-sustainabilityperformance-en.pdf. Work-related injuries recorded in 2020 were primarily due to carelessness and included personal injuries sustained by employees while trying to mitigate an impending accident. One site accident reported by our contractor was also caused by carelessness. The Company thoroughly investigates all workplace incidents and learnings from them are implemented to prevent recurrence of similar incidents. Safety inspections are also conducted on a regular basis and the implementation of corrective actions is tracked until completion and reported to all relevant bodies. During the outbreak of COVID-19, additional safety and health activities were carried out to foster a strong health and safety culture.

In our efforts to standardize procedures for occupational safety and health, the Company is preparing to achieve ISO 45001 certification and began using the Smart Property system to record incidents under Incident category for report, risk assessment and prevention.

Respect for Human Rights

We promote respect for human rights of our employees and stakeholders and are committed to making sure our company is not complicit in any human rights abuse. In 2020, the Company conducted HRDD-Human Right Due Diligence and HRIA-Human Right Impact Assessment with our employees (as described in the 2020 Annual Report's Human Rights Policies and Procedures section). The outcomes informed our development of the Human Rights Roadmap 2020-2022 under the "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework." The roadmap, covering three focus areas including safety, respect and fair and consisting of six core plans, sets out expected outcomes as well frequency of reporting to the Corporate Governance and Sustainability Committee.

Human Rights Roadmap 2020-2022

- 1) Review policies and procedures on rule of law and human rights.
- 2) Raise awareness of the company's online whistleblowing system, which is available at https://www.centralpattana.co.th/en/whistleblowing, inside and outside the Company.
- Promote the rights of employees including subcontract employees to a safe and healthy workplace.
- 4) Revise the Fair and Equal Treatment practice.
- 5) Implement the Protect, Respect and Remedy Framework for customer relations employees (including subcontract employees).
- 6) Conduct human rights training for supervisors, employees responsible for managing and overseeing other employees and subcontract employees.

Employee Retention and Engagement

Our approach is as follows:

- Listen to their opinions and suggestions, ensuring fair treatment of employees at all levels and encouraging dialogue and collaboration between the Company and employees or employee representatives in informing decision-making about the quality of working life.
- Integrate corporate culture, values and beliefs, which serve as our guiding light in thinking and decision-making, into the everyday fabric of the Company to align employees with Central Pattana's purpose of "IMAGINING BETTER FUTURES FOR ALL." The shared beliefs instilled in our employees will guide everything they do at work including striving for continuous improvement to achieve better futures for all. The four core beliefs we live by are: POSITIVITY, DYNAMISM, CUSTOMER CHAMPIONS and COMMUNITY AT HEART. At the Company, we nurture and create different types of change agents from Central Pattana Leader, a leader who lives and breathes our four core beliefs; to CneXt Change agent, a leader who guides the rollout of the CneXt system; to Centrality leader, a leader in creating shared value.
- Develop an employee engagement survey under "CG Voice," based on Aon Hewitt's Employer of Choice survey methodology, to assess employee engagement in two dimensions - basics and engagement drivers, which are divided into four and three categories, respectively. In 2020, 95% of employees took part in the survey, which revealed an overall employee engagement score of 83%. This was a 14% increase from 2019 and by Aon Hewitt's standard puts Central Pattana in the high performing company category. The Company's human resources team and division heads will analyze the survey data including the engagement score and factors influencing employee engagement and use them to develop employee engagement plans and report the findings to the People Development Committee and the Recruitment and Compensation Committee. In 2020, priority was still given to addressing factors that affect talent engagement, and employee engagement score and turnover rate were both established as performance indicators.



Adaptations amid COVID-19 Crisis

In the wake of the COVID-19 outbreak, the Company had to close all shopping centers for 56 days. Measures were rolled out to protect the health and safety of our employees and support them through these challenging times.

- Additional employee management measures during the outbreak included COVID-19 insurance for employees; distribution of masks and sanitizers; establishing work from home guidelines, A/B Day shifts; strict screening, reporting and quarantining process; putting in place protective measures for vulnerable groups such as pregnant women; and launching a COVID self-assessment application for employees.
- Switching to VDO conferencing, cloud-based information systems and remote working through e-workflow.
- Utilizing social media for employee communications and engagement to stay connected with our employees and ensure that they are kept abreast of the company news and updates; and launching a virtual employee engagement initiative including hosting real-time activities on Workplace Live under "HC We Care LIVE" on every Tuesday and Thursday to update employees on work-related news and under "Happy Friday," which were held on Fridays to give employees a chance to relax and have fun together as well as share stories and experiences. Additionally, a psychiatrist was invited to offer advice on self-help and stress management.
- Leading by example, the Company management recognized the dedication and work efforts of employees during the COVID-19 outbreak and kept them informed through:



- Sharing Smiles As a follow-up to thank you video messages during the closure, our executive management team, once restrictions were eased, travelled across the country to all 33 branches to show support and lift employee morale under the activity #WeWillGetThroughThisTogether.
- Q&A with CEO The activity gave employees an opportunity to connect directly with our CEO and ask him questions about the direction and state of the Company and the impact of COVID-19 on the business via Workplace. Mr. Preecha Ekkunagul personally responded to every question submitted on the platform and posted his replies on the Company's internal communications channels.

When the COVID-19 situation began improving, the Company employed both online and offline channels to communicate and inform employees of the Company's direction and new developments to keep morale up and boost their confidence through carrying out the following activities:

 Lunch with CEO - Employees are invited to join our CEO for lunch where they engage in casual and informal conversations. The activity was launched in August and held 5 times through August - December 2020 where 60 employees attended.



- Townhall is a platform for two-way communication held at the company hall and livestreamed company-wide or to select groups so that employees and management can share updates and ask questions. The first townhall meeting was held in October 2020 to communicate change and drive alignment around the Company's objectives and shared values that shape the identity of Central Pattana as the company that is "Imagining better futures for all."

- Central Pattana Step Up Challenge - From encouraging employees to stay fit by walking or running and converting those steps into money for charity, #NextStepWithCentralPattana (formerly CPN Step 2 Share) has now been expanded to include any form of exercise to support employee health and wellbeing. Marking the 40th anniversary of the Company, the goal of 40,000,000 steps had been set and the cumulative steps were counted between November and December 2020.

Result



The employees (tallied during the period) took part in the activity.

1,416

or

29%



The cumulative distance walked has reached

354,923,557

steps

which equal

283,939

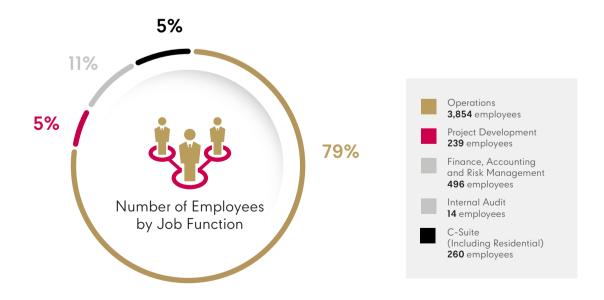
kilometers (1,250 steps are equal to 1 kilometer), well above the target.

Sustainability Performance: Employee Management and Engagement

Topic	2020 Performance	Plan for 2021		
Sustainability Indicator	 Established "CG Voice Score" as a performance indicator and target to achieve an employee engagement score of 75%. In 2020, the Company achieved an employee engagement score of 83% - a 10% increase from 2019 and surpassing the target by 8%. 	Establish "CG Voice Score" as a performance indicator and target to achieve an overall employee engagement score of 77% and a talent engagement score of 75%.		
Recruitment and Talent Acquisition	 Carried out the Employer of Choice plan primarily through online channels. In addition, the Company, as part of Central Group, has been ranked among the country's top 10 most attractive employers for young people. (www.workventure.com) No union members were employed and there were efforts to unionize. 	Implement the Employer of Choice plan.		
Leadership and Employee Development	 Strengthened the capacity of shopping center general managers in business management and sustainability partnerships through implementing the GM Program. Monitored the implementation of the Individual Career Development Plan: ICDP in which 96% of target employees were making progress on their career path as planned. 	 Implement the GM Program and use HCROI to measure the project outcome. Identify key n-3 positions and successor. 		
High Performance Organization	 Through implementing the employee engagement plan, employee voluntary turnover rate dropped considerably but remained within the normal range. The Company recorded no employee complaints or labor disputes. 	 Conduct a study on organizational restructuring to support agile transformation. Build a corporate culture based on four core beliefs. Implement the Human Rights Roadmap 2020-2022, which covers three focus areas including safety, respect and fair. 		

Total Number of Employees in 2020





3.3 Supply Chain Management



The Company works collaboratively with our suppliers to ensure transparency and fairness in all supply chain activities. Together, we seek to minimize the impact on communities, society and the environment and uphold human rights and safety compliance. Our supply chain management plan, which guides how we engage with suppliers across the value chain from development and construction to operations and marketing to corporate, categorizes our suppliers into 12 groups by service provided (as shown in our website: www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholderengagement/supplier).

Supply chain planning at the Company involves analyzing supplier risks in two dimensions – risks in product and service delivery and environment, social, and governance (ESG) risk and evaluating suppliers based on annual spend, dependency and substitutability and difficulty to replace (e.g. services reliance on unique expertise). According to spend analysis (which derived only suppliers in Operation, Marketing, Corporate and exclude utilities providers), 54 of the Company's 4,018 suppliers in 2020 received more than Baht 10 mn in spend annually and accounted for 52% of total procurement spending.

2020 Supplier Spend Analysis

Supplier Tier	Spend Tier (only suppliers in Operation, Marketing, Corporate and exclude utilities providers)	Number of Suppliers	Spend (Baht mn)	% of Spend
Tier 1	More than Baht 10 mn	54	2,103	52
Tier 2	Over Baht 1 mn but not exceeding Baht 10 mn	468	1,448	36
Tier 3	Less than Baht 1 mn	3,496	499	12
Total		4,018	4,050	100

The Company used the result from spend analysis, classified further into nine sub-categories¹, to improve procurement process as a part of corporate operational excellence plan.

The Company employs a number of strategies to manage risk in our supply chain. This includes identifying potential

suppliers and encouraging sustainability practices through supplier selection, screening and performance evaluation, collaborating with suppliers to develop innovative solutions and optimizing our procurement process under operational excellence project.

Remark: 1(1) Office administrative (2) General product (3) IT/Service standard/Audio visual (4) Building&system supplies (5) System maintenance service agreement (6) Outsource&subcontractor (7) Marketing relevance (8) Food supply and service and (9) Building service and renovation.

1. Supplier Selection and Screening

Identifying prospective suppliers is an important part of our supply chain management strategy. We encourage companies to explore new possibilities with us to reduce dependency and increase opportunities for local and small businesses. Prospective suppliers can register their company via our partner's online registration portal. In 2020, the Company received 1,147 new suppliers result in 4,060 total suppliers (as of December 2020), while 1,162 suppliers are local suppliers and 358 suppliers are online registered suppliers (27% and 9% of total suppliers respectively).

At the Company, users are required to complete a supplier evaluation by scanning a QR code on every purchase order and every item purchased through the Company's procurement system. This information is automatically fed back to our suppliers including corrective actions and used in our supplier selection process in the following year. In 2020, 51% of total activated suppliers were passed supplier evaluation process. The outcome from the evaluation led us to improve our tracking PO system more efficiency by reduce human error in inputting process.

The outbreak of COVID-19 has pushed the Company to re-imagine our supplier identification process and make changes to better meet user needs. For example, as factories struggled to keep up with the demand for hand sanitizers amid the pandemic, the Company addressed the shortages by working with alcohol manufacturers and cosmetic packaging companies to produce and package hand sanitizers and distribute them to all branches.

2. Co-Creating Value and Innovation

In 2020, the Company continues to work collaboratively with suppliers to develop innovative solutions especially in the area of development and construction. Below are some of the examples:

 Partnered with The Siam Cement Public Company Limited and S.M. Concrete and Construction Limited to use recycled concrete aggregates (RCA) obtained from pile foundation to build roads in the Central Siracha project, which reduced transport of materials, bringing a positive impact on the environment and contributing to a GHGreduction of approximately 198.26 tCO_aeq.

- Utilized Building Information Modeling (BIM) to create a 3D virtual construction of subtextures, which not only improves efficiency and coordination among stakeholders but lead to shorter project lifecycles and lower costs. The Company trialed the technology in the Dusit Central Park project.
- Worked with Trusty Project Management Co., Ltd., Standard Performance Co., Ltd. and SSS&P Engineering Supplies Co., Ltd. in implementing expansion of "Journey to zero" in the development of Central Siracha. The Company, with partners, trained construction workers to properly sort food waste and produce fermented bio-extracts in their living quarters to prevent odor problems in the construction site. According to the monthly surveys the Company conducted with residents in the surrounding communities, the satisfaction level of respondents regarding the solution to odor issues increased by 56%.
- Expanded the reuse concept, for instance, replacing floor-to-ceiling wall partitions in renovation projects with steel knock down partitions, which are less intrusive and more portable and can be taken down and repurposed in other projects. The materials were trialed during the renovation of Central Rama 2. Another initiative is the reuse of 20 storage containers as temporary office and living quarters at construction sites, which would be transported and reused at other sites when needed. Now, the containers have been relocated and are being reused in Central Ayutthaya project.
- Expanded the reduce concept, for instance, introducing an online system for SI: Site Instruction to enable digital authorization and mass notification to reduce paper-based correspondence between the Company and contractors resulting in 10% reduction in paper consumption. This year, the Company also rolled out the Defect Online Application in all construction projects after a successful trial at Central Pattaya Beach leading to 30% reduction in paper use.
- Expanded the recycle concept, for instance, installing combined drainage systems to reclaim and recycle condensate from split-type air-conditioning systems at Central Siracha and Central Ayutthaya projects after a successful trial at Central Village.

 Continue the Environment and Health program, the Company began mandating installation of dust collectors at all construction sites; installed filters and spray nozzles at all shopping centers' Fresh Air units; replaced standard fans with energy-efficient fans or EC Plus; and trialed UVC sterilizers and plasma sterilization systems at centralwOrld.

During the COVID-19 pandemic, the Company and our contractors have put in place prevention and protection measures at all project sites including temperature checks, setting up automatic disinfection gates and hand washing and sanitizing stations and providing masks to workers who are required to wear them while on premises.



Learn more about Co-Creation and Innovation on page 136 of the 2019 Annual Report and at www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/supplier

3. Operational Excellence to Improving Procurement Process

As a continuation of last year's plan, the Company, together with external consultants, continues to optimize our procurement process and supply chain. At the Company, we classify goods and services into nine procurement categories¹ (excluding development procurement and utility providers) and put in place five key operational plans:

- Strategic sourcing: Perform a procurement analysis in two aspects: 1) by value and quantity per purchase order; and 2) total purchase orders issued each year to improve sourcing.
- Master data structure and register in catalog: Enable improved data quality, more efficient catalogue buying and robust data collection and analysis.
- Supplier partnership: Develop strategic partnerships with suppliers based on spend analysis and work collaboratively with these partners to improve procurement process and build innovative solutions. In 2020, the Company aimed to develop partnerships with four top suppliers for office administrative, general product, building and system supplies and marketing (assessed in terms of annual spend, frequency and distribution capability).
- e-Procurement: Improve the system to better align with the new procure-to-pay process and rolled out Robotic Process Automation (RPA) to automate routine and repetitive tasks and minimize human errors.
- Strategic buying: Analyze the value and use case of products/services and use these data to guide decisions about buying and contract award process e.g. high value goods/services - normal use and low purchase frequency, low value goods/services - frequent use and high purchase frequency.

Sustainability Performance: Supply Chain Management

Topic	2020 Performance	Plan for 2021
Sustainability Indicator	Process Improvement, which included purchase/ procurement process and supply chain management was completed as planned (Phase I).	Continue Phase II of Process Improvementfor Operations.
Supply Chain Management	 1,147 new suppliers and contractors (do not include foreign suppliers) or 100% of new suppliers in 2020 passed the sustainability assessment, which covered economic, environment and social dimensions. Assessed service quality of active suppliers and contractors in 2020 via the online supplier assessment system, which was completed by direct purchasers/ procurers. This year, 36% of purchase orders placed through the online purchase/procurement system. Used e-auctions for 85 procurement projects worth more than Baht 185 mn, making cost management 33% more efficient. The Company had 1,162 local suppliers representing 27% active suppliers in 2020, generating Baht 880 mn circulated in community. The Company recorded a minor accident, in which workers had to pause work for 18 of the 4.1 mn hours worked in the development and renovation projects this year. The Company did not receive any complaints or grievances regarding human rights violations, labor exploitation or negative community and environmental impact due to development and renovation projects in 2020. 	 Target to increase the proportion of local and retail suppliers throughout the supply chain to 10% of suppliers by 2022. Form strategic partnerships for innovation and supplier development.





3.4 Corporate Responsibility and Community Development



The Company has put in place a community development policy which focuses on building participation, community empowerment, quality of life and local pride. Our management approach is as follows:

1. Community and Environmental Impact

The Company seeks to reduce the impact we have on the communities in two respects related to corporate – traffic management and the environment, which is described in the section "Transforming Shopping Complexes into the Center of Life / Service Excellence/ Transport and Parking Services" and the section "Resource and Environmental Management Excellence", respectively. In 2020, no corporate activities have appreciable impact on the communities and the environment.

2. Community Engagement

Honoring Local Identity through Building Design

to instill pride in communities and promote local cultures. The Company has established design guidelines for our buildings in which local identity and heritage are to be incorporated into the structures and interior and exterior design of the building.

 The design of Central Si Racha is inspired by the semi-outdoor and green spaces of Central Eastville in Bangkok. As an industrial city, Si Racha people lead a busy, on-the-go lifestyle. Under the "House of Si Racha" concept, we are creating the "third home" for our customers where they can relax and shop with comfort and ease. In-store browsing and shopping experience is a journey from room to room and each of the shopping center's floor has its own theme. For Fashion Plus, it is "Dressing Room," a dream walk in closet for every shopper; Food Park is "Town's Kitchen," which incorporates metal and wood accents into the design; Lifestyle Zone is "Playroom," offering seamless journey of fun and play; Furniture, IT and Banking Zone is "Living Room," a nature-inspired lounge and lobby; and Family Zone is "Family Room," which is divided into separate areas from "Fun Attic," a dream space for children and young people to expand their imagination to "Dining Pod," where friends gather and share delightful meals in private dining pods to "Learning Pod," an edutainment zone for children.

• The concept behind Central Ayutthaya is "The Prosperity of the Capital", which is based on the Kyoto Model, a city in Japan that has been able to retain its unique cultural identity. The design is organized into four themes: Essence of Ayutthaya, Tourism, Lifestyle and Community. For example, the building façade borrows the style of late Ayutthaya period twelve rabbeted-angled Chedis and the shopping center's outdoor areas are designed to reflect the cultural heritage of the province, which is home to one of UNESCO World Heritage Sites. To highlight Ayutthaya's vibrant trading past, the traditional Thai house-inspired interior design is decorated with household items and everyday objects from Ayutthaya period and the present day.



Refer to our website for more details on Honoring Local Identity through Building Design at www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/community

How Local Identities are Showcased through our Building Designs Year 2019-2021

Shopping Center	Heritage-inspired Façade Design
Central Village	Ideal city of ancient Thailand founded on the land of gold with palaces, temples, houses and markets
Central Si Racha	Third home, a warm, inviting eco-friendly space offering seamless journey and natural greenery
Central Ayutthaya	Late Ayutthaya architecture e.g. twelve rabbetted-angled Chedis, recognized as worthy of World Heritage listing

Financial and In-kind Contributions

Public Space Projects





Community

Free and Discounted Use of Space





nd Community g Initiatives

In 2020, the company has allocated a combined space of more than 2,500 sq.m. for community use including Ayutthaya living square, a reconstruction of Ayutthayaera public square where visitors and locals can glimpse into the city's past and learn about its history and culture and Ayutthaya Interactive Gallery, which offers everyone from tourists to students an opportunity to explore the history of Ayutthaya through digital technology, offering a richer learning experience than reading or museum visit.



Refer to our website for more details on Community and Public Facilities for Community Use at www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/community



For state agencies, educational institutions, civil society organizations and non-profits including the Thai Red Cross Society. In the last 33 years, the Company and Central Group has provided space for the Thai Red Cross Society to set up temporary blood donation stations at the facilities we own. The partnership has led to a plan for permanent allocation of space for blood donation stations at shopping centers with the first fixed station open at the Government Center, Central Hat Yai, which collected 697,500 cc of blood in 2020. Additionally, 100 Central Group employees participating in the "Mask for Blood Hero" project made a trip to the National Blood Center, Thai Red Cross Society, to donate blood, giving 40,000 cc in total. The Company also held 21 blood donation activities at 33 branches across the country under the "Plus 1 More Donations, More Lives Saved" campaign as part of the "Central Group Blood Donation" initiative, which aims to donate 10 mn cc of blood, bringing the total blood volume donated by the Company to 3.4 mn cc. (Data as of June 2020, provided by the Thai Red Cross Society)

Together with our partners and networks, the Company held social good campaigns and activities at our shopping centers to promote understanding and awareness of issues of social, economic and environmental significance.

- Joined hands with Central Group and UNICEF Thailand to launch "Central-UNICEF Together for Every Child" for the fourth year under the theme #EatPlayLove: The Magical Power of Family to raise awareness of the role of families in early childhood development, physical and emotional. Due to the pandemic, the travelling expo was exhibited at only one out of 10 target shopping centers.
- Together with Magic Breath club under the Medical Association of Thailand Under Royal Patronage, the company held the roadshow event "The Magical Breath: Good Breath on Dusty Days" to raise awareness of PM2.5 pollution and distribute 1,000 face masks.
- Organized the "From Thailand to Australia: A Fundraising Concert to Save Australian Animals" benefit concert in which proceeds went to organizations involved in the bushfire disaster relief efforts in Australia including NSW Rural Fire Service, RSPCA Australia, WIRES (NSW Wildlife Information, Rescue and Education Service Inc.) and CFA (Country Fire Authority of Victoria).

3) Corporate **Donations**







Charitable

This year, the company supported Contribution communities and charitable

organizations through making financial contributions to education-related causes, relief efforts and other areas. During the pandemic, the Company, in collaboration with Central Group and Tiang Chirathivat Foundation, donated more than 2 million baht worth of 4,000 relief packs and other essentials to flood victims in Ubonratchathani. Nakhon Ratchasima and Nakhon Si Thammarat provinces. The company and Central Group also joined hands with the Equitable Education Fund (EEF) under the Office of the Prime Minister, to donate 1,700 relief packs to help disadvantaged students who were missing out on school meals due to school closure during the COVID-19 through "Meals for Kids."



4) Volunteering



In addition to providing opportunities for employees to participate in volunteer

activities during office hours, the Company encourages all employees to engage with communities in meaningful ways by donating their skills and expertise to create a positive impact on society, culture and the environment. In April 2020, 11 firefighters from Central Chiangmai and Central Chiangmai Airport helped fight wildfires in Chiang Mai province and handed over firefighting equipment including fire hoses, portable fire pumps, protective clothing and SCBA (Self-Contained Breathing Apparatus) and 1,000 bottled water to the province. Throughout the year, employees in the Company and Central Group also took part in "Centrality," a project seeking to create shared value between business and society. However, because of COVID-19 this year's employee volunteer program had to be scaled back and only 84 activities were organized in which 2,526 employees participated, (subject to data availability; include employees attending more than one activity but do not include the hours employees donated to make face shields under "We Care for All"), a decline of 36% from 2019.

Chapter 19

3. Community Development

1) Local Economy

The Company, in collaboration with Central Tham and Central Group, empowers local economies through supporting market mechanisms in communities in two forms:

 Permanent retail space for organic farm products under the "Jing Jai Farmer's Market" scheme. To date, the Company





In-Kind Community
Givina Initiatives

has set up Jing Jai Farmer's Market at 12 shopping centers (from total 22 markets² across country), benefiting over 2,747 farming families in 318 subdistricts and generating more than Baht 158 mn in local economies. The Company also provided spaces for farmers to promote and sell their products and build brand recognition and together with the Royal Project Foundation held the Royal Project Fair every Friday at five shopping centers which were Central Pinklao, Cnetral Rama 2, Central Rama 3, Central Rama 9 and Central Fastville.

 Curated collection of New Year gifts filled with unique community items and folk wisdom creations. In 2020, the Company, together with Art Bridge Chiang Rai and



Cash Contribution

organizations in Chiang Rai, the most ethnically diverse province in Thailand, which is also known as "The Land of Artists and Arts," carefully crafted special gifts "The Biggest Happiness is Never Stop Giving" – a creation of power, faith, wisdom and the public inspired by three prominent artists and natives of Chiang Rai Tawan Datchanee, Chalermchai Kositpipat and Lord of Mathy Vachirodom (Wor. Vajiramethy) and many others. In addition, a selection of handmade and embroidered hill tribe fabrics was sourced and housewife groups in Chiang Rai and Phayao provinces employed to make tote bags. The arts and culture promotion activities generated economic benefits back to community.

2) Education

Education is the foundation of society. Through "Central's Education" and "CPN Young Thai Intellectual Cultivation" programs, the Company





Cash Contribution

seeks to promote learning and education by providing two types of support: infrastructure and skill development for students and teachers. In 2020, the Company and Central Group funded projects in 22 schools in nine provinces, which included:

- Supported construction of the learning centers at Ban Cha Nu Border Patrol Police Learning Center (Chirathivat Upatham) and Ban Pha Thai Ngam Border Patrol Police Learning Center and implementation of eco-friendly design solutions at Lady Tawee Maneenuch Border Patrol Police School in Mae sot district, Tak province, including maximizing the use of natural light in school buildings and installing solar rooftop panels.
- Supported construction of model kindergarten classrooms equipped with parawood furniture at Ban Thap Boek Ruam Jai School in Phetchabun province and Wat Wareewong School in Trang province.
- Supported schools to become Sufficiency Economy Philosophy learning centers providing classroom learning and skills training in mushroom cultivation, vegetable growing and animal husbandry and other management skills such as basic accounting at 10 schools including: Chiang Mai - Ta Nuea Wittaya School, Wat Ta Duea Community School, Ban Mae Sa School and Ban Pong Noi School; Udon Thani - Ban Dong Udom School and Ban Nong Saeng; and Ubon Ratchathani - Ban Kang Sao School, Ban Phonmaung Mathan School, Ban Tha Hai School (Hai Thong) and Ban Sang Ming School.
- Supported the Partnership School initiative, a collaborative model between schools and vocational colleges aimed at fostering production of job ready graduates who meet the demand of domestic and international labor markets through equipping students with essential life skills and livelihood skills. Participating schools include Wat Nong No Tai Community School and Saraburi Vocational Education College in Saraburi province; Ban Nong Na Kham School and Udonthani Vocatinal College in Udonthani province; Ban Khuan Sawan School and Trang Technical College in Trang province; and Sakae Rat Wittayakhom School in Nakhon Ratchasima province.

3) Others

- Provided equal opportunities for disadvantaged groups e.g. free space for registered lottery vendors with disabilities.
 In 2020, 48 vendors participated in the program, representing 1% of total employee in the Company or
- Joined more than 24 state agencies, state enterprises, businesses and universities to pledge support for gender equality, tolerance and acceptance of diversity to promote peace and harmony in society at the "Gender Equality and Elimination of Discrimination" event, held by the Department of Women's Affairs and Family Development, Ministry of Social Development and Human Security.

Joined hands with AGRITEC, the National Science and Technology Development Agency (NSTDA), Sangkom SukJai Society (Sampran Model) and students and professors at Maejo University's Faculty of Agricultural Production to improve job opportunities for people with disability in Wang Nuea district, Lampang province under the project "Planting Vegetables and Love." In addition to building bamboo greenhouses and raised beds, participants received training on farming, composting and harvesting and produce will be sold at Jing Jai Farmer's Market at Central Lampang.

Our COVID-19 Response

about Baht 5.7 mn contribution.

The company launched a campaign, "WE CARE FOR ALL" in the wake of the COVID-19 outbreak to provide relief and support to those affected including customers, suppliers, employees, health care workers and communities.

Volunteering

Over 1,700 employees made 60,000 face shields, which were given to 5,000 health care workers and government officials at more than 40 hospitals and healthcare facilities across the country under the "WE CARE FOR ALL" campaign.



- 2. Our employees volunteered in a number of relief efforts during the crisis.
 - Central Festival Phuket employees served more than 32,000 meals to those in need and worked in a Royal Kitchen.
 - Central Chiangmai Airport employees raised funds to make 200 care packages, which contain rice and essential items, for housekeepers, security guards, drivers, landscape gardeners and temporary staff.
 - Employees at Central Rattanathibet, meanwhile, teamed up with Miracle of Life Foundation to distribute food supplies and meals in surrounding communities and together with Rattanathibet Police Station set up "Tu Pan Suk" community pantry to help families affected by the crisis.



Face Shield 60,000 pieces

Relief and Rehabilitation

1. Joined hands with more than 90 partners to launch





- "ALL FOR HEROES: Meals for Healthcare Professionals," an initiative to deliver 10,000 meals and 30,000 care packages, containing food supplies and bottled water, to the "heroes" at six hospitals assigned for COVID-19 treatment including Siriraj Hospital, Phramongkutklao Hospital, Ramathibodi Hospital, Rajavithi Hospital, Chulalongkorn Hospital and Police General Hospital.
- 2. Together with our business partners, the Company launched "Caravan of Happiness" to distribute necessities and food supplies to communities and organizations affected by COVID-19. Two donation stations were set up at Major Tower Thonglor 10, fl. 1 and Groove Zone Supercar Parking, fl. 1 at centralwOrld, so that Company employees and those who work at Major Development and





All for Hero "Caravan of Happiness"

its subsidiaries as well as the general public can drop off items. The caravan of 6 pick-up trucks, supported by Mitsubishi Motors (Thailand), delivered the donated items to Pathumwan District Office as well as 5 hard-hit communities including Ban Khrua Community, Phra Chen Community, Soi Ruam-Polo Community, Soi Kulab Daeng-Soi Pluk Chit 3 Community and Wat Barom Community.

Rent-Free Space



In-Kind Giving

Community

1. Ruamjai Fruit Market: Provided over 40,000 sq.m.

of rent free indoor and outdoor retail space at 33 shopping centers to more than 6,000 farmers and small businesses for a period of 3-6 months, which is worth over Baht 150 mn, to help generate Baht 1,500 mn in local economies.



Ruamjai Fruit Market



Revival Market

2. The Company held over 180 promotional events and activities, 30 at Convention Hall and 150 at promotion spaces and provided six-month rent free retail space, worth more than Baht 100 mn worth, to give workers, professionals and businesses affected by COVID-19 opportunities to earn money during the crisis e.g. Revival Market car boot sale and activities to support flight crew and airline employees such as "Talad Nangfa Yak Kai" (Angels Market), "Pinto Nangfa" (Angels Lunchbox), "TG Market" and "Taladnad Air Hostess" (Air Hostess Market).

Sustainability Performance: Corporate Responsibility and Community Development

Topic	2020 Performance	Plan for 2021
Sustainability Indicator	 Community engagement was established as a performance indicator, which included 10,000 hours of employee engagement/volunteering (lowered from original target at 30,000 hours due to COVID-19). In 2020, our employees contributed 10,037 hours of volunteer service to community co-creation and CPN Volunteer activities. 	Establish community engagement as a performance indicator including 24,000 hours of employee engagement/ volunteering.
Corporate Responsibility and Community Development	Community Investment – In-Kind Contributions Provided Baht 3.5 mn of manpower and funding for community co-creation and CPN Volunteer projects and activities. Joined forces with Central Group to implement the social development project "Central Tham," providing Baht 23.9 mn worth of service to community. Held 84 activities, contributing to 10,037 hours volunteered as planned. Commercial Initiatives Organized 621 activities under "Center of Community," of which 134 were activities to support SME business. Provided Baht 53.7 mn worth of free space to government agencies and communities (including entrepreneurs and businesses affected by the COVID-19 pandemic). Charitable Donations Donated Baht 17.4 mn to charities, including budget for supporting education and for relief efforts. The Company did not receive any complaints regarding significant community and environmental impact.	 Provide free spaces to government agencies and communities, representing at least 10% of all activities by 2025. Study appropriate frameworks for Social Impact valuation or Return on Shared Value measurement.

Chapter 19

04

Resource and Environmental Management Excellence

Our climate change and environmental policy encompasses energy and water efficiency, climate resilience, environmental management, biodiversity and effective and sustainable waste management and incorporates a number of international standards including ISO 14001 Environmental Management System (EMS), ISO 14064-1 Greenhouse Gases, ISO 50001Energy Management, LEED: Leadership

in Energy&Environmental Design and the evaluation criteria for the Ministry of Energy's Thailand Energy Award and ASEAN Energy Award. Our goal is to maximizem resource efficiency, increase the use of alternative energy such as solar energy, boost water recycling, reduce landfill waste and lower greenhouse gas emissions.

Management Approach







O2 Climate Resilience



Water Management and Wastewater Management



04 Waste Management



05 Air Quality



6 Green Building



O7 Ecosystem
Management
and Biodiversity



Engaging
Communities in
Environmental
Development and
Management

4.1 Energy Management



We focus on energy efficiency to reduce our environmental footprint and combat climate change and establish management approaches to increase the use of renewable electricity as well as maximize energy efficiency across our operations.

1. Energy Management

In 2020, Central Pattana's energy consumption comprised usage from 34 shopping centers and seven office buildings. Our energy supply came from the following sources:

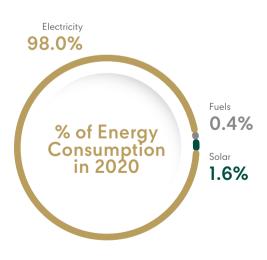
1. Non-renewable Sources

- Grid supplied electricity in 2020, 793,431 MWh of electricity were sourced from the Provincial Electricity Authority and the Metropolitan Electricity Authority, which represented 97.96% of our total energy consumption. The grid-supplied power is used for HVAC systems, lighting and our day-to-day operations.
- Fossil fuels and liquefied petroleum gas (LPG) represented 0.49% of our total energy consumption. Energy from fossil fuels is used to power engines such as lawn mowers, company vans and shuttle buses, equipment used during fire safety training and emergency power systems such as power generators and fire pump system, while LPG is used for activities in Food Parks under Central Pattana management² and during kitchen fire safety training.

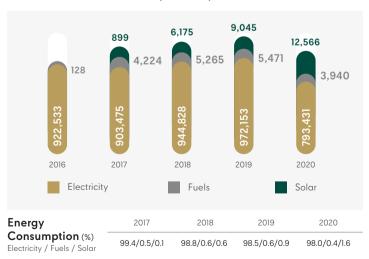
2. Renewable Sources

We continue to invest in renewable electricity and have completed the installation of solar panels on the rooftops of 16 shopping centers and parking facilities, which will supply energy for our buildings and water pumping systems. In 2020, we generated 12,566 MWh of solar energy, which represented 1.55% of our total energy consumption and a 39% increase from 2019. This was a result of onsite solar installations across seven additional projects including Central Westgate, Central Salaya, Central Chonburi, Central Nakhon Si Thammarat, Central Khonkaen, Central Rama 2 and Central Phuket. (Central Suratthani has been excluded as installation was completed in December 2020.) Our plan is to roll out solar installations across eight additional projects as well as explore other solar opportunities in the future.

Energy Source		Energy Consumption (Unit: MWh)				% of Energy	
		2016	2017	2018	2019	2020	Consumption in 2020
Non-Renewable	Purchased electricity from the Provincial Electricity Authority and the Metropolitan Electricity Authority	922,533	903,475	944,828	972,153	793,431	98.0
	Fuels	N/A	4,224	5,265	5,471	3,940	0.4
Renewable	Electricity generated from solar panels	128	899	6,175	9,045	12,566	1.6



Total Energy Concumption and Sources (Unit: MWh)



Grid supplied electricity accounted for 91% of our utility costs or Baht 2,897 mn.

² Tenant and retail store LPG usage is not included.

2. Our Management Approach to Electrical Energy Efficiency

is divided into 2 areas:

- Company Usage includes electricity consumption from common areas and HVAC systems under our direct control. We continue to improve our electrical energy efficiency policy and have set the targets to reduce our electricity intensity by 20% from 2015 levels by 2025 (company usage only) and cut energy consumption from 2019 levels by 4% in 2021. Examples of the energy efficiency initiatives we have implemented include:
- HVAC (Heating, Ventilation, and Air-conditioning) systems
 - Use of high efficiency chiller systems
 - Installation of AC Control Systems across 19 shopping centers to regulate indoor air temperature and humidity
 - Installation of Variable Speed Drives VSD on chilled water pumps and coolant pumps
 - Installation of high efficiency motor pumps on Chilled Water Pump - CHP and Condenser Pump - CDP in one project
 - Cooling tower system upgrades
 - Cooling tower fill replacement
 - Installation of temperature & humidity sensors across
 19 projects to enable semi-automatic control of the
 HVAC systems
 - Improving maintenance and operation of shopping center HVAC systems to optimize efficiency and better correspond to heat load fluctuations
- Responding to the Corporate Governance and Sustainability Committee's policy and green tax incentive schemes, we have accelerated implementation of our energy efficiency measures such as setting up, at three of our projects, escalator control systems and variable speed drives to enable slow speed operation and installation of variable speed drives, temperature & humidity sensors and solar panels as summarized above

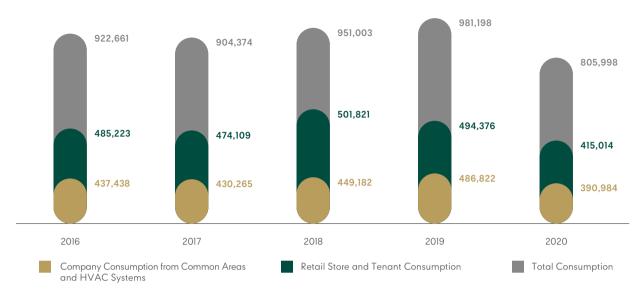
- We educate our employees on energy conservation through training to inspire green behavior change and instill in our workforce environmental and energy stewardship. Due to COVID-19, only two training courses could be held, which were attended by 148 participants (include employees attending more than one training) or 3% of employees. Additionally, we encouraged our employees to take part in Energy Day and "Dream Team," a company-wide challenge held annually to support development of energy efficiency solutions.
- 2. Tenant Usage Central Pattana operates the electricity and air conditioning systems in our buildings. Retail stores and tenants are charged on a per unit basis for their electricity usage, which enables them to monitor and manage their consumption efficiently. We actively engage with our tenants to encourage participation in energy savings initiatives and programs we are implementing.

In 2020, our total electricity consumption was 805,997 MWh (including from solar generation). Of this, 390,983 MWh were company usage and 415,014 MWh were tenant usage or 49% and 51%, respectively.

In the wake of the COVID-19 outbreak, the Thai government announced a number of control measures including temporary closure of all shopping centers nationwide for 56 days from March 22 to May 17, 2020. This, together with our energy savings initiatives and expanded renewable generation capacity, drove down our grid energy consumption in 2020 by 191,916 MWh, which was a 19% decline from 2019. However, due to COVID-19 uncertainty, the Corporate Governance and Sustainability Committee voted for amendment of the 2020 performance indicator for energy efficiency - adjusting it from 2% to 4% reduction in energy consumption by 2021 compared to 2019 levels.

Electricity Consumption by Activity

(Unit: MWh)

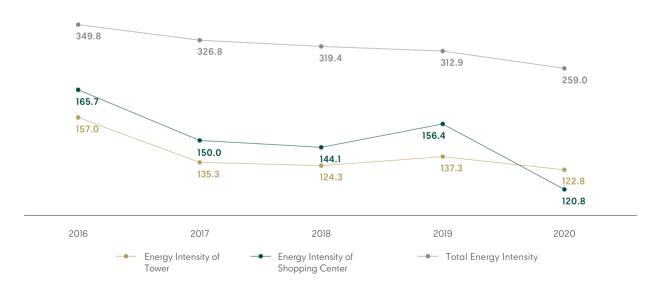


Remark: The number of projects used in calculating annual electricity consumption during 2016-2020 is as follows: 30, 32, 33, 34 and 34. The figures include shopping centers as well as office buildings.

In 2020, the energy intensity of Central Pattana's operations in shopping center (excluding tenant usage) was 120.8 kWh/m²

Energy Intensity

(Unit: kWh/sq.m.)



Remarks: (1) Considers only projects with normal full-year operation and exclude consumption of head quarter. The number of projects that are calculated is 28, 28, 30, 30 and 31 during 2016-2020 respectively.

⁽²⁾ The area used in the calculation is from the Net Leasable Area and common area according to global guideline.

⁽³⁾ Adjust energy intensity index during 2016-2019 according to building area which adjusted and future check in 2020.

4.2 Climate Resilience

We are acutely aware of the effects of climate change, both direct and indirect, on our Company from increasing energy costs to business disruption brought by climate-related natural disasters as a result of rising temperatures caused by our business activities. In 2020, the Corporate Governance and Sustainability Committee voted in favor of setting a long-term greenhouse gas emissions reduction target of 20% by 2025 from the baseline year of 2015, in line with the UN-SDG 13 Climate Action.

Greenhouse gas emissions arising from our business activities include:

- Scope 1 emissions are direct emissions from fuels that are combusted on site e.g. benzine, diesel and natural gas as well as leakage of greenhouse gases from refrigerants, fire extinguishing agents and methane from wastewater treatment system, for instance. Our long-term target is to reduce our Scope 1 emissions by 10% by 2025 from 2015 baseline.
- Scope 2 emissions are indirect emissions from the consumption of electricity in common areas and by HVAC systems as described in the Energy Management / Electrical Efficiency / Company Electricity Usage sections.
 Our long-term target is to reduce our Scope 2 emissions by 20% by 2025 from 2015 baseline.
- Scope 3 emissions are other indirect greenhouse gas emissions from employee commuting and corporate travel, the water and energy consumed by tenants and retail stores within their spaces as described in the Energy Management / Electrical Efficiency / Tenant Electricity Usage sections. Our long-term target is to reduce our Scope 3 emissions by 10% by 2025 from 2015 baseline.

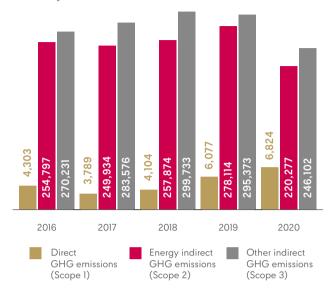
Through seeking verification and certification for Carbon Footprint for Organization (CFO) in the last four years, we have become conscious of Scope 1, 2 and 3 greenhouse gas emissions from our business activities, which stand at 1%, 47% and 52%, respectively. This led to the implementation of a number of emissions reduction measures across our operations with the key focus on reducing electricity consumption as reported in the Energy Management and Electrical Efficiency sections.

In 2020, our greenhouse gas emissions fell by 18% as a result of the 56-day closure during the national lockdown due to the COVID-19 outbreak and those implemented electricity measures. While there were a 21% reduction in Scope 2 emissions and a 19% reduction in Scope 3 emissions, our Scope 1 emissions increased by 12% from 2019 levels. The increase was largely due to refrigerant recharge and use of sulfur hexafluoride in high voltage switchgear in some of the shopping centers under our management.

Reinforcing our commitment to greenhouse gas emissions reduction across our operations, Central Pattana has joined Thailand Voluntary Emission Reduction Program: T-VER, an initiative developed by Thailand Greenhouse Gas Management Organization (Public Organization), and registered our solar project under the Renewable Energy category for certification of emissions reduction. The installation of 12,216 kWp solar PV systems across our 13 shopping centers is expected to reduce 10,247 tCO_eq/year.

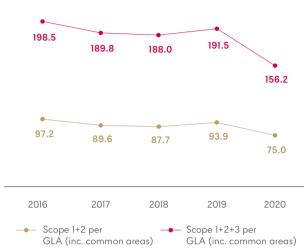
Total Scope 1, 2 and 3 Greenhouse Gas Emissions*

(Unit: tCO₂e)



Greenhouse Gas Emissions Intensity**

(Unit: kgCO₂eq/m²)



- *, ** Remark: (1) Total greenhouse gas emissions data include emissions from the operations of our shopping centers, office buildings and offices for rental and comprise direct emissions calculated using the operational control approach based on the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories and Thailand Greenhouse Gas Management Organization's (Public Organization) greenhouse gas emission disclosure guidelines.
 - (2) Emissions are calculated based on the number of projects that are in operation each year and include 1 office building and the Head Office. The number of projects used in the calculation is between 2016-2020 as follows: 32, 34, 35, 36 and 36 respectively.
 - (3) Coverage is now calculated based on net leasable area and common areas, in keeping with international measurement practices.

4.3 Water Management and Wastewater Management



1. Water Management

Central Pattana primarily operates in Thailand where Mekong River and Chao Phraya River run through.³ The country has a Medium-high Drought Risk and is ranked 45th on the global scale. Our operational risk assessment shows that water scarcity and severe flooding pose major risks to our business and identifies projects located in the northeastern region and Bangkok and its vicinity as vulnerable areas that are prone to drought as well as at risk of water supply shortage due to rising sea levels in the Central region. We, therefore, have established our water management and preparedness measures based on the 3R approach - Reduce, Reuse and Recycle. In 2020, the Corporate Governance and Sustainability Committee amended our long-term water reuse target to 20%⁴ by 2025 and set our water recycling target of 5% in 2021, using the 2019 baseline.





Set our water

recycling target of

20% by 2025

5%

in 2021, using the 2019 baseline

³ GRI 303-1

⁴ Include projects with onsite water recycling systems only.



Reduce

Install high-efficiency toilets with automatic flushing to reduce the amount of water used per flush and shorten the run time of the metering handwash faucets to minimize water waste.



Reuse

To reuse water from sources other than the water authorities, we have installed rainwater tanks and condensate recovery systems (in shopping centers that have compatible systems). The water is used onsite where possible including for watering plants and floor cleaning, for example.



Recycle

Water recycling systems have been installed across 17 shopping centers including two additional projects in 2020. The reclaimed water is used for activities such as watering plants, cleaning parking lots and toilet flushing. We have also been trialing use of recycled water to run cooling towers but found that over a period of time the performance of the cooling towers would be affected

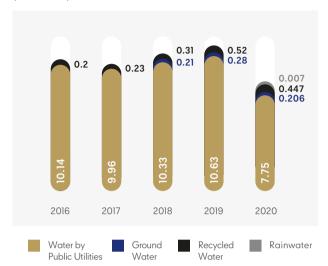
leading to higher energy usage. Despite this setback, we continue to explore new ways to improve our water recycling systems to increase the use of recycled water in our operations including utilizing ozone in the treatment of wastewater to ensure better water quality for the cooling towers.



Thailand experienced drought during the first half of 2020 as water levels in the country's dams and overall rainfall dropped by 30%-40% compared to 2019 levels. However, following the outbreak of COVID-19 and lockdown imposed by the government to slow the spread of the virus, water usage fell across the country. The 56-day nationwide closure of shopping centers under the government order led to a 36% decrease in water usage from 34 shopping centers under our management compared to 2019. In 2020, our total water consumption was 8.41 mn m³. Of this, 7.75 mn m³ were sourced from Metropolitan Waterworks Authority and Provincial Waterworks Authority; 0.21 mn m³ were from ground water in five projects; 0.45 mn m³ were from recycled water; and 0.07 mn m³ were sourced from rainwater tanks installed in two projects or 92.2%, 2.4%, 5.3% and 0.1% respectively.

Water Consumption

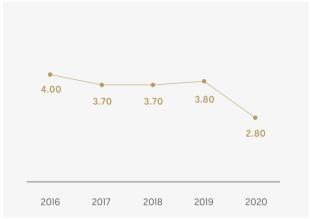
(Unit: mn m³)



Sustainable Development

Water Consumption Intensity

(Unit: m³/sq.m.)



Remark: The decrease in water consumption intensity in 2020 was due to COVID-19.

2. Wastewater Management

We develop guidelines for managing and operating sewerage systems in our shopping centers, which require that wastewater produced from all activities inside our shopping centers undergo pretreatment or preliminary removal of wastewater or sludge constituents before being discharged to the central wastewater treatment system. The pretreatment process comprises:

- · Installation of SBR: Sequencing Batch Reactor, where aeration and rapid sludge sedimentation occurs in the same tank
- Installation of deep shaft reactors, in place of primary clarifiers and aeration tanks
- After the pretreatment, the treated wastewater is discharged into the central public wastewater treatment system

In 2020, 5.49 mn m³ of treated wastewater were discharged into public water resources. Our procedure for wastewater discharge covers quality control⁵, record keeping and reporting as well as regular maintenance of sewage treatment equipment such as piping systems, grease interceptors, wastewater pumps, ponds and aerators, which is part of our preventive maintenance plan. Monitoring and testing of wastewater quality are carried out on a regular basis. If treated wastewater quality is found to fall below the required standards, the shopping center, which implements its own monitoring plan, will take a corrective action to identify and solve the issue to ensure that water discharges meet all applicable water quality standards.





Include testing and monitoring of Biochemical Oxygen Demand: BOD, Suspended Solid: SS, Dissolved Solids: TDS, pH, Grease & Oil, on a monthly basis, conducted externally by an ISO/IEC 17025 accredited laboratory



Chapter 19

4.4 Waste Management

In 2019, Central Group began implementing a waste separation policy and set the goal of achieving zero landfill under the Journey to Zero project. In 2020, the Corporate Governance and Sustainability Committee approved a long-term target of 50% waste to landfill reduction by 2025 and set the target to achieve 10% landfill reduction in 2020.

Our waste management approach focuses on advancing the circular economy, encouraging separation at source, making sure sorted waste is sent for reprocessing to maximize its potential benefits and engaging with key stakeholders including customers, tenants and employees.

1. Journey to Zero Performance - Customers

3 types of waste

Three types of waste bins are set up for general waste, recyclables and hazardous waste across the shopping centers under our management and the use of foam food containers has been eliminated in all our Food Parks.

PET bottles

Bins for PET bottles are set up across 35 Food Parks under our management and at Central Rama 9 as part of the "Care the Whale - Invisible Trash" initiative⁶, which is collaboration between Central Pattana, The Stock Exchange of Thailand (SET) and partners in the Ratchadapisek Road area. To raise consumer awareness of waste separation at source, diners are encouraged to bring their plates to the designated area in our Food Park. In the fourth quarter of 2020, the campaign "Sort Correctly, Get Your Rewards" was launched in which Food Park cleaners were enlisted to help separate plastic bottles from other waste. Through the activities, 7 tons of plastic bottles were collected.





Plastic film and bags

Central Pattana, in collaboration with PPP Plastic,⁷ set up "Bins for Recycling Bags by Magic Hands," which accept 12 types of plastics,⁸ across 17 shopping centers including all shopping centers located in Bangkok and its vicinity, Central Chonburi and Central Rayong, so that visitors can drop off plastic waste at their convenience. The initiative collected 6.2 tons of plastic film and bags (including plastic waste collected from tenants).



The initiative collected

6.2 tons of plastic film and bags



E-Waste

Continuing from 2019, Central Pattana, in partnership with Advanced Info Service, have now set up e-waste drop-off points across 34 projects nationwide to collect e-waste including mobile phones, batteries, dry batteries and gadgets for proper disposal, total 4,788 pieces. Under the program, 0.7 tons of e-waste have been collected, which more than 48 tCO eq of avoided greenhouse gas emissions.



- 6 www.facebook.com/carethewhale/
- PPP Plastic or the Public Private Partnership for Sustainable Plastic and Waste Management was established by the Federation of Thai Industries and the Thailand Business Council for Sustainable Development (TBCSD) to build collaboration in sustainable plastic waste reduction. (https://thaiplastics.org)
- 12 types of plastic film and bags include plastic bags, shopping bags, bread bags, sugar bags, ice bags, fruit and vegetable bags, bottled water packaging film, UHT liquid milk packaging film, shrink film, plastic mailing bags, bubble wrap and Ziploc bags/pill bags.

Reverse vending machines for PET bottles or ReFun Machines

were installed to raise consumer awareness and promote recycling of plastic bottles. Points are awarded for every bottle dropped off, which can be redeemed for gifts or discount coupons for use in stores under Central Group. To date, two machines have been installed at centralwOrld and Central World Offices. In 2020, 16,915 bottles or 286 kg of plastic waste were sent for recycling.



"ThinkDee" challenge

was launched in response to rising demand for food delivery during lockdown to encourage our customers to wash and return used food containers in exchange for CRG discount coupons. The activity was developed with insights from our customers and employee feedback was gathered after it ended. There were promotional activities throughout the month to remind customers to wash their food containers after use, ahead of the drop-off event held on July 10-14, 2020 at 16 participating shopping centers. 90% of customers correctly returned the washed containers and the challenge retrieved 6,500 takeout containers, totaling 159 kg.



The challenge retrieved totaling

takeout containers.



2. Journey to Zero Performance - Tenants

Our waste management is carried out in accordance with ISO 14001

Environmental Management System (EMS) including continuous process improvement for waste sorting and disposal. To date, 31 projects have achieved ISO 14001 certification. In 2020, journey to zero project in 34 shopping centers, ThinkDee the Wed Day project (Data collection from January 1, 2020 - December 31, 2020) and waste management in Central Lampang (Data collection from July 1, 2018 - June 30, 2020) participated in the Low Emission Support Scheme or LESS and under the scheme, the 794 tCO e of greenhouse gas emissions avoided by the shopping center's waste sorting project were verified and certified.



Greenhouse gas Greenhouse gas emissions avoided 794 tCO₂e

Fruit and vegetable scraps

Central Pattana, in partnership with Bangna District Office, Bangkok's Department of Environment and Nonthaburi Municipality Office, launched an initiative to separate fruit and vegetable scraps at source - restaurants and supermarkets - across 6 shopping centers including Central Bangna, Central Eastville, Central Pinklao, Central Rama 2, Central Rama 3 and Central Rattanathibet, and send food waste separated from Food Park diners' plates to organic waste treatment facilities for production of agricultural supplies such as animal feed, fermented bio extracts and organic fertilizers, and biogas. In 2020, 450 tons of organic waste was separated through the project.



Organic waste was separated

Recyclables

Building on our collaboration with Coca-Cola (Thailand), GEPP Sa-Ard and partners, Phase II of the Journey to Zero project - "Coke Collects x Central Group Journey to Zero" - was launched in 2020 to promote proper source separation of used packaging and recyclable materials for reprocessing and recycling. Project progress is tracked through a monitoring and evaluation system and activities are carried out to incentivize participation and support for sustainable waste sorting. The initiative, beginning with establishments under Central Restaurant Group, has now been expanded to other stores and re-launched as "Sort Correctly, Get Your Rewards" across six shopping centers including Central Bangna, Central Eastville, Central Pinklao, Central Westgate, Central Rayong and Central Village. Under the initiative, 797 tons of recyclable materials were separated and sent for recycling.



Recyclable materials were separated and sent for recycling

797 tons

3. Journey to Zero Performance – Employees

The Journey to Zero Committee

was established by the Company to help accelerate our efforts on waste sorting and management to ensure that we are achieving concrete results under the Central Group's Journey to Zero policy. The cross functional team met 12 times on a monthly basis and pushed forward a number of initiatives including the collaboration with AIS to set up e-waste collection points; "ThinkDee" challenge to accept used takeout containers; "Sort Correctly, Get Your Rewards" to motivate Food Park cleaners to help sort plastic bottles from other waste; "The Wed Day," an activity aimed at Head Office employees who were encouraged to sort recyclable materials at home and in the office; development of "CPN Waste Management", a web application for recording the volume of waste being sorted at source, which sends data to the business intelligence tool to provide real-time data and reports; continued development of the CPN Zero Hero application, which was launched in 2018, to enable point collection and redemption under "The Wed Day"; and weekly workplace engagement activity to raise employee awareness of proper waste sorting and disposal throughout 2020.

Seven-type waste segregation

In 2019, we removed individual desk bins from our office buildings after the rollout of the seven-bin system, ⁹ to encourage employees to reduce office waste and learn to sort their own waste while at work. The new system is now being used in all our office buildings including CPN Academy Center. In areas where there are limitations, four types of waste bins will be set up for plastic, paper, glass and metal, and hazardous waste with additional organic waste bins provided in staff canteens. Through the initiative, 11 tons of waste was properly sorted or 41% of total office waste.



"The Wed Day"

An expansion from the customer engagement activity "ThinkDee" challenge, "The Wed Day" was initiated by the Journey to Zero Committee to motivate Head Office employees to properly sort recyclable materials at home and at work to earn and redeem points for gifts such as trash bags for practicing waste separation at home. The activity was held every Wednesday for seven weeks from November to December 2020 during which 183 employees took part and a total of 1.23 tons of waste was sorted correctly.

Office paper waste sorting and reduction

In addition to using information systems for record-keeping, reference and approval, we have joined "Paper X," an initiative launched by SCG Packaging Limited Plc to collect sorted office paper waste for recycling and paper production. In one year, office paper use was reduced by 36% and through our participation in "Shred2Share" (www.ironmountain.co.th) six tons of paper waste was sent for recycling, which equated to 1.6 tCO_e of avoided greenhouse gas emissions.

Overflow - From Trash to Art

Central Pattana supported the artist Wishulada Panthanuvong in creating an art installation from trash, which would be exhibited during the Bangkok Design Week 2021¹⁰, by supplying her with four types of sorted waste including crushed aluminum cans, plastic caps, metal caps and plastic bags and packaging, as raw materials. The requested waste materials were segregated into the specified types within 15 days and the 290 kilograms of waste were delivered to the artist as planned.

⁹ General Waste: Blue, Plastic: Yellow-Pink, Paper: Yellow-Light Green, Glass and Metal: Yellow-Purple, Hazardous Waste: Orange, Organic Waste: Dark Green and wastewater from drink: Light Blue

¹⁰ Bangkok Design Week 2021, where "Overflow - From Trash to Art" by WISHULADA (FB page: WISHULADA) was set to be showcased, has been postponed due to COVID-19.

4. Journey to Zero Performance - Other Stakeholders

Reported in the Supply Chain Management / Innovation and Co-Creation Partnership sections. Due to the COVID-19 pandemic, awareness raising campaigns and activities in schools on waste sorting and circularity under "CPN Young Thai Intellectual Cultivation" have been postponed to 2021.

In 2020, 53,369 tons of waste (including waste awaiting disposal at the end of December 2020) were generated by 34 shopping centers. Of this, 4,119 tons were sorted and diverted from entering the waste stream, contributing to an 8% reduction of total waste sent to landfill.

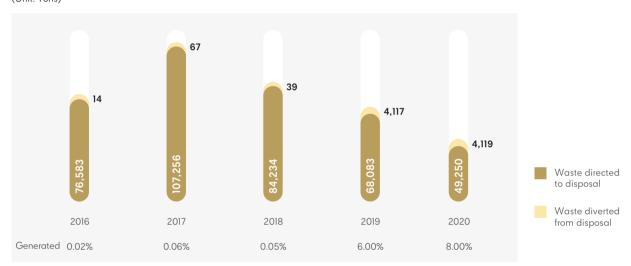


Sorted and diverted from entering the waste stream

Reduction of total waste sent to landfill

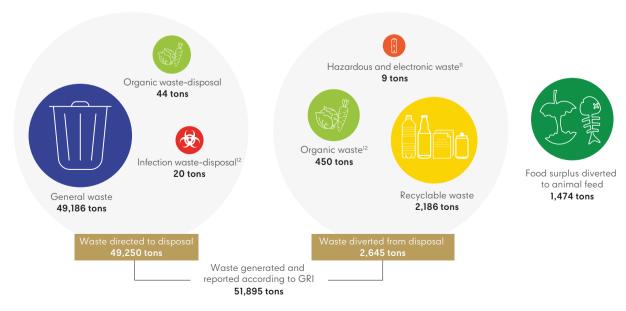
4,119 tons 8%

Total Waste Generated by Shopping Centers under Central Pattana Management (Unit: Tons)



Waste Generated and Waste Composition in 2020

(Unit: Tons)



¹¹ Such as light bulbs, batteries, paint buckets.

Regarding infectious waste produced from beauty clinics, tenants are responsible for arrangement with contractors to collect following by ISO 14001.

40

Chapter 19

4.5 Air Quality

We actively monitor and manage air quality in our shopping centers to ensure all applicable standards are met through quality control measures and testing of indoor air quality and toxic gases that can cause acute health effects. For instance, filter fresh air and carbon dioxide sensors have been installed to ensure sufficient fresh air is introduced into the buildings and if ambient air quality does not meet the standards, the system would automatically shut down.

In 2020, extra measures were introduced to tackle the rising levels of fine particulate matter with a diameter of less than 2.5 micrometers or PM2.5 across Thailand. The particles not only pose a public health risk but has been classified as carcinogenic to humans (Group 1) by the World Health Organization (WHO). Examples of initiatives that we have deployed to ensure customer confidence include:

- Monitoring PM2.5 levels as part of routine air quality testing and installing filters on fresh air systems
- Installation of 15 air quality monitors across 14 projects located in areas with high levels of PM2.5
- Shutting off or adjusting the flow rate of the fresh air systems when outdoor PM2.5 levels exceed safe limits

- Spraying water at specific times in accordance with the policy and request for cooperation from district offices in Bangkok and municipalities
- Stop the burning of incense sticks and other ritual offerings that emit fine particulate matter in projects that have a spirit house, buddha image and shrine in front of the building
- Ask for customer cooperation to turn off idling engines while in the parking facilities with security guards performing constant checks
- Ensure proper corporate fleet maintenance and encourage employees to have their personal vehicles including motorcycles inspected
- Discourage in-person meetings and encourage remote meeting via conference call and VDO conference
- Reduce paper use to minimize deliveries by office messengers
- Use of ventilation fans during construction to protect the health and wellbeing of workers

4.6 Green Building



We have incorporated Green Building guidelines in the design and development of our shopping centers including LEED: Leadership in Energy & Environmental Design, which is established by the U.S. Green Building Council: USGBC, the evaluation criteria for ASEAN Energy Award¹³ and the Ministry of Energy's Thailand Energy Award. In 2020, Central Pattana received ASEAN Energy Award in the following category:



The evaluation criteria for ASEAN Energy Award and Thailand Energy Award assess dimensions of eco-friendly building management including energy efficiency, reduction of greenhouse gas emissions and environmental impact, waste management, green building innovations and eco-friendly and sustainable materials.

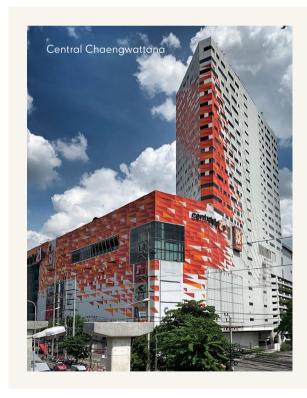
New and Existing Building Category Winners - Central Korat and Central Mahachai

Due to COVID-19, Thailand Energy Award 2020 has been postponed. To date, 24 projects of Central Pattana have won six ASEAN Energy Awards and 36 Thailand Energy Awards or 73% of the projects that are in operation and foodwOrld @ centralwOrld has achieved LEED Platinum Award in the Commercial Interior Retail - Restaurant/Cafeteria category.

Additionally, we have established a plan to develop our own environmental sustainability standards based on Green Building standards as one of our long-term environmental management plans and to motivate our shopping centers to go beyond meeting required standards. Environmental Sustainability Award is given annually since 2019 to branches with outstanding environmental performance in reducing electricity and water usage, lowering greenhouse gas emissions, waste management and employee engagement. In 2020, the winner was Central Chaengwattana.







Central Chaengwattana and Sustainable Environmental Management

Central Chaengwattana is our 11th shopping center. When it opened its doors in 2008 the shopping center was considered the first modern one stop shopping destination in Nonthaburi province serving customers from the Government Complex as well as northern Bangkok residents.

Design, Architecture and Building Materials

When it began operations, LED lighting was used to decorate the outdoors and building exteriors of the shopping center - the first building in the country to utilize the technology. The energy efficient solutions incorporated into the building design include well-insulated walls made from Q-Con blocks, which lower the rate of heat transfer, and Low-E Glass. The exterior walls are painted with light colors, which helps keep OTTV at 33.84 W/m², below the legal requirement of 40 W/m². Skylights are installed to allow natural light

into the building, while 94.4% of roofing materials are insulated metal sheets with ceramic coating, which helps keep RTTV at $9.84~\text{W/m}^2$, below the legal requirement of $10~\text{W/m}^2$. Trees are also planted around the project to provide shade and lower ambient temperatures.



Sky Light which helps keep RTTV at

9.84 W/m²

Electricity Management

Central Chaengwattana has installed the BAS - Building Automation System to enable control of the building electrical system and utilizes natural light in common areas by using lux sensor, which automatically adjusts brightness according to available natural light and activity. Common areas have been retrofitted with low-energy LED lighting and the shopping center encourages tenants to switch to LED light bulbs, which are more energy efficient and cost-effective. To date,

96% of tenants have participated in the initiative. The shopping center uses Central Air - conditioning System, which comprises eight water chillers with COP of 0.55-0.67 kW/TR and operates at low condenser water temperatures through CPM (Chiller Plant Management). Variable Speed Drives: VSD has also been installed on chilled water pumps and air handling units to enable accurate control and adjustment. Additionally, installation of the smart lift system has reduced energy consumption by more than 10% compared with conventional systems. In 2019, the electricity usage on a per unit leasable area improved by 4%.



The electricity usage on a per unit leasable area improved by

4%

Water Management

The SBR: Sequencing Batch Reactor has been installed at Central Chaengwattana and wastewater produced by the shopping center is treated to the standards required for discharge by the Ministry of Natural Resources and Environment's ministerial regulation on wastewater quality standards. Through "Central Green Project: Clean Canals, Collaboration, Care for the Environment," which is now in its fourth year, the shopping center collaborates with Klong Kwae Community to preserve and protect their water source. In 2019, Central Chaengwattana was able to increase per person water use efficiency by 11%.

Waste Management

Central Chaengwattana participates in "Journey to Zero" and has launched an initiative encouraging employees to reduce use of single use plastics and separate the waste they generate into three categories including generate waste, recyclables and food waste - with rewards given to employees who correctly sort and return the recyclable items. The shopping center also engages with customers, tenants and the community to segregate waste into specified categories to divert as much waste as possible from landfill before properly dispose of the rest in landfills.

Indoor Air Quality Management

Central Chaengwattana's parking facility is located outside the main building to prevent vehicle exhaust from migrating into the building. Indoor air quality inspections are carried out on a regular basis and include testing of CO2 levels and the levels of PM10 and PM2.5 particles. R-134a, a refrigerant that is ozone and climate friendly, is also utilized.

Green Building

Central Chaengwattana, in 2010, won the Ministry of Energy's Thailand Energy Award for Energy Efficiency and Conservation Excellence in the Energy Efficient Buildings Category and the ASEAN Energy Award for Energy Efficiency and Conservation Best Practices in the New and Existing Building Category.

4.7 Ecosystem Management and Biodiversity



The wellbeing of people, plants and wildlife in the ecosystem is important to us. Central Pattana does not seek development opportunities in restricted or protected areas. Our policy also requires that ecological surveys and assessments be conducted with external experts and sets clear guidelines for managing and preserving the ecosystems around our new developments and renovations, which occur outside restricted or protected areas.

We promote community wellbeing by bringing nature closer to people through landscape design to maintain harmony between built environment and natural ecosystem. This includes increasing green spaces by planting trees inside and outside our developments, growing native plants that are local to the areas around the projects and when removal is necessary trees will be transplanted to nearby projects. In 2020, in response to severe droughts in many regions, Central Pattana has made efficiency improvements

to minimize our water consumption. For instance, we are switching to drought - tolerant landscape to reduce water usage replacing grass lawns with ground cover shrubs, installing sprinkler systems to optimize water use and turning fallen leaves and twigs into compost and fertilizer, which are used within our developments. We are also considering introducing more perennial flowers into the landscape filling it with a variety of colors through the seasons. Results from these initiatives are expected to become more visible by 2021.

In order to achieve the target of planting 10,100 perennials in Bangkok area since 2019, we have expanded our green space program for the community, which focuses on tree planting, under the concept "urban forest" to plant 6,500 additional trees in September 2020 around Nong Khaem Waste Disposal Center in Bangkok.

4.8 Engaging Communities in Environmental Development and Management



We work to minimize negative impacts of our projects on the community and the environment in every stage from construction to operations. This includes managing and reducing dust generation, noise pollution and waste during construction and engaging the community to manage public water resources and waste after opening under two Central Group projects, "Central Group Loves the Earth" and "Central Green." Together with local communities, we launched 19 environmental conservation activities in 2020, which included forming firefighting teams to battle wildfire, picking up trash from beaches, tree planting, organizing Big Cleaning, clearing drains and sewers and promoting use of tote bags instead of plastics. The activities, which were participated by 429 employees, represented 23% of "CPN Volunteer" projects and activities and accounted for 20% of hours volunteered in 2020.

Due to COVID-19, Central Pattana did not participate in 60+ Earth Hour 2020.



Sustainability Performance: Resource and Environmental Management Excellence

Topic	2020 Performance	Plan for 2021		
Sustainability Indicator	 Track electricity usage and results from energy efficiency measures implemented, as part of strategic performance monitoring. Reduce usage of grid-purchased electricity (exclude tenant usage) by 19% compared to 2019 levels. 	 Set a target to reduce electricity intensity by 20% by 2025 compared to baseline year (2015). Reduce electricity consumption by 4% from 2019 levels. 		
Management Approach	 Achieved 100% Carbon Footprint for Organization (CFO) certification for 34 shopping centers, Central World Offices and the Head Office. (Coverage includes properties leased by CPNREIT but excludes the Ninth Tower, Unilever House and G Tower.) Total electricity usage in 2020 fell by 19% or 191,916 MWh compared to 2019 as a result of our energy efficiency measures and temporary closure due to the COVID-19 outbreak. Onsite electricity production from solar radiation (solar PV) from 16 projects accounted for 1.60% of total energy consumption or 12,566 MWh - a 39% increase from 2019. Installed the water recycling systems in two additional shopping centers, which increased the total to 17 projects. This, together with other process improvements, led to a 50% increase in water recycling from 2019. Carried out "Journey to Zero" through separating waste at source, which reduced the volume of waste sent to landfill by 4,119 tons or 8% of total waste - a 60% improvement in waste sorting compared to 2019. Achieved ISO 14001 certification for Central Korat. There were no illegal encroachments into protected or restricted areas. Central Pattana recorded no significant incidents of non-compliance with environmental management practices or leakages. 	 Conduct a study on greenhouse gas emissions reduction target setting to align with the targets of the Paris Agreement or Science-based targets. Roll out solar installations (solar PV) across 8 additional projects. Set a long-term target to reduce greenhouse gas emissions by 20% by 2025, compared to a 2015 baseline. Establish water reuse targets of 5% in 2021 and 20% by 2025. Achieve ISO 14001 certification for 1 additional project. Set a target to reduce waste sent to landfill by 15% from 2021 levels and set a long-term goal to halve our diversion rate by 2025. 		