

# Sustainable Development

## 3

### 3.1 Sustainable Development Policy and Goals

Central Pattana operates six business groups including: 1) Shopping Centers and related businesses, which account for over 80% 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 – economic, social and environmental. We integrate sustainability in our operations by aligning our sustainability strategy to the UN Sustainable Development Goals (SDGs) to drive transformational change across our value chain. To learn more about our approach to sustainability, please visit our website: [www.centralpattana.co.th/en/sustainability/sustainability-strategy/at-a-glance](http://www.centralpattana.co.th/en/sustainability/sustainability-strategy/at-a-glance).

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ESG RATINGS



CCC	B	BB	<b>BBB</b>	A	AA	AAA
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Central Pattana has been listed as a member of the Dow Jones Sustainability Indices-World Index (DJSI World) in Real Estate sector for the fourth consecutive year; the Dow Jones Sustainability-Emerging Markets Index (DJSI Emerging Markets) for the eighth consecutive year; and the Sustainability Yearbook by S&P Global for the fourth consecutive year. The Company also earned a BBB in the MSCI ESG Ratings and achieved a Green Star status by GRESB, the global standard for portfolio-level sustainability reporting in the real estate sector, and a GRESB Public Disclosure Level of "A" for 2021.



## (3.1 Sustainable Development Policy and Goals)

## Engagement and Stewardship of Key Stakeholders

Our stakeholders are divided into six primary groups and three secondary groups. Each group is supported by a dedicated team who work collaboratively with the stakeholders to address their needs and expectations in an effective and timely manner. Insights from stakeholders are regularly fed into the Company's decision-making process. Below are additional stakeholder communication and engagement activities undertaken in 2021 by Central Pattana in response to the COVID-19 pandemic:

Stakeholder Group	Engagement Platforms	Frequency	Further Details
Primary	Customers	Pre-development customer behavior survey	Becoming the Center of Life
		Customer satisfaction surveys Conducted customer satisfaction survey as on demand	
		Communication and online shopping	
	Tenants	Tenant satisfaction surveys	Tenant Management and Development
		Branch meetings with tenants	
		Trainings and development programs for tenants and entrepreneurs	
		Communication via CENTRAL PATTANA Serve application	
	Employees	Online surveys • CG Individual Assessment • 360 Manager Performance Review • CG Voice Employee Engagement Survey	Employee Management and Development
		Meetings • Top management • Hybrid town hall companywide and division-wide	
		Online trainings	
		Communication via Workplace and Workchat applications	
		Employee activities such as volunteering and Community Day	

## (3.1 Sustainable Development Policy and Goals)

Stakeholder Group		Engagement Platforms	Frequency	Further Details
Primary	Suppliers	Supplier assessment <ul style="list-style-type: none"> <li>• Pre-qualification</li> <li>• After delivery of goods and services</li> <li>• Re-evaluation of suppliers</li> </ul>	Annually	Supply Chain Management
		Meetings and trainings <ul style="list-style-type: none"> <li>• Business Development and Construction <ul style="list-style-type: none"> <li>- Group-specific meetings in line with the principles of the circular economy</li> </ul> </li> <li>• Shopping Center Management and Marketing <ul style="list-style-type: none"> <li>- Safety trainings</li> <li>- Capacity building trainings</li> </ul> </li> <li>• Organization Management</li> </ul>	According to timelines and work plans	
	Communities	Community impact assessment	At the start of every new and revised project	Corporate Responsibility and Community Development
		Community relief and support	When disasters occur	
		Donation of retail and commercial spaces for community use	According to needs and circumstances	
		Volunteer activities with local communities	Volunteer opportunity calendar	
	Public Sector, Independent Organization and Others. Including Thai Chamber of Commerce and Federation of Thai Industries	Discussion meetings on issues relating to: <ul style="list-style-type: none"> <li>• Traffic management</li> <li>• Waste and environmental management</li> <li>• Energy and greenhouse gas management</li> <li>• Labor and workforce</li> </ul>	According to timelines	Corporate Responsibility and Community Development  Resource and Environmental Management Excellence
Secondary	Shareholders and Investors	Meetings, Surveys, Company Disclosures	Quarterly	Corporate Governance Policy
	Competitors	Meetings Group communication via social media <ul style="list-style-type: none"> <li>• Response to government policy</li> <li>• Safety</li> </ul>	According to timelines 24/7	Corporate Governance Policy
	Creditors	Opportunity Day Company disclosures	Quarterly Annually	Corporate Governance Policy

## (3.1 Sustainable Development Policy and Goals)

## Materiality Assessment

The 2021 material assessment mapped out issues arising from the changing external environment and COVID-19 challenges that affected stakeholder expectations and responses as well as Central Pattana's long-term value creation. It also identified new sustainability risks from the type of risk factors and the probability of occurrence to the impact from the ongoing COVID-19 pandemic, which began in 2020. Details can be found in Chapter 2 "Risk Management" in our 2021 Annual Report.

### Materiality Assessment Process

Mega Trend Analysis	Identify and Prioritize Material Topics	Validation and Reporting
<p>Conduct desk research to analyze:</p> <ul style="list-style-type: none"> <li>• Key global and national trends</li> <li>• Trends that are being accelerated by the ongoing COVID-19 pandemic</li> <li>• Corporate sustainability assessments from institutions such as Dow Jones Sustainability Indices: DJSI, GRESB (Global ESG Benchmark for Real Assets) and THSI (Thailand Sustainability Investment)</li> <li>• UN Sustainable Development Goals: UN SDGs</li> </ul>	<p>Review key mega trends together with enterprise risks and stakeholder inputs collected from the annual management workshop and strategic planning workshops conducted at function and division levels to understand the Company's positioning regarding challenges and opportunities.</p> <p>Identify and prioritize material topics based on the expectations of Central Pattana's Senior and Executive Management, as well as purpose and strategy to determine the issues that are most important to the Company.</p>	<p>The Sustainable Development team and Risk Management and Strategy team present the priority sustainability issues to the Company which feed into corporate strategy, risk management plan and sustainability plan. Performance is tracked and measured by relevant committees. Please refer to Chapter 7 "Corporate Governance Structure" section in our 2021 Annual Report for more details.</p> <p>Sustainability reporting and disclosure is prepared in accordance with the GRI-Standards and 56-1 One Report and approved by the Corporate Governance and Sustainable Development Committee.</p> <p>Our participatory material assessment process is externally assured (see page 248-249).</p>



## How We Drive Sustainability

The 10 priority sustainability issues were presented to the Company by a cross functional team made up of members from Sustainability, Risk Management and Corporate Strategy departments and incorporated into our strategy, risk management plan and 5-year sustainable development plan (2022-2026). With additional sustainability risks identified in 2021, Central Pattana has expanded our environmental and social commitments – achieving net zero greenhouse gas (GHG) emissions by 2050 and building sustainable communities in alignment with the UN SDGs. We use “Objectives and Key Results” (OKRs) to set our sustainability indicators cascading down to division, department and

individual contributor levels with the progress tracked and measured by relevant committees as detailed in Chapter 7 “Corporate Governance Structure”.



To achieve net zero greenhouse gas (GHG) emissions by

# 2050

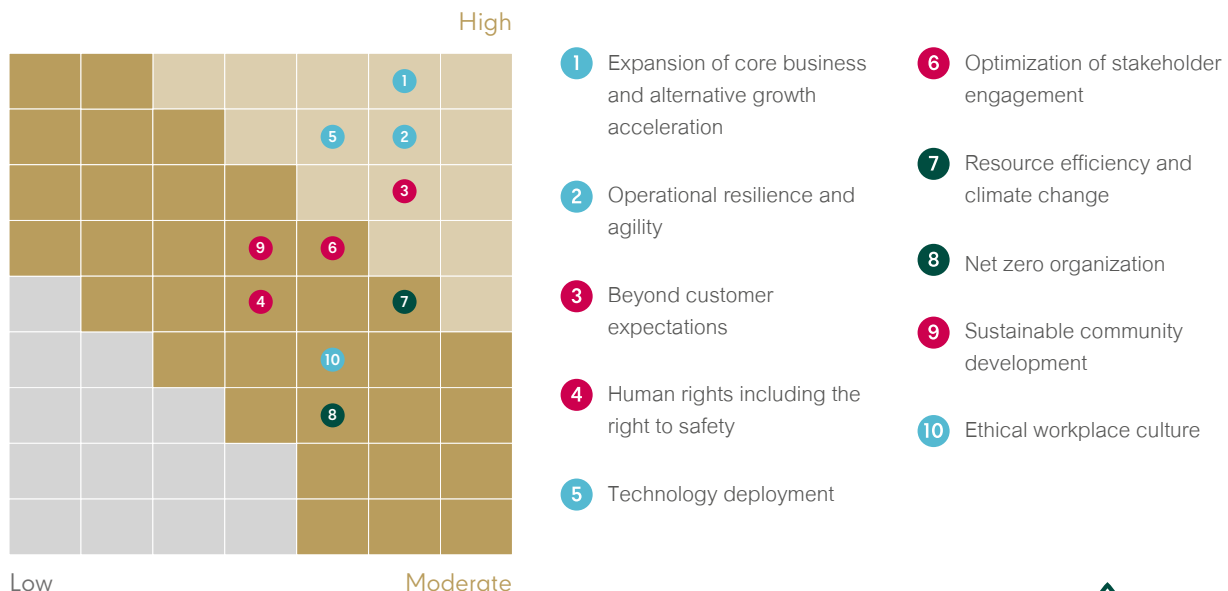
The table and matrix below show the findings of the materiality assessment, how 13 mega trends and 10 priority sustainability issues are linked and topic-specific disclosures.

Mega Trends, Risks and Opportunities	Priority Sustainability Issues	Value Drivers	Topic-Specific Disclosures
<ul style="list-style-type: none"> <li>Intensified competition</li> <li>Globalization and urbanization</li> <li>Slow and volatile economy particularly the prolonged downturn in the domestic economy</li> <li>Business model reform</li> </ul>	1. Expansion of core business and alternative growth acceleration	<ul style="list-style-type: none"> <li>Risk management</li> <li>Geographic and real estate portfolio expansion</li> <li>Diversification</li> </ul>	GRI 203 Indirect economic impacts GRI 102-15 Key impacts, risks, and opportunities GRI 102-29 Identifying and managing economic, environmental, and social impacts GRI 102-30 Effectiveness of risk management processes GRI 102-31 Review of economic, environmental, and social topics
<ul style="list-style-type: none"> <li>Consumer lifestyle changes</li> <li>New normal life with high priority on convenience, cleanliness and safety</li> <li>Shifts in demographics</li> </ul>	2. Operational resilience and agility 3. Beyond customer expectations 4. Human rights including the right to safety	<ul style="list-style-type: none"> <li>Product innovation</li> <li>Service excellence</li> <li>Safety management for customers, tenants and employees</li> </ul>	Becoming the Center of Life  GRI 416 Customer health and safety GRI 418 Customer privacy GRI 403 Occupational health and safety
<ul style="list-style-type: none"> <li>Digital disruption</li> <li>Digital transformation</li> </ul>	5. Technology deployment	<ul style="list-style-type: none"> <li>Innovation and technological applications for customers and tenants</li> </ul>	

## (3.1 Sustainable Development Policy and Goals)

Mega Trends, Risks and Opportunities	Priority Sustainability Issues	Value Drivers	Topic-Specific Disclosures
<ul style="list-style-type: none"> <li>Stakeholder concerns over business and organizational agility in the face of change</li> </ul>	6. Optimization of stakeholder engagement	<ul style="list-style-type: none"> <li>Tenant management and development</li> <li>Employee engagement</li> <li>Supply chain management</li> </ul>	Stakeholder Engagement  GRI 401 Employment GRI 404 Training and education GRI 414 Supplier social assessment GRI 204 Procurement practices
<ul style="list-style-type: none"> <li>Climate change</li> <li>Loyalty to brands that are purpose-led</li> </ul>	7. Resource efficiency and climate change 8. Net zero organization 9. Sustainable community development 10. Ethical workplace culture	<ul style="list-style-type: none"> <li>Resource and environmental management excellence</li> <li>Community and social responsibility</li> <li>Corporate governance</li> </ul>	Purpose-led Organization  GRI 302 Energy GRI 303 Water and Effluents GRI 304 Biodiversity GRI 305 Emissions GRI 306 Waste GRI 413 Local communities GRI 205 Anti-corruption

## Stakeholder Ranking of Material Topics



Key opportunities and impacts on Central Pattana's operations



Economic









Social



Environment





## How We Set Our Sustainability Targets

	Our Priority UN SDGs	SDG Targets and Indicators
	<p>Target 8.1 and 8.3 Sustain per capita economic growth and support productive activities, decent job creation and entrepreneurship and encourage the formalization and growth of micro-, small- and medium-sized enterprises</p> <p>Target 8.8 Protect labor rights and promote safe and secure working environments for all workers including migrant workers</p>	<p>Indicator 8.1 At least 7% annual growth rate of real GDP per capita</p> <p>Indicator 8.3.1 Proportion of informal employment in total employment, by sector and sex</p> <p>Indicator 8.8.1 Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status</p>
	Target 11.7 Provide universal access to safe, inclusive and accessible, green and public spaces for all	Indicator 11.7.1 Average share of the built-up area of cities that is open space for public use for all
	Target 13.2 Integrate climate change measures into organizational policies, strategies and planning	Indicator 13.2.2 Total greenhouse gas emissions per year
	Target 7.2 and 7.3 Increase substantially the share of renewable energy in the global energy mix and double the global rate of improvement in energy efficiency	<p>Indicator 7.2.1 Renewable energy share in the total final energy consumption</p> <p>Indicator 7.3.1 Energy intensity measured in terms of primary energy and GDP</p>
	Target 6.3 Improve water quality by halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Indicator 6.3.1 Proportion of wastewater flows safely treated
	Target 12.3 and 12.5 By 2030, halve per capita global food waste at the retail and consumer levels and substantially reduce waste generation through prevention, reduction, recycling and reuse	<p>Indicator 12.3.1 (b) food waste index</p> <p>Indicator 12.5.1 recycling rate, tons of material recycled</p>

## (3.1 Sustainable Development Policy and Goals)

Priority Sustainability Issues	2021 Targets	Target for 2022-2026
<b>Economic, Social and Community Sustainability</b>		
<ul style="list-style-type: none"> <li>1 Expansion of core business and alternative growth acceleration</li> <li>2 Operational resilience and agility</li> <li>3 Beyond customer expectations</li> <li>5 Technology deployment</li> <li>6 Optimization of stakeholder engagement</li> </ul>	<ul style="list-style-type: none"> <li>10% growth rate</li> <li>40 innovations-destinations</li> </ul>   8.1 and 11.7.1	<ul style="list-style-type: none"> <li>Maintain an annual growth rate of over 10%</li> <li>Allocate 20% of space for community use</li> </ul>
<ul style="list-style-type: none"> <li>4 Human rights including the right to safety</li> </ul>	<ul style="list-style-type: none"> <li>80% customer satisfaction</li> <li>80% tenant satisfaction</li> <li>80% employee engagement rate</li> </ul>	
	 8.8.1	<ul style="list-style-type: none"> <li>Achieve zero occupational injuries</li> </ul>
<ul style="list-style-type: none"> <li>9 Sustainable communities</li> <li>10 Ethical workplace culture</li> </ul>	<ul style="list-style-type: none"> <li>Disclosure of the proportion of micro, small- and medium-sized and community enterprises</li> <li>Local economic return of 100 million baht</li> </ul>  8.1 and 8.3.1	<ul style="list-style-type: none"> <li>20% of suppliers are micro, small- and medium-sized and community enterprises</li> <li>Generate local economic return increase of at least 7% annually</li> </ul>
	<ul style="list-style-type: none"> <li>25,000 employee volunteer hours</li> <li>Donation of 10 million cc of blood</li> </ul>	

## (3.1 Sustainable Development Policy and Goals)

Priority Sustainability Issues	2021 Targets	Target for 2022-2026
<b>Environmental Sustainability</b>		
<ul style="list-style-type: none"> <li>7 Resource efficiency and climate change</li> <li>8 Net zero organization</li> </ul>	<ul style="list-style-type: none"> <li>15% reduction in Scope 1 and 2 GHG emissions intensity (compared to 2015)</li> </ul>  13.2.2	<ul style="list-style-type: none"> <li>Reduce Scope 1 and 2 GHG emissions intensity by 20% (compared to 2015)</li> <li>Become a net zero organization by 2050</li> </ul>
	<ul style="list-style-type: none"> <li>4.5% of total energy consumption come from renewable sources</li> <li>4% reduction in energy consumption by 2021 (compared to 2019)</li> </ul>  7.2.1 and 7.3.1	<ul style="list-style-type: none"> <li>Increase the share of renewable energy to 12% of total energy consumption</li> <li>Reduce energy consumption by 20% (compared to 2019)</li> </ul>
	<ul style="list-style-type: none"> <li>5% of water used across shopping centers which onsite wastewater recycling systems installed</li> </ul>  6.3.1	<ul style="list-style-type: none"> <li>Increase the share of recycled water across shopping centers to 20%</li> </ul>
	<ul style="list-style-type: none"> <li>15% reduction in the amount of waste sent to landfill</li> </ul>  12.3.1 (b) and 12.5.1	<ul style="list-style-type: none"> <li>Reduce the amount of waste sent to landfill in half</li> </ul>

## Reporting Approach

Central Pattana Sustainability Report and Disclosure has been published annually for nine years to showcase our economic, social and environmental sustainability performances. Our 2021 reporting and disclosure is prepared in accordance with the Global Reporting Initiative (GRI) Standards - Core Option, ISO 26000:201 Guidance on Social Responsibility, United Nations Global Compact: UNGC and the UN Sustainable Development Goals: SDGs.

## (3.1 Sustainable Development Policy and Goals)

**Scope and Boundaries of Reporting**

The Report is an account of Central Pattana and its subsidiaries in Thailand's sustainability performance from a financial period between 1 January to 31 December 2021. It describes our sustainability performance in economic, social and environmental aspects reflective of our sustainability priorities. The Report contains performance data of 36 shopping centers located in Thailand (Central Phuket consists of two shopping centers: Central Phuket Festival and Central Phuket Floresta), 10\* office buildings and related and complementary businesses that operate in Thailand and are managed by Central Pattana. Details can be found in Chapter 1 "Business Structure and Operating Performance". Please note that the environmental performance data of Central Si Racha, Central Ayutthaya, 2 hotels, one residential projects for rent, 22 residential projects for sale, and the supply chain performance data of Central Pattana's subsidiary, CPN Residence, have not been included.

Key to our sustainability approach is engaging with all stakeholder groups including shareholders, tenants, customers, suppliers, creditors, employees, competitors, community and society, the environment, public organizations, independent organizations and others. The reporting content contains performance disclosures of Central Pattana, associated companies and subsidiaries that Central Pattana holds more than 50% of the shares or has direct management control including companies that voluntarily disclose their sustainability information. For more information about the scope and boundaries of Central Pattana's sustainability reporting, please refer to our website:

**Click**

<https://www.centralpattana.co.th/en/sustainability/sustainability-reporting-library>

**Quality Control**

The reporting content has been reviewed for accuracy and completeness by Central Pattana's Sustainable Development Department and Excellence & Sustainable Development Division, which serve as the quality control focal point for

our sustainability reporting. The Report is prepared annually by a working group and approved by Senior Executive Vice President, Finance, Accounting and Risk Management before it goes into circulation.

**Independent Assurance**

The Report and key performance indicators have been assured to be in conformance with the GRI-Standards by an independent recognized third party that is specialized in real estate. The Independent Assurance Statement is available at page 248-249. Refer to the 2021 GRI Content Index on our website for information: [www.centralpattana.co.th/en/sustainability/sustainability-reporting-library](http://www.centralpattana.co.th/en/sustainability/sustainability-reporting-library).

In accordance with Central Pattana's Policy on Climate Change and the Environment, the report is made available in digital form only and can be downloaded here: [www.centralpattana.co.th/en/investor-relations/publications/report/annual-report](http://www.centralpattana.co.th/en/investor-relations/publications/report/annual-report).

If you have any inquiry or wish to submit your feedback about the report, please contact:


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**Remark :** \* Included The shoppes at Belle Grand Rama 9



## 3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment

Central Pattana listens to our stakeholders and engages with them throughout the value chain. We put customer needs at the center of everything we do and strive to remain responsive to our stakeholder needs through leveraging the best systems, processes and technologies in line with our purpose, “Co-Creating Shared Value.” At Central Pattana, our stakeholders are divided into two categories: primary stakeholders and secondary stakeholders as described further on our website: [www.centralpattana.co.th/en/sustainability/sustainability-strategy/framework/stakeholders-engagement](http://www.centralpattana.co.th/en/sustainability/sustainability-strategy/framework/stakeholders-engagement). Our stakeholder engagement plan is integrated into the Company's annual business plan and our sustainability reporting focuses on six key stakeholder groups as follows:

Management Approach	Stakeholder Group	Reporting
<b>Diversification and business ecosystem development</b> <ul style="list-style-type: none"> <li>• Diversification and business ecosystem development</li> <li>• Business partnership via Joint Investment and M&amp;A to generate long-term growth</li> </ul>	Shareholders	1) Diversification and business ecosystem development
<b>Becoming the Center of Life</b> <ul style="list-style-type: none"> <li>• Product innovation</li> <li>• Service excellence</li> <li>• Innovation and technology</li> </ul>	Customers	2) Becoming the Center of Life
<b>Tenant Management and Development</b> <ul style="list-style-type: none"> <li>• Small and new entrepreneur development</li> <li>• Tenant development</li> <li>• Tenant engagement</li> </ul>	Tenants	3) Stakeholder Engagement
<b>Employee Management and Engagement</b> <ul style="list-style-type: none"> <li>• Recruitment and talent retention</li> <li>• Leadership and people development</li> <li>• High performance organization</li> </ul>	Employees	
<b>Supply Chain Management</b> <ul style="list-style-type: none"> <li>• Supplier risk analysis and continuous improvement of procurement process</li> <li>• Sourcing of new suppliers and supplier evaluation</li> <li>• Co-creating value and innovation</li> </ul>	Partners	

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

Management Approach	Stakeholder Group	Reporting
<b>Corporate Responsibility and Community Development</b> <ul style="list-style-type: none"><li>• Center of Community</li><li>• Local Prosperity and Local Pride</li><li>• Circular Economy</li><li>• Employee Volunteering</li></ul>	Community	4) Purpose-led Organization
<b>Resource and Environmental Management Excellence</b> <ul style="list-style-type: none"><li>• Energy Management</li><li>• Climate Resilience</li><li>• Water and Wastewater Management</li><li>• Waste Management</li><li>• Air Quality</li><li>• Green Building</li><li>• Ecosystem Management and Biodiversity</li><li>• Engaging Communities in Environmental Development and Management</li></ul>	Environment	

Central Pattana has integrated sustainability into our annual strategic plan with sustainability indicators established as part of the Company’s key performance indicators. OKRs - Objective and Key Results are tracked and reviewed to ensure we stay on track to achieve our objectives and goals. Refer to the “Business Policy and Business Overview” section.

This Sustainability Report summarizes our strategies, approaches and work plans across our sustainability policies and commitments and details our performance and impacts under the four sustainability reporting frameworks including: 1) Diversification and business ecosystem development; 2) Becoming the Center of Life; 3) Stakeholder engagement; and 4) Purpose-led organization.

## 01

**Diversification and Business Ecosystem Development**

Central Pattana prioritizes the retention of strong and sustainable business growth through a five-year business plan (2022-2026) with a compounded average growth rate (CAGR) in revenue of over 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:

**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, 20 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 expands the 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 22 residential projects, including 15 high-rise condominium projects and 7 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.

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)



## Business Partnership via Joint Investment and M&A to Generate Long-term Growth

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.
- 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.
- Central Pattana acquired shares of GLAND equivalent to 67.53% of total issued and paid-up shares. The acquisition of shares in GLAND, a property developer for real estate projects for sale and for lease, which includes office buildings, hotel, residential projects and retail area, as well as projects under development and land bank in several locations, unlocks the potential to develop mixed-use projects based on the business strategy and create long-term returns to shareholders.
- Central Pattana joint invested in Central and Hongkong Land Company Limited ("CHKL") By invested through CE Holding Company Limited, the joint venture company between the Company and Harg Central Department Store Company Limited ("HCDS") and HKL (Thai Developments) with the shareholding ratio of 25:26:49, respectively. The joint investment has the objective to develop the mixed-use project, located on Wireless Road and Soi Somkid, Bangkok. The project is expected to be developed in 5 years and will be completed approximately by 2026. The joint investment with partners who has expertise could enhance assets potential and create long-term growth going forward.
- Central Pattana acquired shares of Siam Future Development Public Company Limited ("SF") equivalent to 96.24% of total issued and paid-up shares. This investment is objectively to expand business potential into a small new retail format as well as a high potential regional mall in the long run which enhance company's competitiveness and contribute long-term shareholders' return.

## 02

## Becoming the Center of Life

## Management Approach

**Product Innovation**

Customer centric product and service development for everyone and every lifestyle, adapting to change and evolving with the 'new normal' with a focus on convenience, hygiene and safety and agility

**Service Excellence**

Ensuring continuous improvement in service standards to create 'beyond expectation' experience for customers through swift, continuous and responsive customer engagement with a special focus on convenience and safety

**Innovation and Technology**

Leveraging innovation and technology to enhance transactions, communications and service facilitation

**Product Innovation**

There are two dimensions to Central Pattana's product innovation: rethinking space allocation from creating zones to developing 'Destinations' to deliver a seamless integrated customer journey that satisfies the needs of each specific customer group; and creating new experiences to meet ever-changing customer needs and demands. Our product innovation is driven by insights gleaned from our consumer behavior research, both quantitative and qualitative, and demand forecasts. Presently, we classify our Destinations into seven types as follows:

**01 Family Destination**

is a destination for families that includes theme parks, water parks, indoor playgrounds, kids' restrooms and family dining zones.

**2021 Performance**

We launched two new Family Destinations at the opening of Central Si Racha and Central Ayutthaya and completed a renovation of one Family Destination at Central Rama 2.



(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

## 02 Food Destination

is a dining destination that includes Food Parks and destinations which offer a wide range of choices to diners from local specialties to national and international cuisines to buffets to desserts and drinks.

### 2021 Performance

We launched two new Food Destinations at the opening of Central Si Racha and Central Ayutthaya. The design of the Food Destination at Central Si Racha leans into the Glass House design. The Food Destination at Central Ayutthaya, on the other hand, takes inspiration from the province's unique cultural heritage, both in its design and offerings. A marketing campaign, "Wonders of Taste and Wonders of 16 Districts," was launched to showcase Ayutthaya's status as a culinary destination. This year, we completed the refurbishment of Food Destinations at three shopping centers including Central Rama 9, Central Rama 2 and Central Khonkaen, and added new brands and more varieties at eight Food Destinations.

Completed the  
refurbishment

3

shopping  
centers

Added new brands  
and more varieties at

8

food  
destinations



At Central World, we have been trialing Food Destinations that cater to specific lifestyles. They include Hug Thai Zone, a destination for people who love Thai street food and office workers who have limited time to spare; and Zone I (the former Isetan store) where customers can enjoy real Japanese cuisine in an authentic atmosphere.

## 03 Fashion Destination

is a destination for every lover of styles - streetwear, luxury, minimalism, activewear or gender-fluid fashion - organized in zones and formats such as Fashion Plus and Pop-up stores in common areas of the shopping centers.

### 2021 Performance

We rolled out the "Seamless Integrated Experience" format to create a Fashion Destination that blurs the line under the name, "Playhouse" at Central Si Racha. It is a retail zone that fits the needs of small business operators who are facing staff shortages as well as offers a shopping experience the entire

family can enjoy together, picking items and paying for them at a cashier - just like what you would normally do at a department store. Brands offered at the Playhouse include those that customers are familiar with at Central shopping centers as well as up and coming brands that are trending on IG.

To date, there are 787 retailers in Fashion Plus Zones across 26 shopping centers (including Central Si Racha and Central Ayutthaya) and 99 pop-up stores (include retailers in all product categories).

Retailers in  
fashion plus zones

787

Pop-up  
stores

99



## 04 Lifestyle Destination

is a destination that brings together people with similar interests and lifestyles such as people who enjoy international food, desserts, noodles, local cuisines, coffee, music, art, nature, environment, animals and travel.

### 2021 Performance

We completed the renovation of Instamarket, a lifestyle destination for customers who like to shop on Instagram, and Pet Park & Pet Shop, a lifestyle destination for animal lovers, at Central Westgate. We also rolled out new lifestyle formats in permanent and temporary retail spaces and through marketing campaigns to adapt to changing consumer behaviors and cater to a variety of lifestyle needs from home and garden to e-sports to photos and check-ins, for example. In addition, we developed a destination for home décor lovers,



“Design House.” The destination, which has been piloted at Central Si Racha, is a retail zone with a mix of small shops carrying all things decor and accessories in one place.

### 05 Sport Destination

is a destination for health and fitness enthusiasts. We make use of the spaces in the front of the shopping centers, on the rooftop and in multipurpose convention halls, turning them into recreational spaces.

#### 2021 Performance

We completed major renovations at Central Pinklao, Central Rama 2, Central Rayong and Central Salaya and partially refurbished Sport Destinations at four shopping centers.

### 06 Tourist Destination

is a destination for tourists, both Thais and internationals, to enjoy travel experiences that match their lifestyles.

#### 2021 Performance

We developed a new destination and refurbished H Zone at Central World to create “Hug Thai Zone,” as a destination for people who like modern and contemporary Thai lifestyles and international workers living in Thailand as well as foreign visitors who love everything Thai. At “Jing Jai Farmers’ Market,” which is part of the Destination, customers can buy quality products from Thai farmers from 46 communities or over 3,000 families.

Quality products  
from

46

communities

From Thai farmers  
over

3,000

families



We also developed Central Ayutthaya into a destination for Thai and international visitors under the concept “Cultural Capital” showcasing the province’s identity with a ‘Thai Twist’ and through Must-Visit Instagrammable Landmarks around the shopping center.

### 07 Center of Community

has been adapted to better meet community needs, to deliver a convenient experience, promote community health and wellbeing, and strengthen local economies.

#### 2021 Performance

We had to postpone the co-development plan of the Government or G Center, which kept the number of Government Centers to date at 14. To meet public needs amidst the COVID-19 pandemic, we offered the common areas, parking spaces and multipurpose convention halls in our shopping centers across the country to be converted into 26 mass vaccination centers and 20 blood donation stations.

Mass vaccination  
centers

26

Blood  
donation stations

20



## Service Excellence

Central Pattana is committed to ensuring continuous improvement in service standards and uses the data from customer satisfaction surveys, conducted on a quarterly basis, to improve our work plans and continue enhancing our services. This year, we focused on the following issues:



### Commuting

including parking facility readiness, convenient routes, traffic management and parking lot safety



### Services and Amenities

including signage, amenities, service staff and safety and hygiene management systems



### Ambience

including décor, cleanliness and orderliness, variety of stores and shops and marketing campaigns and promotions

## (3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

Our Service Excellence Plan is divided into four work plans as follows:

## 1. Traffic and Parking Management

### Traffic Management

This year, we continued to implement the traffic management plan that had been established in 2020. We were able to continuously plan, allocate and utilize our manpower efficiently even though the number of staff on duty had to be reduced during certain hours due to the government-mandated lockdowns. We have put in place a traffic control plan for four different situations: normal, slow, congested and accidents, and expanded implementation of smart parking technologies to make entering and exiting our parking lots easy and convenient. The automated car park ticketing system and License Plate Recognition: LPR has helped reduce the amount of time spent at the entrance and exit points to just 8 seconds. Both systems have been integrated with the Cashless Payment Parking

and are now being piloted at two projects, Central World and Central Ladprao. On their way in, customers wave their hands in front of the sensor for a ticket to be issued and before taking their vehicles out they simply scan the QR code on the front of the ticket to check and pay parking fees using their mobile devices. There are three payment options available: mobile banking, payment via True Money Wallet and Dofin and cash at self-service kiosks and at the shopping center's information counters. The parking barrier gate will open automatically if the parking fees have been paid. But if the gate does not open, the customer can scan the QR code on the front of the ticket at the parking kiosk or press the SOS button for assistance. This year, our plan to set up more digital display stands to show real-time traffic outside the building, first trialed in 2020, has been postponed. As the COVID-19 pandemic has led to an overall reduction in traffic activities, our current traffic management plan remains effective at managing traffic flows around Central Pattana's projects.

### Parking Facilities Management, Transport Services and Other Services Available at Central Pattana's Shopping Centers



Priority parking

**811**

slots available at  
all projects



Lady parking\*

**1,292**

slots available at  
12 projects



Family parking

(for parents with prams)

**185**

slots available at  
31 projects



Carpool parking for vehicles

carrying more than 4 passengers

**54**

slots available at  
3 projects



EV charger parking

**55**

slots available at  
24 projects



Supercar parking

**231**

slots available at  
31 projects



Big bike parking

**1,148**

slots available at  
25 projects



Bicycle parking up to

**2,205**

spaces available at  
25 projects

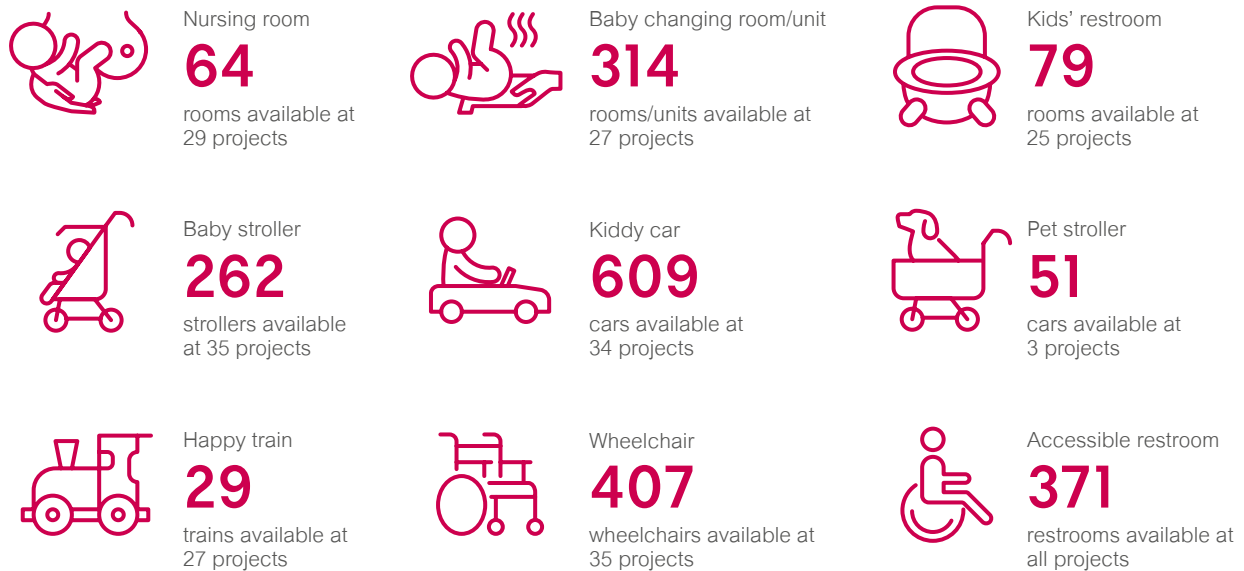
- Intelligence parking: 45,404 slots available at 17 projects
- Valet parking: This service has been suspended in accordance to the social distancing measures.
- Transport hub: Available at 27 projects
- Shuttle bus: Available at 16 projects

- Reserved parking: Available at Central World
- Parking for food delivery drivers: Available at Central World
- Taxi service for elderly: Available at Central Bangna
- Cashless Payment Parking: Available at Central World and Central Ladprao

**Remark :** \* This service has been suspended in 23 projects consequently from the impact of the pandemic.

## 2. Services and Amenities Available at Central Pattana's Shopping Centers

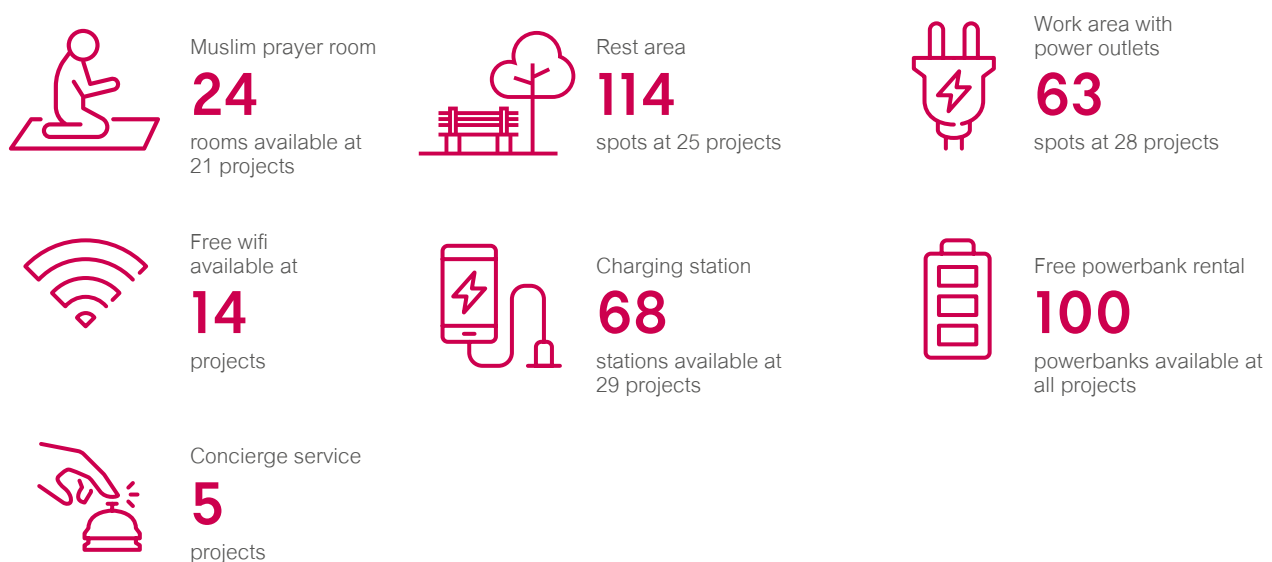
### Families and People with Special Needs



### Tourists



### Others



(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

### 3. Safety and Security

Central Pattana's safety and security measures for customers and tenants are in line with ISO 45001 Occupational Health and Safety. The measures have been implemented in five pilot projects including Central Rama 3, Central Rama 9, Central Salaya, Central Eastville and Central Mahachai. We set out daily site security plans as well as plans for emergency response training and drills and exercises. The table below outlines our management approach to public safety and security:

#### Prevention

Loss Prevention (LP) department is responsible for handling, monitoring and minimizing losses in shopping centers as well as supervising security guards provided by suppliers that meet all of the requirements of the Business Security Act, B.E. 2558.

In 2021, Central Pattana continued to implement strict measures to prevent the transmission of infectious and communicable diseases. With a focus on active surveillance through CCTV monitoring, we trained security guards and surveillance staff on how to do simultaneous monitoring on 32 CCTV cameras. Staff, stationed at different locations and times, based on the Crime Clock, worked in two-hour shifts to allow adequate rest time before resuming surveillance. If any unusual activity is detected, the 1st Response Team will be called in immediately to help mitigate the incident or prevent further damage. This new system has contributed to faster response and prevention despite reduced manpower during the government-mandated lockdowns.

To date, we have installed 8,205 CCTV cameras (including Central Si Racha and Central Ayutthaya), set up 2,416 Call Point Service across all parking lots and added a new channel for reporting emergencies through QR code.

#### Operation

Central Pattana uses the Color-Code Condition\* to monitor and assess crisis severity, on a monthly basis, with our employees, state officials, external security consultants and security experts from Central Group. The overall situation in 2021 remained largely Blue or Guarded except for the project in Hat Yai city, Songkhla province, which was Orange or High. The color meant there were risks of explosive attack, terrorism and other threats. If an armed intruder is able to

evade our prevention team, the security guards on duty will follow a 3-step response measure - deter or slow down the intruder by shutting down some exits; help the customers evacuate safely from the premise; and hand over CCTV footage to law enforcement, giving top priority to ensuring stakeholder safety.

With an ongoing pandemic and strict implementation of surveillance measures, the incident response exercises and additional staff training had to be conducted through tabletop exercises in which employees from each team discussed their roles and responses and practiced through scenario gameplay based on real-life situations.

In addition, we put in place measures to respond to unexpected events. They include:

- Installing at least 1 Automated External Defibrillator (AED) near the Information Counter across all projects and providing AED training to the staff.
- Obtaining insurance plans including Industrial All Risks (IAR), business interruption insurance and public liability insurance.
- Purchasing life insurance, in addition to accident insurance plans, for all security guards and employees with safety and security duties or related responsibilities.

**Remark :** \* Central Pattana uses the Color-Code Condition 5, which has 5 levels including Low-Green, Blue-Guarded, Yellow-Elevated, Orange-High and Red-Severe, 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, external security consultants and security experts from Central Group, closely monitor and assess the situation.

#### Engagement

The Safety, Occupational Health and Environment Committee is 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 2021, we have, with our contractors and subcontractors, expanded data collection on accidents to develop an accident prevention and reduction plan. The report was disclosed in accordance with the GRI Standards.

#### 4. Service Standards

Central Pattana's quality management systems have been developed in line with ISO 9001 Quality Management System (QMS) principles to ensure continuous process improvement and consistent delivery of products and services. Guided by our service philosophy, "Service with the heart," we strive to increase customer satisfaction, while also aim to reduce complaints and recurring issues. In 2021, we carried out the following:

- Process standards
  - Established the selection criteria for security guards and housekeepers and held meetings with contracting companies to inform their executives of our policies and standards.
  - Provided monthly training to subcontractors, focusing on theory and scenario-based learning. The training also included "Canary Tour," a field visit to familiarize

the workers with the layout of the shopping centers and store names.

- Monthly performance evaluations of security guards and housekeepers were conducted by the Service with the Heart Team and "Mystery Shopper." In Q1-Q3 of 2021, employees from a different branch carried out the checklist-based evaluations of subcontractors to measure service standards at each touchpoint.
- Launched the "Reward & Recognition" program for subcontractors. We made the fourth week of every month the 'week of recognition' and held an annual award ceremony at the branch level for workers who demonstrated exceptional performance in Q4. In addition to a Service Excellence pin, each awardee also received a gift certificate and praises from the branch general manager.





## (3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

- Reviewed the standard operating procedures (SOPs) for customer relations employees. To make this engaging and fun for the employees, we conducted the activity through “CS Professional.” Employees were encouraged to create and post video clips on TikTok to show examples of good and bad service provision to help new and current employees better understand service expectations and standards.
- Further improved the Booking system (formerly I Booking) to adapt to the new normal. This included rollout of touchless experience and simplified employee procedures. The system has been launched across our projects nationwide, while the concierge service is now expanded to three pilot projects including Central World, Central Village and Central Phuket. Additionally, the shuttle bus service has been trialed at Central Village and is expected to be rolled out in Q1 of 2022.
- Revised the “Central Clean and Safe” masterplan that had been rolled out during the outbreak of COVID-19 to be more robust and rigorous and incorporated the measures into our service standards covering five key areas - screening, distancing, tracing, cleaning and touchless experience - and established as service standards utilization of new technologies below:
- Protective shields to facilitate social distancing at Information Counters
- Automatic alcohol dispensers in elevators
- Social distancing warning sensors at high-traffic escalators
- UV-C for AHU filters and UV-C cabinets for shoppers to disinfect purchased items and shopping bags
- Touchless lifts and automatic handrail sterilizers
- Adopted ISO 20121 Event Sustainability Management System in managing our multipurpose convention halls, in line with the government policy to support and promote MICE (Meeting Incentives Conventions Exhibitions. To date, 9 of our 13 convention halls have been ISO 20121 certified and 13 convention halls (include re-certification of under Meeting Room and Exhibition categories) have received the TMVS (Thailand MICE Venue Standard) certification under Meeting Room and Exhibition categories from the TCEB (The Thailand Convention and Exhibition Bureau). The TCEB certification’s assessment components include Physical Component, Technology Component, Service Component and Sustainability Component. Additionally, two projects are undergoing the AMVS -ASEAN MICE Venue Standards certification.





## Innovation and Technology

Central Pattana seeks to develop new technologies and solutions including in IT infrastructure management and customer analytics to provide the best experience for our primary stakeholders, in particular, our customers, tenants, employees and suppliers. In 2021, we implemented our plan as follows:

### 1. Elevating Digital Experience



#### Customers

We upgraded @central Life on LINE application and rolled out new functions and features throughout the year. The main functions of the application include:

- “Indoor Map Navigation” helps customers navigate and find their desired store
- “Gift for You” provides access to more personalized privileges with coupons tailored to customer lifestyles, interests and needs
- “i-Booking” enhances convenience for customers wishing to book services and amenities such as wheelchairs, strollers, Kiddy Car, ahead of time
- “Smart Chat” is a shortcut to other functions available in the application making it easy for customers to find the information they need



#### Tenants

SERVE by Central Pattana is an all-in-one platform for internal communications, information search, maintenance request and online rent payment via e-payment, that will include new features and functionality such as integration with The 1 Biz and the business matching platform Crowdfunding. Additional information can be found in the “Tenant Management and Development” section of our 2021 Annual Report.



#### Residents

Digital services for residents via CPN Residence Family, which allow users to book a viewing appointment, find information about how to make a reservation, make payment, receive project news and updates and request maintenance.

### 2. Digital Services

- Cashless payment is now available at all Food Parks operated by Central Pattana. Diners no longer have to get food coupons but can pay via mobile banking by scanning a QR code at the restaurant or make payment via e-wallet with Alipay, Wechat Pay, Rabbit Line Pay, Dolfon and Shopee Pay.
- Central Eats, Central Kitchen and Chat & Shop services are also available through @central Life. The features have been added in the wake of changing consumer behavior as a result of the COVID-19 pandemic. Customers can

get their food delivered from their favorite restaurants in the shopping centers operated by the Company or order food from multiple restaurants or directly from just one restaurant for one-stop pick-up via Central Kitchen, which has partnerships with other food delivery applications including Grab. For purchase of non-food items, customers can enquire about products and order them directly from any of our shopping centers via Chat & Shop.

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## Living Our 4 Beliefs

## Customer Champion

## @central Life

Central Pattana launched our LINE Official Account under the name “central Life” in 2019 to adapt to changing behaviors as customers increasingly spend time in the digital world. The application has many useful functions. The first function focuses on communications and digital engagement, which helps us reach the customers where they are. Serving as an all-in-one platform for our customers or ‘Your Lifestyle Companion,’ the application offers four features including: Indoor Map Navigation; Latest News, keeping customers up to date with the latest privileges, promotions and events; Privileges and Promotions (has been renamed as Gift for You), notifying customers of privileges and promotions from the shopping centers and retail stores with personalized in-app e-vouchers; and “Reserved Parking.” The menu and functions of the application are continuously updated with food delivery and online shopping functions further enhanced during the pandemic to keep up with evolving needs of customers and tenants. Below are just some of the examples of the functions and features of the application:



“Chat & Shop” Enable customers to access services and shop from their favorite stores even during the lockdowns through “One Call One Click” “Delivery & Drive Thru” and “Chat & Shop” and easily talk with our employees and make purchases from the nearest Central shopping centers.



“Smart Chat” Utilize Chatbot to help customers find the information they need in just one click through LINE Official Account. The information stored for the chatbot to answer customer enquiries

draws on customer insights from big data analytics. In “Smart Chat” customers can click on sub-menu features to choose the service they are interested in and the branch they wish to receive the service from. Services available in “Smart Chat” include:

- “Indoor Map Navigation” Enhance customer convenience from finding the location of a desired store to food recommendations to weekly special promotions from stores.
- “Promotions” Keep customers updated of promotions and highlights that are ongoing across the shopping centers as well as at the branch level. This includes credit card promotions and other marketing campaigns with our business suppliers-partners.
- “Events and Activities” Update customers about marketing campaigns that are happening on specific dates and times at each branch.
- “Your Coupons” Notify and update customers on privileges and promotions from the shopping centers and retail stores and deliver e-vouchers for personalized privileges.
- “i-Booking” Make a reservation for services and amenities provided at the shopping centers such as Kiddy Car, strollers, wheelchairs, powerbanks, concierge service and shuttle bus service.
- “Special Privilege for The 1 members” Integrated service with the 1 Card, allowing customers to check and redeem points at any time.
- “More information” Sub-divided into categories including information about the shopping centers, store numbers, retail space rental inquiry and customer feedback.



CENTRAL  
EATS

“Central Eats” Get your favorite food from multiple restaurants in the shopping centers operated by Central Pattana, delivered with Grab.



“Central Kitchen,” a delivery service to support restaurant operators and make it easy for customers to order from more than 2,000 dishes from over 1,000 restaurants. Customers can place their orders by phone or through LINE Official Account and have the food delivered to their home or visit Central Kitchen at the nearest Central shopping center and pick-up the food themselves through a touchless experience.

## Sustainability Performance: Becoming the Center of Life

Topic	2021 Performance	Plan for 2022
<b>Sustainability Indicator</b> 	<ul style="list-style-type: none"> <li>• “Shopper Satisfaction” was removed from our 2021 key performance indicators due to the impact of COVID-19 pandemic, which presented external challenges to customer satisfaction that are outside of Central Pattana’s control.</li> <li>• Revised the 2021 indicator to execution of subplans.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish “Shopper Satisfaction” as a key performance indicator and target to achieve a shopper satisfaction score of 80 in 2022. The indicator may be subject to revision based on the COVID-19 situation in 2022.</li> </ul>
<b>Customer Centric Development and Catering to All Lifestyles</b> 	<ul style="list-style-type: none"> <li>• Carried out project development as planned. New development and partial renovation projects including Central Phuket, Central Udon, Central Rama 2 and Central Khonkaen are 100% complete.</li> </ul>	<ul style="list-style-type: none"> <li>• Implement the project development plan, which includes construction of two projects, renovation of two projects and partial renovation of seven projects.</li> <li>• Implement the destination development plan in new projects and renovate 40 destinations across all existing projects.</li> </ul>
<b>Service Excellence</b> 	<ul style="list-style-type: none"> <li>• Carried out the traffic and parking management plans and set up new transportation hubs, now 27 in total. The Cashless Payment Parking has also been piloted at Central World and Central Ladprao.</li> <li>• Implemented Safety and Occupational Health standards, which had been adapted from ISO 45001 Occupational Health and Safety, in five projects.</li> <li>• Carried out the work plans in accordance with Community Strategy, which aimed to build communities of people with similar interests and lifestyles. In 2021, 81% of the target to build communities of family-oriented people, sports enthusiasts, Yold (Young old) and Gen Z, was achieved.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue implementation of plans to boost customer and tenant satisfaction in accordance with the annual strategic plan under Service with the Heart.</li> <li>• Apply for ISO 45001 Occupational Health and Safety certification for five projects.</li> </ul>
<b>Technology and Innovation</b> 	<ul style="list-style-type: none"> <li>• Carried out the work plans in accordance with Elevating Digital Experience Strategy, which aimed to build online communities of people with similar interests and lifestyles, with a focus on family-oriented people and sports enthusiasts. The overall result fell short of the target.</li> </ul>	<ul style="list-style-type: none"> <li>• Revise strategies to deliver digital experiences and develop innovations for the target groups.</li> </ul>

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## 03

## Stakeholder Engagement

**1. Tenant Management and Development**

Our tenants remained concerned about the ongoing impacts from COVID-19 from the slowdown in the domestic economy to staffing issues as stores were getting ready for reopening to securing vaccines for all employees to labor shortages and worries about business costs, cash flow, ability to service debt and inventory management. In 2021, Central Pattana, therefore, rolled out a range of relief measures to assist our tenants as part of our tenant engagement activities.

**1.1 Tenant Engagement**

In 2021, the Thai government announced a slate of public health measures to control the spread of the coronavirus 2019 including closure some of shopping centers nationwide. The almost 60-day closure had a severe impact on more than 15,000 businesses including SME operators, retail stores, manufacturers, distributors and service providers across Central shopping centers.

Under Central Pattana's Tenant-Centric Business Partnership, we focus on providing prompt and professional support to help push businesses forward as well as creating new opportunities to increase sales through leveraging new platforms and services, to grow our shopping center businesses and support our tenants and their employees. Examples of our tenant relief and support measures include:

- 1. Liquidity boost** Assisted business owners to access multi-bank loans through partnering with seven leading financial institutions in Thailand to offer soft loans and O/D (overdraft) accounts to boost tenants' liquidity. We utilized our partner grading system and credit score database to help each business partner secure tailor-made credit. Additionally, to support more than 5,000 vendors and suppliers in our supply chain, we rolled out the Supply Chain Financing Program to help increase their cash flow and working capital and lower the interest rates on their loans.
- 2. Rent waivers and revolving credit assistance** Since the start of the outbreak of COVID-19, we have been providing rent waivers to tenants as appropriate. Central Pattana

was the first business operator in the market to lower rent and continues to do so. Reductions are calculated based on the actual situation and in the case of temporary closure of shopping centers due to the government order, 100% rent waivers will be provided. A flexible-leasing program has also been rolled out to help our tenants expand their businesses to new projects such as Central Si Racha and Central Ayutthaya.

- 3. Tenant-Centric Marketing** To boost sales across the board, we ran marketing campaigns throughout the year and utilized big data from The 1 database to develop Super Powerful CRM Marketing. To create new sales opportunities with big campaigns and big promotions, we worked, in collaboration, with companies under Central Group and stores in our shopping centers to drive the country's economic recovery. We also partnered with restaurants and food shops to create Food Destinations, which attracted over 100 food bloggers who visited and shared reviews and recommendations. We joined hands with partners such as Shopee, Major, SF, Grab, AIS and other bank partners, to launch tailor-made marketing campaigns and became the 'role model' for safe shopping center - offering spaces to serve as mass vaccination sites and launching the marketing campaign, "I'm Vaccinated" with offers and benefits from more than 100 partners to encourage COVID-19 vaccine uptake.
- 4. New platforms and services** To boost sales and adapt to changing consumer behavior, we have developed new platforms and services to support worry-free omnichannel experience. Tenants can take part or co-create promotions with us through different channels including The 1 Unlimited point system, Chat & Shop and Credit Card Month program. Some of the new services we have developed include Take-Away Food Destination, which allows customers to order quick and convenient takeaways from over 300 restaurants; delivery services such as GrabFood, Drive-Thru Pick-Up; and live streaming of shops across all shopping centers. The application, CentralPattana 'Serve,' has also been enhanced to improve mobile and tablet user experience and further facilitate tenant service under the concept,

“Self-Service, Anywhere, Any Time – All in One.” Through the application, tenants can submit maintenance requests, manage their rent contracts, make rent payment online and use CRM services.

## 1.2 Tenant Development

For over 40 years, Central Pattana has been tenant-centric in how we conduct our business. Many of our partners have been listed on the stock exchange, ventured into new markets or rapidly scaled up their businesses, while e-commerce retailers that started out online now have physical stores at our shopping centers to provide a seamless experience for customers. With the goal of enhancing the capacities and competitiveness of our tenants, Central Pattana carried out our tenant development plan in two dimensions as follows:

1. Skills and knowledge development on Modern Trade through CPNlead- CPN Leading Entrepreneur Advanced Development Program and CPN Retail Academy. Both programs are workshop-based training to help business owners learn about modern trade management as well as gain foundational knowledge on areas that are still new to them such as online marketing, customer relations, product development and visual merchandising. CPNlead is designed specifically for new entrepreneurs who can allocate 1-3 months to complete the in-depth training. It is organized in a small group of no more than 60 trainees and offers opportunities for trainees to test out new business ideas. On the contrary, CPN Retail Academy targets small local business owners who only have time to attend courses that take no longer than one or two days. The workshop, which aims to help trainees develop basic business knowledge and skills, is conducted in a group of 100-300 people and held in every region. After they complete the course, we will continue to track trainees' performance and select promising entrepreneurs who meet the requirements to join our incubator program and support their business expansion under the “Local Hero” initiative. Due to the COVID-19 pandemic, both programs have to be put on hold this year.



2. Enhancing tenants' competitive advantage In 2021, we focused on helping tenants to increase competitive ability to win over customers based on our belief of 'Customer Champion' through utilizing the CRM (customer relationship management) system. We, in partnership with The 1, a company under Central Group that has over 15 years of expertise in Established Database, created the application, “The 1 Biz,” to enable our tenants to make use of big data analytics to gain a competitive advantage. Instead of having to invest in building their own CRM systems, our tenants can use The 1 Biz to learn about their customers and use the data to develop and tailor products and marketing strategies to meet customer needs as well as track performance and boost sales. The initiative aims to empower our tenants to not only attract and retain customers but also build a base of advocates.



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### 1.3 New Entrepreneur Development

Central Pattana identifies and helps develop new entrepreneurs through providing opportunities to small businesses and local entrepreneurs looking to venture into modern trade. We offer a wide range of retail spaces that fit the needs, levels of expertise and conditions of each business operator. This year, we have renovated our retail spaces and added new formats to diversify offerings to keep up with a fast-changing world and consumer preferences and tastes that are constantly evolving.

#### Retail Formats for Different Types of Entrepreneurs

##### Pop-up Stores



Open spaces in the common areas of the shopping centers suitable for entrepreneurs who are looking to test their products for a short period of time

To date, there are 99 pop-up stores across our shopping centers.

##### Markets such as Market Market



Open air space in front of the shopping centers where vendors can sell products during certain times of the day such as in the evening or at weekends

##### Jing Jai Market



Dedicated space for farmer-to-consumer shopping

Organic farmers can sell agricultural products to customers in the permanent retail spaces inside the shopping centers or in temporary event spaces during marketing campaigns.

##### Retail Space for Gifts and Souvenirs such as

Kad Luang Airport, Northern Village and Sam Samut Market



A destination for Thai and international tourists suitable for local entrepreneurs looking to enhance the value of local products

The Retail Space for Gifts and Souvenirs are set up in separate areas to be a hub for premium souvenirs and handicrafts that showcase local identities and are considered “must-buys.”



### Take Away Zone



Dedicated area for take away for food entrepreneurs who do not need to cook on site or can cook in a common kitchen, catering to customers who prefer take away meals

### Local Hero



Retail space for local businesses and entrepreneurs

“Local Hero” is for current tenants who: sell trendy and high-demand products; have stylish store layouts and designs; have capacities in terms of financing, production or manpower; and are ready to expand their businesses to other Central shopping centers; as well as popular local businesses that meet those criteria but do not have a shop at our shopping centers. Eligible businesses will be invited to trial their shops in different types of retail spaces including: (1) Shop in Shop, which is made up of a variety of shops between 10 - 20 sq.m. in size that have dedicated salespeople; and (2) Hug Craft, which carries products from businesses that have limited manpower and is manned by salespeople provided by Central Pattana.

To date, 45 shops have been selected for Local Hero. However, most of the entrepreneurs said in our expansion readiness survey that, due to the COVID-19 pandemic, they wish to expand in 2022.

### Retail Zone, Playhouse and Design House



New retail formats under the “Department store” concept offering variety of products from different brands where customers can shop and pay in one place

One of the formats has been trialed at Central Si Racha under the name, ‘Playhouse,’ to meet the needs of entrepreneurs who have limited manpower. With a focus on fashion and lifestyle products, it offers something for everyone in the family. Inside, customers can ride a merry-go-round, get snacks from vending machines, take fun snaps in a small photo booth or relax at a café corner. Using a similar concept, we also developed a home décor zone under the name, ‘Design House,’ which caters to entrepreneurs who are facing staffing shortages or want one shared retail space for products from different brands.

### Cloud Kitchen



Commercial kitchen space for restaurant operators wishing to offer delivery services, from current tenants who want to set up stand-alone delivery service to famous restaurants that want to add a new sales channel to their business to reach the right customers online without breaking the bank.

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

Living Our 4 Beliefs

## Customer Champion

**เปิดตัวแอปสำหรับ  
คู่ค้า-ผู้เช่า  
เจ้าแรกในวงการ  
ศูนย์การค้าไทย**

**ข้อดีของการเป็นผู้เช่า  
กับ Central Pattana**

**SERVE สะดวก รวดเร็ว**  
ให้คู่ค้าบริหารร้านค้าในศูนย์การค้า  
ได้ด้วยตัวเอง

**ทำธุรกรรมต่างๆ**

- แจ้งซ่อม
- ขอใบเสร็จรับเงิน
- บันทึกยอดขายรายวัน
- ขอใบแจ้งหนี้, ใบเสร็จ, ใบกำกับภาษี
- ชำระเงินออนไลน์
- ตรวจสอบสัญญาเช่า

มีข้อมูลข่าวสาร จากศูนย์การค้า  
ครบถ้วน และทันเวลา

เข้าถึงบริการพร้อม ไม่เสียเวลาในการดำเนินการ

ประหยัดเวลา ลดข้อผิดพลาดในการดำเนินงาน  
หลายช่องทาง ทั้งโทรศัพท์มือถือ  
และคอมพิวเตอร์

**เพิ่มยอดขาย และวางแผนการดำเนินงาน**  
รวมกับข้อมูลการขาย และข้อมูลการขาย

**ไม่เสีย  
ค่าใช้จ่าย  
สมัครได้เลย  
วันนี้**

**CENTRALPATTANA**


**SERVE**  
CENTRALPATTANA

Central Pattana developed the Central Pattana 'SERVE' application to be an all-in-one platform that assists our tenants in everything they do. It is the first of such applications in Thailand's shopping center industry. We used the insights collected from tenant surveys to develop the application based on the Tenant Centric approach to meet the lifestyle needs in the digital world. Key functions of the application include:

- **Financial management:** Tenants can quickly find invoices and make payment, both online and offline, and access their receipts easily as well as use the data on the application for other transactions.
- **Store management:** Tenants can find rent information, submit repair and maintenance requests for electrical problems, cooling and heating problems, water problems, gas problems, and get status updates and rate the service after the job is done.
- **News and activities:** Tenants can stay to date with the latest news, activities and marketing campaigns happening at each branch to make appropriate plans to serve customers, run promotions with the shopping centers on specific dates and times and look up information or services provided by the shopping centers.

In 2022, we plan to roll out a new function, "business matching," to further support tenants in business expansion as we grow together. It will include services such as opening new stores in other Central shopping centers; learning about franchise opportunities that can lead to new business avenues; developing partnerships with other tenants; providing SME operators with access to information and funding resources; and becoming Central Pattana's business partners and enjoying partnership privileges. To date, the application adoption rate among tenants is 91% with 64% of the users interacting with the app on a regular basis, consistent with our target.

## Sustainability Performance: Tenant Management and Development

Topic	2021 Performance	Plan for 2022
<b>Sustainability Indicator</b> 	<ul style="list-style-type: none"> <li>• “Tenant Satisfaction” was removed from our 2021 key performance indicators due to the impact of COVID-19 pandemic, which presented external challenges to tenant satisfaction that are outside of Central Pattana's control.</li> <li>• Revised the 2021 indicator to execution of subplans.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish “Tenant Satisfaction” as a key performance indicator and target to achieve a tenant satisfaction score of 80 in 2022. The indicator may be subject to revision based on the COVID-19 situation in 2022.</li> </ul>
<b>Tenant Engagement and Development</b> 	<ul style="list-style-type: none"> <li>• A 70% recruitment rate of new business operators was achieved. It was a satisfactory result in light of the COVID-19 pandemic.</li> <li>• Despite having to postpone CPNlead Class 4, Central Pattana continued to provide support to CPNlead Classes 1-3. New business openings and expansions among our trainees increased by 30%, compared to 2019.</li> <li>• Implemented the strategic marketing plan with 99 pop-up stores up and running, which is a 47% increase from 2020 or 76% of the target.</li> <li>• Supported small and local entrepreneurs to operate 4,876 modern trade stores. (as of 31 December 2021 and exclude new tenants or those whose contracts ended.) The 7% increase could be attributed to execution of the work plan under Central Pattana's Sustainability Strategy to support small businesses with potential in terms of capacity and products that may have limited experience, knowledge and funds. In 2021, we provided support to 80 operators, achieving 104% of the target.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase the percentage of new tenants according to the corporate strategy.</li> <li>• Implement the strategic marketing plan and increase the number of pop-up stores according to the corporate strategy.</li> <li>• Increase the proportion of local business operators and small entrepreneurs to 10% of tenants by 2025.</li> </ul>

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

## 2. Employee Engagement and Transformation Awareness

Central Pattana believes in creating an equal, fair and inclusive workplace where good governance and human rights principles are respected and upheld, as summarized in Chapter 6 in the “Corporate Governance Policy” section of the 2021 Annual Report. Our management approach to become an Employer of Choice is as follows:

### 2.1 Recruitment and Talent Acquisition

At Central Pattana, we provide equal opportunity to all applicants and employees without regard to gender, race, ethnicity or other differences. In 2021, we further enhanced our recruitment process and manpower planning through utilizing the Human Resource Information System, “CneXt,” adding people analytics and predictive analysis capabilities to the centralized repository, which stores employee data of all companies under Central Group. To improve workforce planning, we developed “Build & Buy,” an in-depth analysis of integrated human resource data from multiple databases including resignations, transfers, promotions, retirement and current workforce, which is used to create an effective headcount plan for each function, division, branch and department, as well as develop appropriate recruitment and employee development plans that meet all hiring needs. This year, we used the following channels for staff recruitment:

1. Internal recruitment “Opportunities for Internal Transfers,” is a program that we run annually to give current employees an opportunity to gain experiences working in a different function, grow professionally or relocate back to their hometowns when the Company launches new projects in the provinces. In 2021, we slowed recruiting and hiring for some roles due to the COVID-19 pandemic. To fill vacancies, our recruitment department adjusted its plan to focus more on internal hiring. This year, 511 positions or 54% of all open vacancies were filled through internal recruiting and 77 employees submitted requests to relocate to their hometowns. Of these, 28% moved to Chonburi, 36% to Ayutthaya and 13% to Chanthaburi provinces, respectively. To delay new recruitment for positions that would be vacated by retiring employees and in some instances allow employees to share their knowledge with new hires, the Company will consider offering 1-2 years employment extension on a case by case basis upon mutual agreement and based on

job function. In 2021, 5 employees participated in the Extension for Retirement program.

2. Recruitment within companies under Central Group, this is carried out through two programs: ‘Transfer Within Central Group’ and ‘Central Group Management Associate (MA).’ Transfer Within Central Group is a program that allows employees to transfer between Central Pattana and other companies under Central Group. Employees can submit requests and transfer to another company with their years of service also transferred to the new positions. In 2021, 19 employees participated in the program. Of these, four moved to companies under Central Group and 15 moved to Central Pattana or 21% and 79% of total employee transfers, respectively. Central Group Management Associate (MA), on the other hand, is run by Central Group and aims to attract young talents to the company and its subsidiaries. As MAs, the employees get to rotate between jobs and gain hands-on experiences working at different companies under Central Group, which is now in its eleventh year. In 2021, four employees or 15% of all MAs participated in job rotation with Central Pattana.
3. External recruitment Central Pattana uses various methods and mediums for external recruitment including mass media, social media, recruitment agencies, Central Pattana’s own channels such as company websites [www.centralpattana.co.th/en/job-opportunity](http://www.centralpattana.co.th/en/job-opportunity) and <https://jobboard.central.tech/> and LinkedIn. We also created a new recruitment channel on Facebook, [www.facebook.com/CentralPattanaCareers/](https://www.facebook.com/CentralPattanaCareers/) to directly communicate with job seekers and reach potential candidates. This not only helped lower recruitment costs by 8%, compared to 2020, but also made our recruitment process more efficient. Our analysis showed that the viewing and apply rates of our job postings increased by 149% and 90%, respectively.

General Manager Trainee or GM Trainee was one of the key positions that we advertised on all recruitment channels. “GM Trainee” is a training program we have created to prepare future leaders to drive Central Pattana’s growth and expansion. Selected candidates will gain knowledge and skills in how to manage shopping centers and develop the skills they need to become a good leader through on-the-job learning with current general managers serving as their coaches. The six-month program, which is now in its sixth

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year, has been further improved in 2021. As part of their training, GM trainees now have to undertake a special work assignment for which they will be evaluated. This year, we welcomed eight GM Trainees, an increase of eight trainees compared to the year before. Of these, six were internally recruited and two were recruited from companies under Central Group.

To enhance our recruitment capabilities, we conduct a salary evaluation and assess our hiring practices against companies of similar size and those in the same industry every year. We maintain gender diversity ratios in our workforce and use human resources analytics to plan employee benefits programs to ensure flexibility and responsiveness to our employee needs. This includes implementing hybrid working, a four-day working week in the office instead of five for employees in some of the departments, flexible hours for office workers and offering a range of health insurance coverage that include Your Choice Your Protection and family coverage from which employees can choose based on their needs. This year, we launched a flexible benefits program that

allows employees to use the excess amount to cover other health expenses such as fitness membership, vaccination, additional checkup and therapy, for example. The program has been trialed with employees at the middle management level and higher.

## 2.2 Leadership and People Development

People Development is key to Central Pattana's growth strategy as we continue to expand our business and is used as one of the mitigation plans to help address employee worries over the Company's ability to respond to change and influence employee engagement levels and dedication. In today's hyper-competitive job market, it is more important than ever to ensure an integrated approach to recruitment, retention and development of employees. At Central Pattana, we have been using "CneXt," a Human Resource Information System to gather, facilitate and leverage data from our employees to create a holistic approach to employee development including leadership development and people development.

Leadership Development	2021 Performance
<p><b>People Manager Program</b>, a program for employees at the Team Leader 1 level and higher (heads of department and higher), aims to strengthen people management skills of supervisors to lead their teams to success. The program covers 5 areas of people management including:</p> <ol style="list-style-type: none"> <li>1. Attract, Select &amp; On-boarding</li> <li>2. Manage Performance</li> <li>3. Develop &amp; Grow</li> <li>4. Engage &amp; Retain</li> <li>5. Off-Boarding</li> </ol>	<p>The program, delivered through e-learning via CneXt, included 7 courses:</p> <ol style="list-style-type: none"> <li>1. Employ Branding</li> <li>2. Recruitment, Selection &amp; Interview Skills</li> <li>3. Onboarding Program</li> <li>4. Talent Management &amp; Succession Plan</li> <li>5. Career Development</li> <li>6. Employee Engagement</li> <li>7. Off-Boarding</li> </ol> <p>In 2021, 79% of target employees (2,275 out of 2,877 employees) attended the training. Additionally, three trainings were conducted and livestreamed via Workplace to give employees an opportunity to hear from senior executives and learn from their experiences in people management across all five areas.</p>



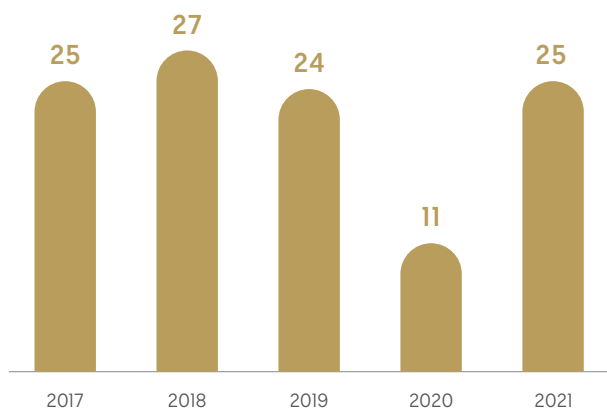
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Leadership Development	2021 Performance
<p><b>Talent Management</b> is a program that identifies and nurtures high potential and outstanding employees with a career roadmap or Individual Career Development Plan: ICDP, giving them opportunities to learn, grow and advance their career within the Company and prepare for future growth.</p>	<p>The target for participation was met as 95% of target employees took part in the program (372 out of 391 employees). We tracked individual progress on a quarterly basis. In 2021, we offered different forms of development opportunities to our employees including Management Development Program and the online learning program “Skills of the Future,” which was provided by Thammasat University and SkillLane (TUXSA) and held post-training sharing sessions for participants to exchange what they learned and share their experiences. We recognize that, in addition to supporting their professional development, it is important to listen and learn from our employees. So we organized “Tea Time Talk” to give employees from different departments a chance to talk and discuss ideas about the Company with our senior management team in a casual setting.</p>

People Development	2021 Performance
<p><b>Functional Competency</b></p> <p>We set out capabilities for each function and develop a training roadmap accordingly, which includes training courses for each unit and job role, and perform regular monitoring and evaluation.</p>	<p>Functional Competencies for support functions including accounting, finance and procurement, were developed for 41 job roles and 87 employees with individual development plans and training courses defined through employee assessments.</p> <p>Additionally, with Functional Competencies for core frontline functions including Property Management, Marketing and sales, now completed, we plan to develop Functional Competencies for each job role in 2022.</p>
<p><b>Skills and ethics training under Central Pattana’s core beliefs</b> with a focus on corporate governance and occupational safety and health and environment</p>	<p>We provided corporate governance trainings to our employees, which focused on anti-corruption, human rights, PDPA and public safety through online platforms.</p> <p>The trainings included public safety courses - safety training for security guards; occupational health and safety committee training; large machinery maintenance training e.g. crane maintenance - which were attended by 532 people (include those attending more than one activity); and environmental management courses - ISO 14001 internal auditor training; energy conservation and wastewater treatment training - which were attended by 1,868 people (include those attending more than one activity).</p>



### Average Training Hours (hours/person/year)



Due to the COVID-19 pandemic, people development programs in 2021 had to be shifted to e-learning. We provided 95 training courses to employees in total – an increase of 42% from 28 courses in 2020. The results of the course evaluation surveys showed that 78% of employees were satisfied with the training they received (a reduction from 2020). Our approach to people development, which is based on the 70:20:10 Model, emphasizes learning through hands-on experience and cross-functional learning and development during the pandemic. In 2021, our employees, on average, received 25 hours of training per year, which is 127% higher than in 2020.

#### Educational Grant Program

Central Pattana believes in investing in the development of our people and capabilities and is committed to providing support to employees who want to expand their skills and knowledge and pursue a master's degree. Our employer-sponsored employee education program is open to employees who meet the following criteria: have at least two years of service and have received a B level rating in consecutive years. Under the program, "Grants for Master's Degrees, Skills of the Future," grants are awarded to employees who meet the above

criteria and are interested in studying technology and digital technology-related fields such as data science, information technology, digital marketing and digital innovation. Employees can choose between regular or international degree programs in Thailand or degree programs with overseas study tours under the Executive Program. The grants we provide to our employees are conditional with a minimum service commitment of two years. While in the program, grant recipients cannot transfer to another company under Central Group. If the recipient's employment comes to an end or if they leave the company before completing the studies, the recipient will be liable to repay twice the value of funds expended on the awarded grant. Employees are required to submit the applications online and after the initial screening, those who meet the minimum requirements will have to take a test online. Only applicants who passed the test will be asked to interview with the selection committee and awardees will be announced after the process is completed. Due to the challenges posed by the ongoing COVID-19 pandemic, the program is suspended for 2021 and will be launched again in 2022.

#### Innovative Organization

At Central Pattana, employees at any level are encouraged to share new ideas, innovate and explore new ways to improve and elevate the standards of our operations. We foster an environment of continuous learning and knowledge sharing, which is key to people and organizational development as we strive to create value and satisfaction for all stakeholders based on the Plan-Do-Check-Act cycle. In 2021, we continued to implement the "Power of Dream," for the eleventh year. The program has been renamed and adjusted to embrace more diverse ideas and solutions. It is divided into three sub-programs, which include Dream Mini, Dream Team and Dream Big, based on application and usage.

#### Power of Dream Performance

Project	Employees Participated (Person)	Number of Ideas/Projects Submitted (Ideas/Projects)	Performance against Target (Percentage)
Dream Mini	113	211	141
Dream Team	868	45	129
Dream Big	498	444 *	89

Remark : \* Includes ideas from Dream Mini and Dream Team

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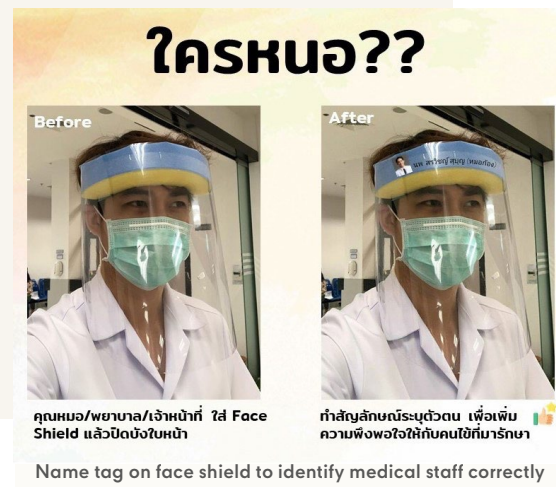
Living Our 4 Beliefs

## Dynamism

### Dream Mini

provides open online space for employees to think outside the box and pitch ideas, whether big and small, already implemented, viable or still needs further study. The objective of the program is to encourage employees to think and ideate about how they can improve our processes. Employees at any level and from any branch can submit their ideas for each category. Dream Mini Awards include Critics Choice Award, People's Choice Award for the idea that has the most views and following from our employees and Most Popular for the winning idea in the category with the most submissions. Entrants can enter their ideas into the four categories below:

- Boosting customer confidence for COVID-free shopping
- Boosting foot traffic to the shopping centers
- Reducing operating costs
- Central and Tenants "Happy Together" through the crisis



### Dream Team

is a competition for creative solutions that are viable and in alignment with the strategy of each branch. The solutions, developed and refined in a systematic manner, must be able to scale, produce immediate results and solve problems based on the PDCA (Plan-Do-Check-Act) cycle and QC Story. The objective of the program is to create solutions that will improve process efficiency, productivity and effectiveness at the corporate and branch levels. Eligible project submissions must be projects that: have already been implemented; delivered results within 2-3 months; and can be replicated to other branches or company-wide. The winning project in 2021 was from "HYI's Shopping Helper: We Help You Shop" team. To help customers who want to shop but cannot visit the shopping centers, the team developed a "shopping helper" to respond to enquiries about products that are available at different shops. It is a solution created to increase sales channels for tenants, while customers are still choosing not to go out.

**CENTRAL PATTANA DREAM TEAM 2020**

**DREAM TEAM Pro** เพิ่มความพึงพอใจของลูกค้า/เพิ่มรายได้/ลดค่าใช้จ่าย  
"ปัญหาใหญ่ - วิเคราะห์ย่อย"

Time line: 2020 → 2021

ขั้นตอนโครงการ: 1. เสนอไอเดียโครงการ, 2. ดำเนินการ, 3. สรุปงาน

สำหรับสาขาที่ส่งหัวข้อแล้ว ขยายเวลาให้ดำเนินการได้ถึงปีหน้า ซึ่งทำให้มีเวลาวิเคราะห์วิเคราะห์มากขึ้น โอกาสที่จะบรรลุเป้าหมายที่สูงขึ้น

**DREAM TEAM Mini** เพิ่มความพึงพอใจของลูกค้า/เพิ่มรายได้/ลดค่าใช้จ่าย  
"ปัญหารูทีทางแก้ - คิดได้ทุกวัน - ทำได้ทันที"

Time line: 2020 → 2021

รอบรอบไอเดีย: 1. สาขาคัดเลือกส่งประกวด, 2. คณะกรรมการคัดเลือก, 3. ประกาศผล

สาขาคัดเลือกโครงการ (ที่ดำเนินการเสร็จสมบูรณ์) ส่งประกวดภายในวันที่ 30 กันยายน 2020

## Dream Big

is a challenge for big solution ideas through design thinking. The objective of the program is to create innovations that will support the implementation of the Company's strategy and create an economic impact. The innovations may require funding to develop and implement and need more than three months to yield results. It is organized in the form of a competition with employees presenting their solutions at a Hackathon. In addition to cash prizes, the winning projects will get to see their solutions piloted in the real world with support and funding provided by the Company. The competition consists of four stages including: (1) Ignite The challenge is unveiled by senior management during Inspiration Talk; (2) Ideas Challengers work together to generate as many ideas as possible in three categories: customer experience, tenant experience and shopping center management. Extra points are awarded to teams that are able to also incorporate technologies and O2O experiences into their solution ideas; (3) Innovate Teams compete in a one-day Hackathon by pitching their ideas to our executives who will select the winners; and (4) Implement Winning teams participate in a design thinking workshop to turn their ideas into solutions.

One of the winning projects was the Robotic Process Automation for Central Pattana, which proposed establishing a RPA Consulting Team to automate routine, time-consuming and repetitive tasks that involved multiple employees. The utilization of BOT, will not only help improve efficiency but also significantly reduce human errors.



## 2.3 High Performance Organization

### Performance Management and Evaluation

This year, Central Pattana began using OKR - Objectives and Key Results to set goals and measure key results for company-wide employee evaluation. We also expanded the capabilities of the Human Resource Information System, "CneXt" to support employee performance management. The four-step process we use for employee performance management and evaluation is described below:

1. Employees set individual objectives and key results in alignment with the Company's OKRs. This includes establishing the goals for annual work plans and Individual Performance Management Plans, which outline the results

in five aspects: company growth, brand value creation, optimization, internal process improvement and people. Goals, work plans, indicators and weight for each goal are set accordingly.

2. Before approving, supervisors will review the proposed OKRs to ensure that they align with the Company's OKRs and monitor the progress and conduct periodic check-ins with employees.
3. During performance review season, employees are required to complete a self-evaluation in the online system, which will be reviewed by their supervisors through one-on-one feedback sessions. The initial performance ratings are collectively discussed at manager-level meetings in

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the calibration process. The results are communicated back to the employees through performance dialogues with scores subsequently confirmed in the system.

4. The OKR scores are used to calculate the rate of pay raises and annual bonuses and are analyzed together with the results of three other evaluations - core competency, leadership competency and Individual Development Goal (IDP) - to determine promotions and development of individual development plans in the following year.

In addition, 360-degree feedback has been added as part of our leadership competency assessment, enabling employees to share feedback with supervisors through completing the People manager survey, in which 90% of employees participated. The survey results are also used as one of the indicators for the People Manager Program in which managers are required to provide one-on-one feedback with his/her subordinates, to strengthen people management skills of supervisors to lead their teams to success.

#### Process Improvement

In our drive to become a purpose-led organization, Central Pattana has modified our processes and organizational structure to support agility shifting away from organizational silos to a team-based lateral structure with more decentralized authority and lateral decision-making. All employees can contribute to developing new ideas and enjoy the same access to work tools. In 2021, the Company has restructured corporate organizational structure as shown in 7.1 “Corporate Governance Structure Chart” section in our 2021 Annual Report. We have introduced changes to all functional structures and are in the process of modernizing the job structure to reduce management layers and expand and increase the span of control to give employees greater autonomy and agility at work with considerations given to the Layer and Span of control. The job structure redesign is still ongoing and will be continued in 2022.

#### Enhancing Work Environment

Due to the COVID-19 pandemic, Central Pattana, in 2021, still implemented WFH-Work from Home arrangements during the periods when the situation worsened and trialed hybrid work arrangements for some departments as the situation was getting better. We also re-worked our office design

and workspace under the “Smart office” project to fit our employees’ needs, work functions and changing lifestyles and further enhance occupational safety and health. The plan to renovate the back of house offices at each branch, however, has been postponed.

#### Digital Transformation

Leveraging technology in the workplace is central to our transformation to a purpose-led and agile organization. We have set digital upskilling in the company’s strategic work plan and launched the Human Resource Information System “CneXt,” which enables self-service and real-time human resource management and can be accessed on computers, tablets and mobile phones from anywhere, at any time. Integrating digital transformation and human resource management, the system has two modes, ESS- Employee Self Service and MSS-Manager Self Service and is used to manage different areas of human resources management including people excellence: recognizing the importance of team and employees to develop and retain people; service excellence: streamlining processes and experiences; and organization excellence: utilizing human resource data to inform business planning. Since its launch in 2019, we continue to improve the CneXt system and roll out new functions every year. Among the functions available are benefits, time attendance, indicator setting, annual performance reviews, people development planning, online training. Functions for supervisors include coaching and feedback, creating requests and monitoring hiring and vacancies. Other general functions include salary slips, tax deductions, personal information update, internal transfer and updates news and information from Central Group.

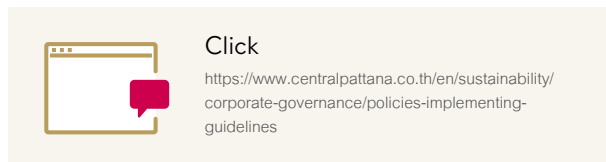
We began using AI-Artificial Intelligence and Machine Learning to manage datasets and perform certain human resources tasks. This included using BOTs to handle functions on CneXt - CNEXT BOT, which manages employee day-offs, overtime pay and recruitment; Health Bot, which performs screening of employees for COVID-19 during the pandemic; CHOM BOT, which helps foster a culture of appreciation and recognition; ACADEMY BOT, which updates employees about training courses and self-development opportunities; Cee, which reminds and invites employees to take part in surveys; and RPA – Robotic Process Automation, which

performs account reconciliation. Develops management systems for tasks such as booking a meeting room, creating e-memo, developing online surveys, disbursing funds, booking a company's vehicle, tracking document delivery and developing applications for each specific unit including creating budgets, selling retail space and floor plan, requesting marketing approvals, accounting for greenhouse gas emissions and waste management, for instance.

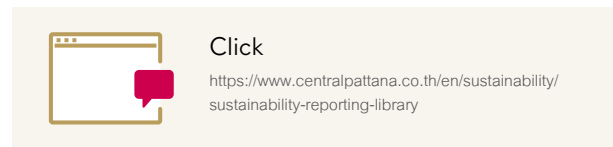
As a result of the COVID-19 pandemic, Central Pattana has fully embraced VDO Conferencing and connected our information systems to the cloud. We rolled out remote working through e-workflow and adjusted how we communicate and engage with employees through the Company's social media platforms to include live streaming, posting news updates and stories and holding online recreational activities to help our employees de-stress, have fun and share ideas and experiences. Employees can also clock in and out via Mobile clock.

#### Employee Safety

We establish Safety and Occupational Health Policy, which is publicly available on our website:



We set up Occupational Safety and Health Committees (OSHC) at the corporate and branch levels, which are responsible for developing and driving our Workplace Safety Policy and Plan to prevent and reduce workplace incidents, injuries, work-related illnesses, nuisance, or unsafe working conditions. Presently, the committees have 355 members - 154 members representing the employer and 157 members representing the employees – who represent 8% of the workforce (contract employees are not included). The report is disclosed in Section "Employee Development and Engagement" on the website at



Work-related injuries recorded in 2021 were primarily due to carelessness. Four accidents reported by our contractors was caused by the negligence of workers and customers. 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.

#### 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, we conducted HRDD - Human Right Due Diligence and HRIA - Human Right Impact Assessment with employees as described in the Annual Report's Chapter 6 "Corporate Governance Policy" under the "Human Rights Policies and Procedures" section. The outcomes informed the development of our Human Rights Roadmap 2020-2022 under the United Nations Guiding Principles on Business and Human Rights. The table below summarizes the progress in our implementation of the mitigation plan related to the human rights of employees in the workplace:

## (3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

Human Rights Roadmap 2020-2022	2021 Performance	Plan for 2022
1. Review policies and procedures on rule of law and human rights.	We updated HR policies to ensure clarity, relevance and application to stakeholders as described on the website: <a href="https://www.centralpattana.co.th/storage/sustainability/cg/cg-policy/20220217-cpn-hr-policy-en.pdf">https://www.centralpattana.co.th/storage/sustainability/cg/cg-policy/20220217-cpn-hr-policy-en.pdf</a>	Present a plan to revise and add procedures to align with international standards.
2. Raise awareness of the company's online whistleblowing system.	We added a new complaint channel, which is available on the website: <a href="http://www.centralpattana.co.th/en/whistle-blowing">www.centralpattana.co.th/en/whistle-blowing</a>	Present the progress on complaints that have been submitted to the Corporate Governance and Sustainable Development Committee and disclose information as appropriate.
3. Promote the rights to safety, health and wellbeing of employees including subcontractors.	We conducted the work environment evaluation in accordance with the human rights principles and added the checklist to our annual audit checklist for the international standard system management.	Present the plan to improve the work environment to prevent and protect the rights of employees to a safe workplace.
4. Implement the Protect, Respect and Remedy Framework for customer service employees.	We developed the threat management plan for customer service employees.	
5. Revise the Fair and Equal Treatment practice.	We increased the remedy budget for at-risk employees to ensure fair and equal treatment and lift workplace spirit and morale.	Measure our implementation of the Company's human rights practices against the international standards of human rights.
6. Conduct human rights training for supervisors, employees responsible for managing and overseeing other employees and subcontract employees.	We, in partnership with Central Group, conducted activities to communicate and raise awareness of employees about everyday human rights violations under the topic "Be Mindful to Avoid Unintentional Violation" as well as held an online seminar under the theme "Business and Human Rights – Your Responsibility or Whose?" and an online talk show "Think About Company Ethics," with ethics self-assessments based on the Company's Code of Conduct completed by employees.	Improve the e-learning course "Ethics in Workplace" on CneXt and refresh our corporate culture to align with UNDP Human Rights principles.

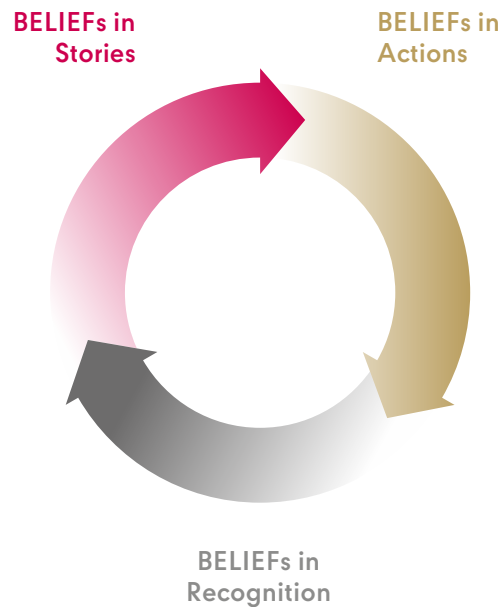


### Corporate Culture

At Central Pattana, we cultivate a culture that is driven by our core beliefs and purpose. The four core beliefs we live by are instilled in our employees guiding them in everything they do to imagine better futures for all. To foster a purpose-driven culture, we communicate and engage with our employees through interviews and experience sharing sessions with employees at all levels from senior management and middle management to operations through these activities: Beliefs in Stories: Learn and understand core beliefs through in-depth interviews with management; Beliefs in Actions: Share hands-on experiences in which employees discuss experiences from participating in the following activities: 1) DREAM BIG: Challenging employees to ideate and turn ideas into reality under our core belief, Dynamism; 2) CUSTOMER DAY: Getting employees to spend one day attending to customers to learn and get hands-on experience from our gurus under our core belief, Customer Champion; 3) COMMUNITY DAY: Encouraging employees to spend one day volunteering to give back to the community and society or participating in creative activities with employees from other departments or organizations under our core belief, Community at Heart;

### Employee Engagement

Central Pattana develops "CG Voice," our employee engagement survey based on Kincentric's Employer of Choice survey methodology (formerly a part of Aon Hewitt), to assess employee engagement in two dimensions – basics and engagement drivers, which are divided into four and three categories, respectively. In 2021, two employee engagement surveys were conducted in Q3 and Q4 in which 97% of employees took part. They revealed an overall employee engagement score of 78% - a 6% decrease from 2020. 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







and Belief in Recognition: Show appreciation and recognition for behaviors and actions embodying our core beliefs through CHOM BOT on Workchat, the Company's social media platform.

develop employee engagement plans and report the findings to the People Development Committee and the Recruitment and Compensation Committee. In 2021, priority was still given to addressing factors that affect talent engagement, and employee engagement score and turnover rate were both established as performance indicators.

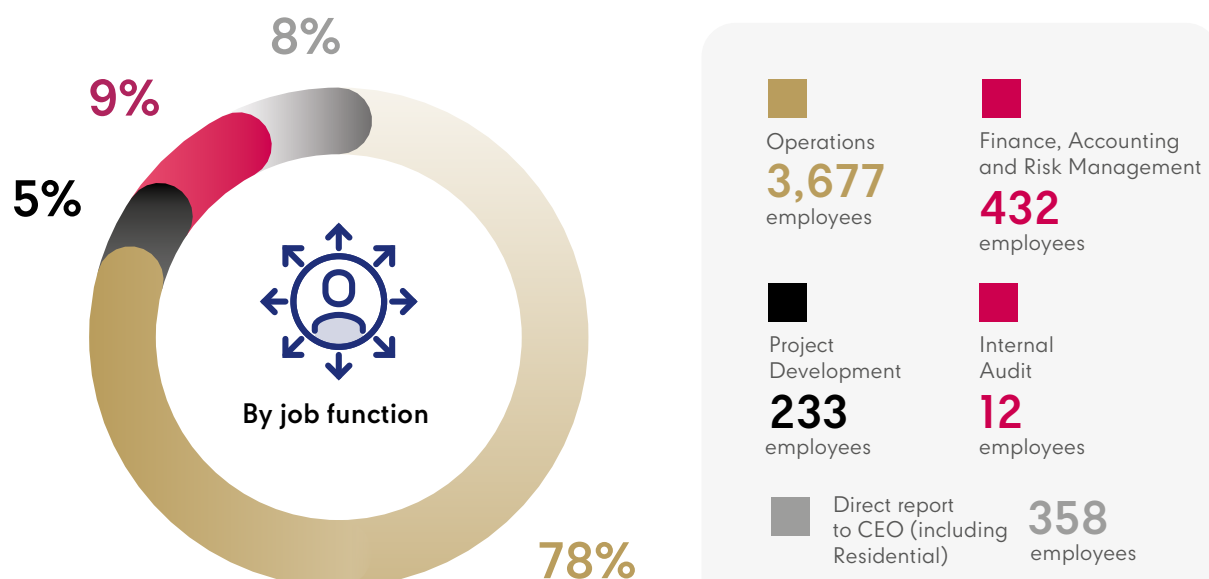
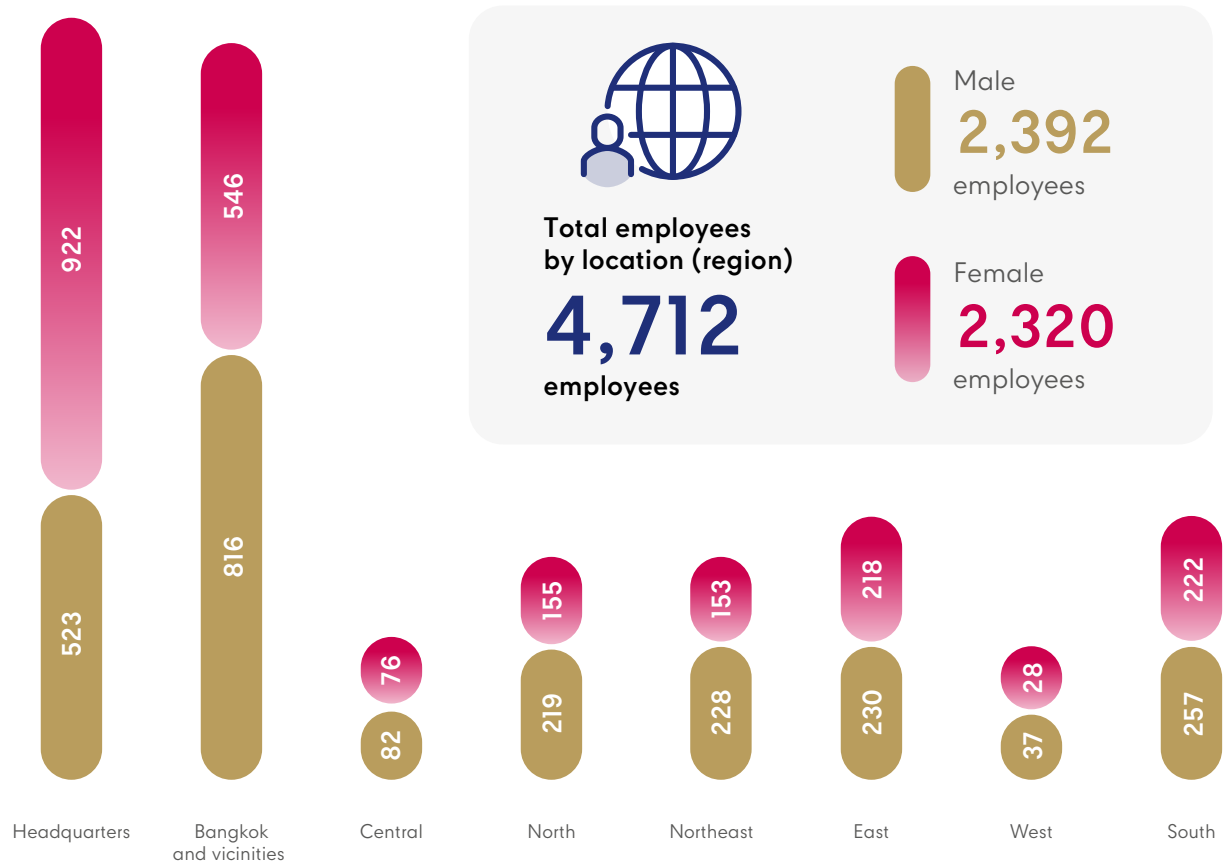
Achieving an overall employee engagement score of above 80% in Q3, Central Pattana won the Kincentric Best Employer Awards Thailand 2021 alongside 14 leading organizations in the country.

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## Sustainability Performance: Employee Management and Engagement

Topic	2021 Performance	Plan for 2022
<b>Sustainability Indicator</b> 	<ul style="list-style-type: none"> <li>Established “CG Voice Score” as a key performance indicator and target to achieve an overall employee engagement score of 80%.</li> <li>In 2021, we conducted two employee engagement surveys, which returned an average employee engagement score of 78%.</li> </ul>	<ul style="list-style-type: none"> <li>Establish “CG Voice Score” as a key performance indicator and target to achieve an overall employee engagement score of 80% and a talent engagement score of 75%.</li> </ul>
<b>Recruitment and Talent Acquisition</b> 	<ul style="list-style-type: none"> <li>Carried out the Employer of Choice plan including deployment of Build &amp; Buy program, which helped fill 30% of open positions through internal recruitment.</li> <li>No union members were employed and there were no efforts to unionize.</li> </ul>	<ul style="list-style-type: none"> <li>Continue implementation of the Employer of Choice plan and target to fill 50% of open positions through internal recruitment.</li> </ul>
<b>Leadership and People Development</b> 	<ul style="list-style-type: none"> <li>Carried out implementation of the 6-month GM Program, which kicked off in November 2021. A project evaluation will be conducted in 2022.</li> <li>Completed execution of the plan to establish n-3 level key positions.</li> </ul>	<ul style="list-style-type: none"> <li>Carry out leadership development under the GM Program and use HCROI to measure the project outcome.</li> </ul>
<b>High Performance Organization</b> 	<ul style="list-style-type: none"> <li>Conducted the organizational structure change study for agile adoption and piloted the new structure in one branch, which returned significantly higher employee engagement rates.</li> <li>Through implementing the employee engagement plan, the annual voluntary turnover rate remained within the normal range.</li> <li>Employees reported 68-80% stronger alignment of behavior to Central Pattana's four core beliefs.</li> <li>Central Pattana recorded no employee complaints or labor disputes.</li> </ul>	<ul style="list-style-type: none"> <li>Roll out changes to the organizational structure at branch operations level to support agile transformation.</li> <li>Reduce the average layer and span of control to the target level, which is a process that began in 2021.</li> <li>Foster a corporate culture based on four core beliefs.</li> <li>Implement the 2022 Human Rights Plan and conduct a human rights impact assessment.</li> </ul>

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

**Total Number of Employees in 2021**

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### 3. Supply Chain Management

Central Pattana's approach to supply chain management focuses on transparency and fairness in all supply chain activities. Together with our suppliers, we strive to minimize our impact on communities, society and the environment, respect human rights and ensure safety across the supply chain. Our Supplier Management Plan encompasses business development and construction, shopping center management and marketing and organizational management and is subdivided into twelve products and service categories. Refer to our website for further details on how we categorize our suppliers:



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<https://www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/supplier>

Our Procurement Policy and Guidelines and Code of Conduct for Suppliers are aligned with relevant national, regional and international laws, rules, regulations and guidelines such as Thailand's Labour Protection Act, the United Nations Global Compact (UNGC), the Universal Declaration of Human Rights (UDHR) and the International Labor Organization's (ILO) standards. More information on our policies and guidelines is publicly available on our website:



Click

<https://www.centralpattana.co.th/en/sustainability/corporate-governance/policies-implementing-guidelines>



Click

<https://www.centralpattana.co.th/en/sustainability/corporate-governance/code-of-business-conduct>

We have integrated sustainability into how we work and engage with our suppliers and communicate our expectations at every stage of procurement and supply chain management from supplier selection to supplier risk assessment to performance monitoring and evaluation to supporting and collaborating with our suppliers to realize shared value for society, communities and the environment.



### 3.1 Supplier Risk Analysis

Supply chain planning at Central Pattana involves analyzing supplier risks in two dimensions – delivery reliability risks and sustainability risks linked to issues such as governance, the environment and safety. Risk levels are then assessed based on annual spend, dependency and substitutability and difficulty to replace such as services that require special expertise. The supplier risk analysis is conducted at the business unit level beginning with shopping center management, which includes marketing and organizational management (but does not include business development and construction). According to our 2021 spend analysis (which excluded utility providers for electricity and water supply), 102 of our 3,213 suppliers received more than Baht 10 mn in spend annually and accounted for 70% of our total procurement spending.



Total suppliers

**3,213**

Suppliers receiving more than Baht 5 mn in spend annually

**102**

accounted for

**70%**

of our total procurement spending

### 2021 Supplier Spend Analysis

Supplier Tier	Spend Tier (excludes business development and construction and utility providers)	Number of Suppliers	Spend (mn Baht)	% of Spend
Tier 1	More than Baht 5 mn	102	2,527	70
Tier 2	More than Baht 1 mn but not exceeding Baht 5 mn	306	689	19
Tier 3	Less than Baht 1 mn	2,805	390	11
<b>Total</b>		<b>3,213</b>	<b>3,606</b>	<b>100</b>

Central Pattana further analyzed the results of the spend analysis above at sub-category level based on the categories of products and services we procured <sup>1</sup> and used the outcome to further improve our procurement process as outlined in our 2020-2021 procurement plan and develop plans to help boost the capabilities and capacities of our suppliers according to needs and readiness.

**Remarks :** 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.

### Procurement Process Improvement

Since 2020, Central Pattana has been working in partnership with external consultants to improve our procurement process and supply chain management. This began with our shopping center management operations, which includes marketing and organizational management. Annually, a supplier sustainability risk assessment is conducted to evaluate 100% of our suppliers, who are categorized by the type of products and services they provide into nine sub-categories, across 15 key issues in the procurement standards encompassing five sustainability issues - code of business conduct, environmental and safety compliance, pollution prevention and management, occupational safety and transport safety and considerations for consumers and communities including human rights and labor practices. From this process, we identified the following risks and developed mitigation and risk reduction plans to address them as described in the table below:

Risks and Opportunities	Plan	2021 Performance
<p>Opportunity to boost procurement efficiency and effectiveness</p> <p>Reduce dependency risk in the supply chain</p>	<p>1. Strategic sourcing by analyzing purchases in two dimensions: the total cost and amount of products procured per each purchase order and the total number of purchase orders issued within the year</p>	<ul style="list-style-type: none"> <li>Successfully negotiated with suppliers by implementing the total cost of ownership or TCO approach, which is an estimation of the overall cost of using a piece of equipment throughout its life cycle, to procure equipment for building operations, system operations and maintenance. This resulted in a reduction in procurement costs of elevators and escalators and other products and services in all categories mentioned above.</li> <li>Developed regional median pricing in addition to the corporate-level median pricing in support of the Company's strategy to increase local procurement and mitigate the risk of centralized procurement.</li> </ul>

## (3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

Risks and Opportunities	Plan	2021 Performance
<p>Opportunity to enhance sourcing</p> <p>Reduce the risk of supply shortages</p> <p>Improve forecast accuracy for suppliers and manufacturers</p>	2. Strategic sourcing by analyzing the total cost of products/ services together with usages	<ul style="list-style-type: none"> <li>Conducted an analysis of consumables with low unit costs that were frequently and commonly used, such as products and services procured for food courts, Food Parks and building and facilities operations including drinking water and toilet paper, to enable blanket purchase orders for these consumable items to streamline the procurement process, ensuring sustained supplies and lower costs.</li> <li>Implemented the procurement plan in accordance with the Company's strategy to increase procurement from local suppliers. This included purchasing organic products such as soaps, liquid hand sanitizers and alcohol gel from Patom Organic Living, a community producer of eco-friendly and sustainable products. Currently, the products are being trialed in 13 projects.</li> </ul>
<p>Reduce inventory risk</p> <p>Opportunity to enhance procurement analytics for actionable insights</p>	<p>3. Inventory data structure</p> <p>4. Supplier development and partnership with a focus on top suppliers, both in terms of the volume and frequency of transactions, that have strong distribution capabilities</p>	<ul style="list-style-type: none"> <li>Created a catalog of recurring low value purchases and developed system integration capabilities to connect our systems to the suppliers' e-commerce systems. Suppliers, such as Office Mate and Thai Watsadu, were assessed and selected in accordance with our supplier development and partnerships plan. This change enabled us to order products and services directly on the suppliers' online platforms as well as access and use their inventory management systems.</li> <li>Shortened order cycle time, which in the past could take as long as 1 month, to within 7 days from the quotation to delivery processes.</li> <li>Assessed suppliers' customer concentration risks and worked with them to address and mitigate those risks. For example, we helped Phone Advertising Co., Ltd., which is one of our marketing suppliers, to develop their purchase-to-pay process (P2P) to ensure strict transaction monitoring and greater accountability.</li> <li>Developed a plan to audit suppliers in the risk groups that continue to impact the operations of Central Pattana's business to gain confidence in the suppliers' ability to deliver the products and services. For instance, this year phone audits are being trialed with some vendors in the risk groups.</li> </ul>



## (3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

Risks and Opportunities	Plan	2021 Performance
Operational risks and anti-corruption  Opportunity for leveraging big data on one common repository	5. Improve e-procurement system	<ul style="list-style-type: none"> <li>Developed “Procure to Pay,” to automate procurement processes from ordering to payment bringing procurement together in one platform. The system is expected to be launched on a trial basis in 2022.</li> </ul>

### 3.2 Sourcing of New Suppliers and Supplier Evaluation

Central Pattana seeks to identify potential new suppliers to reduce our business’s dependence on specific groups of suppliers and ensure that all potential suppliers including local and small business operators have a fair and equal opportunity to compete for business and set out, in our strategic sourcing plan, to increase local procurement. To achieve this, we have added three additional channels to find potential new suppliers, which include: increasing local sourcing and local procurement spend; identifying potential suppliers through the e-procurement systems of Central Pattana’s partners; and supporting and developing long-term partnerships with small businesses. In 2021, Central Pattana procured products and services from 3,213 suppliers, 58% out of these are local and small business operators.

At Central Pattana, supplier evaluation is conducted in 3 stages: (1) pre-qualified vendor assessment, which all new vendors are required to do; (2) buyer’s evaluation upon receipt of all products and services; and (3) vendor audit, which include a bi-annual assessment of our suppliers’ organizational standard, conducted by Procurement. Sustainability aspects are fully integrated into all supplier assessments, while supplier risk assessment is incorporated into (3).

The Buyer – users of products and services within the Company - 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. Suppliers will be automatically notified if quality issues are found with products or services they provide. Suppliers who fail to meet the performance standards set by Central Pattana will be asked to resolve the issue or submit corrective actions and preventive actions and if no actions are taken, this will influence the outcome of their annual re-registration in the following year. If any of our suppliers is found to breach any of these conditions: (1) committing a serious violation of any law, engaging in corrupt practices, abandoning the contract, filing for bankruptcy or shutting down unexpectedly, the supplier will be blacklisted immediately; (2) failure to fulfil their contractual obligations such as failure to deliver on quality as agreed that is shown to be the result of an unintentional error; (3) receiving a C grade for 3 consecutive times from the Evaluation for Quality Service; and (4) failure to meet any of the sustainability criteria, which include governance, environmental and social dimensions will result in the supplier being considered for inclusion on Central Pattana’s Blacklist. In this instance, the supplier will be asked to deliver the products or services and implement a corrective action plan with the performance re-evaluated by the Buyer. The committee will then consider adding or removing the supplier from the blacklist in accordance with the Company’s guidelines for blacklisting of suppliers.

In 2021, 78% of all active suppliers were evaluated under grading system A-D. More than 95% of suppliers received an A grade. Only one supplier received a D grade and was asked to submit and implement a corrective action plan.

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### 3.3 Co-Creating Value and Innovation

Central Pattana continues to work collaboratively with suppliers to co-create value and innovation in accordance with our Procurement and Supplier Policy, which is integrated into the expanding corporate governance framework governing our Occupational Health and Safety Policy, Climate Change and Environment Policy and Law and Human Rights Policy. We focus on collaboration with strategic suppliers and high-risk suppliers, particularly those that provide products and services to business development and construction as well as external contractors and subcontractors for shopping center management. Value co-creation with suppliers is realized in 2 dimensions - the environment and safety.

Innovation initiatives	2021 Performance	Projects
<b>Environment: under circular economy principles</b>		
Utilizing Building Information Modeling (BIM) to create 3D virtual construction of sub textures and design facility management	Partnered with Team Consulting Engineering and Management Plc. and Form BIM Akitek Co., Ltd. to use BIM to design facility management and create retail shop drawings to improve design precision and the efficiency of store expansion or modification planning.	Central Si Racha Central Ayutthaya Central Chanthaburi Dusit Central Park
RCA- Recycled Concrete Aggregates	Collaborated with the Cement Group Cement-Building Materials Business of the Siam Cement Plc. to deploy CPAC Green Solution's technology to create Recycled Concrete Aggregates (RCA) from crushed concrete piles for road construction. The initiative was expanded from the Central Si Racha project in 2020 to the Central Chanthaburi project this year.  This reduced transportation of materials to and from the construction site, creating a positive impact on the environment and contributing to a GHG reduction of approximately 198.26 tCO <sub>2</sub> eq or equivalent to that removed by 2,178 trees.	Central Chanthaburi Central Si Racha
Reducing food waste and construction waste	Following the success of the "Journey to Zero" project at the Central Si Racha project, Central Pattana, in partnership with NMC Conland Co., Ltd., has expanded the initiative to all new projects. We trained construction workers on how to properly sort their food waste and produce fermented effective microorganisms or EM fluid in their living quarters to prevent odor problems in the construction site. The initiative helped cut costs by more than 70%. The EM fluid were given away to residents in the surrounding communities who responded positively to the activity and expressed a satisfaction rate of over 80%. The rest of the EM fluid were used to fertilize vegetable gardens inside the construction site, which supply fresh produce for our workers. In addition, concrete debris from our construction sites were collected and used to create slabs and pavers, which we donated to temples and organizations in need.	Central Ayutthaya Central Chanthaburi Central Korat expansion project Dusit Central Park

## (3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

Innovation initiatives	2021 Performance	Projects
Reducing construction waste through collaboration with designers and contractors	<p><b>Reduce :</b></p> <ul style="list-style-type: none"> <li>• Reduce demolition waste by conducting life cycle assessments of materials and prolonging their life cycle through refurbishment. This included installing wraps on railings, columns and the belly of the escalators.</li> <li>• Reduce tile removals by installing rubber flooring tiles over existing tiles.</li> </ul> <p><b>Reuse :</b></p> <ul style="list-style-type: none"> <li>• Developed temporary partitioning solutions that could be reused several times. This includes using portable vinyl partitions instead of fabric ones to temporarily close off the stores that were under construction. The partitions can be moved easily and reused multiple times.</li> <li>• Artfully re-arranged and decorated old lamps to increase illumination level.</li> <li>• Carefully dismantled and removed sanitary fixtures and re-installed them at van terminals for public use.</li> <li>• Transported excavated soils to other project sites for backfilling.</li> </ul>	Central Rama 2 Some measures were implemented in Central World renovation project
Reusing equipment	Converted 20 shipping containers into temporary offices and living quarters at construction sites.	Central Ayutthaya Central Rama 2
Reducing paper consumption by removing steps in work processes	<ul style="list-style-type: none"> <li>• Continued the rollout of Construction Online for SI: Site Instruction between Central Pattana and our contractors to enable online authorization and mass notification. With further system improvements since 2020, we were able to reduce paper consumption by 80% when compared to the previous process.</li> <li>• Developed Site Visit Online, a real-time online monitoring system, and created training videos, to enable on-site employees to quickly report to relevant parties and make it easier to review mock ups and select materials amidst the COVID-19 pandemic, to ensure construction projects can continue without interruptions.</li> </ul>	All new development projects and renovation projects

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

Innovation initiatives	2021 Performance	Projects
<b>Environmental: under net zero principles</b>		
Using alternative energy – solar energy	<p>Completed the installation of solar carports on the rooftop of bus stops and van stops to supply power to air conditioning systems, lights, mobile charging stations and tree spotlights around the projects.</p> <p>Developed a method to calculate the economic and environmental value of installing solar lighting systems around the projects by using a combination of factors including building composition, shading, distance, solar radiation and risks in the event of a lack of sunlight for 2 consecutive days. The outcome showed that solar lights can be installed in up to 50% of the street lighting systems in some of the projects.</p>	<p>Central Si Racha Central Ayutthaya Central Chanthaburi Central Rama 2</p> <p>Central Chanthaburi Central Village expansion project</p>
Reusing wastewater from air conditioning systems	<p>Partnered with our tenants to install condensate drain lines to capture condensate from air-conditioning systems, which are pumped into the storage tanks.</p> <p>The recovered condensate is used for watering the plants around the project.</p>	Central Village expansion project
Maintaining and increasing green spaces	Transplanted trees from construction sites and replanted them in the same or new areas. For example, this year, 300 trees removed from Central Rama 2's Central Park were replanted around the project and other projects under our management.	Central Rama 2

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

Innovation initiatives	2021 Performance	Projects
<b>Social:</b>		
Safety considerations	Central Pattana has established safety and environmental measures at construction sites and expects all our contractors to maintain strict compliance. Construction management consultants are hired to manage contractor safety and compliance and perform periodic inspections. If a problem is detected, the contractor will receive a Safety Improvement Report – SIR, which includes a corrective action plan, to implement. In 2021, 50 SIRs were issued to the contractors who already completed 49 corrective action plans. One corrective action plan is still being carried out by the contractor.	Implemented in accordance with Safety and Environmental Management measures in all new development projects and renovation projects.
Health considerations	<p>During the COVID-19 pandemic, Central Pattana worked with our contractors to develop prevention and protection measures and rolled them out across all project sites to keep our workers safe.</p> <p>The measures, based on “Central Hygiene and Safety Master Plan,” included temperature checks, setting up automatic disinfection gates and hand washing and sanitizing stations, providing masks to workers who are required to wear them while on premises and vaccinating all workers against COVID-19. If a COVID-19 infection is detected at any construction site, the site will be put under quarantine immediately with a field hospital and observation areas set up for workers to self-isolate and quarantine.</p>	
Human rights considerations	<p>Central Pattana has established strict measures for labor registration and inspection of illegal employment. Any construction site that employs migrant workers is required to register their workers with the province where the site is located and provide proper documentation to the project manager. Spot checks are conducted on a regular basis by a consulting team hired by Central Pattana as well as the provincial employment offices. In 2021, all migrant workers employed by eight contractors were legally registered. Of this, 20% were Cambodian, 19% were Burmese and 2% were Laotian, respectively.</p> <p>In addition, we established measures to support housing for workers or set up child-friendly spaces if the number of children at a project site exceeds 10% of the total number of workers. For example, at the Central Chiangmai renovation project, a kindergarten camp has been set up inside the workers' accommodation. Children can attend classes with missionary teachers who come twice a week as well as take part in other kid-friendly activities.</p>	

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)



Find out more about the innovations we co-created with our suppliers on page 134 of the 2020 Annual Report and on our website



<https://www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/supplier>

## Sustainability Performance: Supply Chain Management

Topic	2021 Performance	Plan for 2022
<b>Sustainability Indicator</b> 	<ul style="list-style-type: none"> <li>Completed Phase II of Process Improvement. This included improving processes and practices in procurement and supply chain management.</li> </ul>	<ul style="list-style-type: none"> <li>Continue Phase III of Process Improvement for Development.</li> </ul>
<b>Supply Chain Management</b> 	<ul style="list-style-type: none"> <li>1,000 suppliers including new suppliers (do not include foreign suppliers) or 100% of all new suppliers passed the sustainability assessment, which covered economic, environmental and social dimensions.</li> <li>Undertook a service quality assessment of active suppliers and contractors in 2021 via the online supplier assessment system. The assessment was completed by direct buyers/procurers. This year, the percentage of suppliers and contractors assessed was 65% of all purchase orders placed through the online purchase/procurement system.</li> <li>Through implementation of strategic procurement, which increased by 15% from 2021 levels, our cost management became 24% more efficient.</li> <li>Cost management effectiveness, compared to base pricing, exceeded the target by 6%.</li> <li>Partnered with local suppliers who represented 58% of active suppliers in 2021. The procurement generated recurring purchases worth Baht 1,663 mn in the local economy.</li> <li>Central Pattana recorded a minor accident, in which workers (including contractors, outsource workers and subcontractors) had to pause work for 820 hours of the 64 mn hours worked in all our existing, development and renovation projects this year.</li> <li>Central Pattana did not receive any complaints or grievances regarding human rights violations, labor exploitation or negative community and environmental impact due to our development and renovation projects in 2021.</li> </ul>	<ul style="list-style-type: none"> <li>Target to increase the proportion of local and retail suppliers throughout Central Pattana's supply chain to 10% of total procurement value by 2025.</li> <li>Develop partnerships and collaborate with strategic suppliers in innovation and supplier development.</li> </ul>



## 04

## Purpose-led Organization



In our transformation into a purpose-led organization driven by the shared goals and objectives in “Imagining Better Futures for All,” Central Pattana sets out clear commitments to reduce our environmental footprint and enhance the quality of life and wellbeing of communities through embedding and embodying our core beliefs in every aspect of our operations. Going further this year, we have developed our 10-, 20- and 30-year plans, to be officially announced in 2022, to achieve net zero and become an organization that creates shared value in sustainable urban and community development.

### 1. Corporate Responsibility and Community Development

Our impact reduction and community development journey began when we established our very first Society, Community and the Environment Policy, which aligned with Central Pattana’s Corporate Governance Principle - Social Responsibility. Since then, we have developed a management approach that focuses on key areas - community engagement, community empowerment, quality of life and local pride - and established it as Central Pattana’s Sustainability Framework - Creating Shared Value (CSV) under our core belief, Community at Heart, with objectives of reducing the impact we have on communities and the environment, fostering community partnerships and supporting community development, as described further on our website.



Click

<https://www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/community>

In 2021, we established the CSV Committee – Creating Shared Value Committee to oversee projects relating to CSV and CSR to ensure alignment with the Company’s business operations and Central Group policies, which put a strong emphasis on fostering participation and engagement at the community, society and national levels to create value for all based on the sustainable business and circular economy principles. Refer to our website to find out more about our CSV Committee:



Click

<https://www.centralpattana.co.th/en/about-us/management-structure/sub-committee>

Our management approach to CSV outlines three work plans and one tool that span across our operations from design and construction of new projects to management of current assets as described below:

1. **Center of Community:** Foster community participation and engagement, serve as the center of the community in ways that meet the needs of the community and society, demonstrate commitment to corporate social responsibility (CSR) and provide assistance in disaster situations
2. **Local Prosperity and Local Pride:** Drive economic growth and community wellbeing, reduce inequality and create opportunities for local people, support household-income generation, foster pride in culture and showcase local creations and treasures
3. **Circular Economy:** Advance circular economy, with a focus on holistic waste management and stakeholder engagement
4. **Employee Volunteering:** Build a voluntary workforce that puts community at its heart, aligning with our core belief, “Community at Heart,” ensure convenience and support employees to bring our beliefs to life both at work and through civic engagements that align with the three work plans set out above.

#### 1. Center of Community

Central Pattana utilizes our expertise as a retail property developer and our assets to meet the needs and demands of the community and society at any particular time to deliver on our objective of creating positive social impact. In 2021, the CSV Committee presented the Center of Community Work Plan, which included three subplans - public health promotion, public commitment and disaster relief, and corporate philanthropy.

1. **Public Health Promotion:** We utilized and adapted our assets including common areas and parking lots to support public health and quality of life promotion initiatives amidst the COVID-19 pandemic. We joined hands with partners in the public and private sectors as well as the Thai Chamber of Commerce, hospitals and public health centers, to help drive the country’s mass vaccination efforts. We turned our shopping centers into Provincial Vaccination Centers providing

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over 40,000 sq.m. of space in 22 of our 33 shopping centers nationwide to serve as mass vaccination sites in 15 provinces including Bangkok and its vicinities; Chiang Rai, Chiang Mai and Lampang in the North; Phuket, Surat Thani and Songkhla in the South; Rayong and Chonburi in the East; and Nakhon Ratchasima, Ubon Ratchathani, Udon Thani and Khon Kaen in the Northeast. To date, the operations have delivered the COVID-19 vaccines to more than three million people across the country.

At Central Pattana, one of the public health initiatives that we have long been involved with is the blood donation project, which is a collaboration between Central Group, the Thai Red Cross Society and provincial red cross chapters. It has been more than 34 years since we first started offering temporary spaces in our shopping centers to serve as blood donation stations and in 2020, we set up the first permanent blood donation center at Central Hatyai's Government Complex. With a national blood shortage caused by the COVID-19 pandemic, we set a target to help collect 10 mn cc of blood by 2021 to help increase blood supply in the country. However, as our shopping centers were temporarily closed by government orders, we were able to bring in 9.4 mn cc of blood, which could save up to 80,000 lives. The total volume of blood donated through our operations including through activities held under Central Group's "Plus 1 More Donations, More Lives Saved" campaign, which aimed to collect 10 mn cc of blood, is 14.6 mn cc.

2. **Public Commitment:** We tackle challenges faced by the Company or the community and turn them into solutions that not only create opportunities or reduce losses but also promote the wellbeing of the communities in which we operate. Through conducting community needs assessment surveys and analysing challenges to project development, we identify what the community see as priority issues and implement appropriate plans for construction and improvement of public facilities e.g. footbridges, sidewalks and electrical substations, for example. Refer to our website to find out more about our public commitment initiatives:



Click

<https://www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/community>

In 2021, we carried out the construction and improvement of public facilities initiative in Central Si Racha and Central Chanthaburi projects. In the Central Si Racha development project, we made improvements to the footbridge and supported construction of sidewalks and a bus stop for students and employees at Darasamut School, which is located directly opposite the shopping center, to ensure they have a safe place to wait for the bus instead of having to wait on the side of the road like they used to. As part of the Central Chanthaburi project development, a bus stop had been relocated; a footbridge built; canal-side roads and medians improved; and roads expanded. In total, we invested more than Baht 10 mn financially in both projects.

We recognize public needs and demands to access public services on holidays or weekends, which is consistent with the People's State policy adopted by state agencies to ensure convenient access and reduce crowding in government offices that provide services that cannot be accessed anywhere else. Through our partnerships with state agencies and organizations, we have launched One Stop Service in our shopping centers that operate under our hygiene and safety measures. The agencies and services available at these one stop shops include: Department of Public Administration - national ID and civil registration; Utility authorities - electricity and water services; Thai Post; National Telecom Public Co., Ltd.; Provincial Transport Offices; Department of Public Works and Town and Country Planning; Labor Offices under the Ministry of Social Development and Human Security; Provincial Labor Offices; Provincial Social Security Offices; Provincial Employment Offices; Provincial Labor Protection and Welfare Offices; Provincial Skill Development Institutes; Police; Damrongtham Center; Passport Offices; Provincial Legal Execution Offices; and Thai Red Cross Society. To date, there are 14 Government Centers in Bangkok and other provinces.

3. **Disaster Relief:** We provide assistance in disaster situations under the Community Disaster Management framework, utilizing our assets and expertise to implement community crisis management in response to natural and man-made disasters and other tragedies. The process consists of response, rehabilitation and recovery and is implemented in collaboration with Central Group and Tiang Chirathivat Foundation. In 2021, we provided rehabilitation assistance to flood victims in 9 provinces

including Phitsanulok, Phetchabun, Tak, Chaiyaphum, Nakhon Ratchasima, Khon Kaen, Lopburi, Ayutthaya and Chantaburi, which included donation of 1,900 relief packs and essential supplies worth more than Baht 0.61 mn to 7,600 flood victims.

## 2. Local Prosperity and Pride

For forty years, Central Pattana's commitment to growing together with the community has remained steadfast under our core belief, "Community at Heart." Our community development plan is developed together with our business development plan, with the aim of helping to drive local economies and generate income for communities at the household level through employment, procurement, business development, agricultural development and community-based tourism. We align our sustainability target for community development with the UN SDG Indicator 8.1 and target to achieve a growth rate of at least 7% of real GDP per capita annually. At Central Pattana, community development is carried out in four formats including honoring local identity, retail space for community products, community development and local procurement.

**1. Honoring Local Identity through Building Design:** Central Pattana brings local wisdom and local identity into the design of architectural structures, interiors and exteriors of our properties and assets transforming them into something contemporary that blend with today's customer lifestyles; while instill a sense of pride within the community and help elevate local cultures. This approach was used to develop the design concept "The Prosperity of Ayutthaya" for Central Ayutthaya, with the aim to showcase the province's magnificence as a UNESCO World Heritage Site across the themes - the essence of Ayutthaya, tourism, lifestyle and community. For instance:

- The building façade borrows the style of late Ayutthaya period twelve rabbeted-angled Chedis whose square anda have three rabbits on the four corners.
- 'Ayutthaya Outdoor Signature' in front of the shopping center greets visitors with the 3D lettering sign, "Ayutthaya." Each letter is engraved with silhouettes of flowers, such as crown flower, gardenia crape jasmine and jasmine, in fine and delicate detail - creating a complex play of light, shadow and atmosphere during the day as well as at night.
- The 'Town Square' in front of the shopping center is where visitors will find the sign "Ayutthaya," whose typography

design combines the characteristics of a lotus flower and Thai alphabets. The letters are made of bronze - a nod to the prosperity and timeless beauty of the former capital where the finest artisans and craftsmen lived and worked from painters to silversmiths and goldsmiths to sculptors, molders and potters to carpenters, weavers and plasterers.

- The pedestal trays of flowers installation at the G floor entrance, created in the style of Elaboration Art, is a re-interpretation of an object commonly used in homage paying ceremonies and royal rituals in ancient times. Next to it are budding lotus geometric wire sculptures with golden leaves that symbolize glory and prosperity in the midst of Ayutthaya's everyday life and arts.
- 'Ukhao' or the paddy in Ploen Nakhon Zone of G floor re-imagines a scene from the past - featuring a traditional Thai wooden house with a raised platform under which the owner keeps their belongings, haystacks and animals - complete with rattan furniture, a metal wire farm cart, in place of a traditional wooden one, bamboo handicrafts, timber furniture and colorful rice straw piles.
- At 'Unam' or water abundance on G floor, the main attraction are giant Thai fishing basket-shaped chairs and a wooden boat that serves as a piece of furniture as well as a work of art decorated with lotus leaves, woven floating fish mobiles and lotus leaf-inspired seating set - highlighting the deep connection residents and communities in Ayutthaya have to rivers. The former capital is located at the confluence of rivers, which serve as its lifeblood from Chao Praya River, Pa Sak River, Lopburi River and Noi River along with hundreds of canals. The installation is a re-telling of everyday life in ancient Ayutthaya weaving stories and elements from floating markets, fishing, natural vegetation and handicrafts.
- 'Porcelain Room' is a permanent exhibition room that tells the history of Ayutthaya, once a buzzing port city with rich cultural exchange and trade of pottery and ceramics between East and West. During the Ayutthaya period, a lot of porcelain was also imported from China. To celebrate Ayutthaya's exuberant heritage of ceramic craft, the Porcelain Room brings together 'Krabueang Hai Yang' - a traditional form of Thai porcelain that in the past were made to order and imported from China. The Co-working Space located on the second floor, meanwhile, features a collection of Benjarong, another renowned pottery of the Ayutthaya era.



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1. Central Ayutthaya
2. The pedestal trays of flowers installation at the G floor entrance
3. 'Ukhao' on G floor
4. 'Unam' on G floor
5. 'Porcelain Room'

**2. Retail Space for Community Products:** We provide retail spaces for local and community products in the forms of permanent spaces such as souvenir zones and Local Hero as described in the “Tenant Management and Development” section of our 2021 Annual Report as well as dedicated areas for local artisanal crafts, which include Mae Fah Luang Foundation Shop, OTOP shops, Sai Jai Thai Foundation Shop, for example. We also offer retail spaces for free to farmers during marketing campaigns, to bring farmers and customers together. The expenses including marketing and advertising for some of these activities are covered by the Company, for instance, the Royal Project, which has been held consecutively for 51 years to sell community products sourced from programs supported by foundations under royal patronage and/or under the queen patronage. Or Ruamjai Market, which was launched in collaboration with Central Group, to generate jobs and incomes under our strategy “Rebuild Thailand Rebuild Economy” to help rebuild the country’s economy hard hit by the COVID-19 pandemic. Through the Ruamjai Market initiative, sales are conducted under a local market omni-channel format, which include our online e-commerce platform and 88,000 sq.m. of retail spaces in 106 shopping centers across 44 provinces, to help increase opportunities for communities, farmers and small business operators to boost sales and incomes.

We are also in the process of studying methodologies for social impact assessment to develop measurements for the value of our investment and the economic and social impact on the communities that receive the support. This year, we achieved 138% (only included data voluntarily disclosed by operators) of our indicator for social impact investment set at Baht 100 mn in direct local revenue.



**3. Community Development:** In collaboration with “Central Tham” and Central Group, we implement activities to promote and strengthen local economies and develop local market mechanisms under the “Jing Jai Farmers Market” initiative, which aims to provide retail opportunities to farmers who grow organic fruits and vegetables. All organic produce sold at Jing Jai Farmers Markets undergoes pesticide residue testing to ensure customers can have confidence in the

quality and safety of the fresh produce. The spaces in our shopping centers have also been re-designed to be the central markets for organic fruits and vegetables that are grown with love by farmers across the country - with highlights from 77 provinces and products with GI registration, which is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. At each of our Jing Jai Farmers Market, shoppers can find areas dedicated to highlight products from the places in which the markets are located such as - Puangthong Longan from Samut Sakhon province, known for its thin skin, solid flesh texture and sweetness; Ban Phaeo Coconut from Samut Kahon, known for its aroma, fleshy meat and sweet flavor; Nan Golden Orange from Nan province, known for its golden skin, sweet and sour taste and vitamin C content, for example. Farmers who are part of the program are also encouraged to use packaging made from natural materials. It is another challenge that our vendors readily take on, in addition to going to great lengths to ensure their products are safe, fresh and chemical-free. Some of the creative ideas they come up with to create the perfect packaging for their products and maximize use and reuse of materials include bamboo baskets, vegetable containers made from the outer sheaths of banana trees and holders fashioned from bamboo strips that are used in place of plastic bags. To date, we have set up Jing Jai Farmers Markets at 10 of 26 Central shopping centers, supporting more than 7,200 families across 609 subdistricts and generating over Baht 218 mn in local economic return - 55% of which from branches directly operated by Central Pattana.

In addition to economic development, we are also committed to supporting education development in communities and in partnership with Central Tham we provide two types of support: infrastructure - buildings, classrooms and tools and equipment; and skill development for students and teachers. In 2021, we, together with Central Group, carried out a development project at one school in one province - installing a water filtration system at the Forest Industry Organization 13 School in Mae Chaem district, Chiang Mai province to ensure access to clean and safe water for students, teachers and school employees. Through the Equitable Education Fund, we provided scholarships to 146 disadvantaged students in 40 provinces and 60 vocational students in three provinces, which included Udon Thani, Saraburi and Trang.



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**4. Local Procurement:** Our local procurement strategy focuses on local sourcing and purchasing of materials and goods as well as employing skilled workers in communities to produce products that we can use in the Company such as consumables, gifts, souvenirs and mementos. In 2021, we supported production of New Year gifts “Do Good by Central Pattana” under the concept “Create Jobs Create Opportunities from Local Materials,” offering job opportunities for youth and giving back to three organizations in Chiang Mai province:

- The Healing Family Foundation: We supported production of handwoven cloths (Saori) by children with intellectual disabilities who got to be creative and turn their imagination into reality through creating precious gifts that would delight anyone who receives them.
- Regional Juvenile Vocational Training Center 7: We helped design a livelihood development program that covers everything from downstream to upstream along with additional basic skills training to help children and youth who had committed a criminal act build confidence and forge new beginnings through sustainable organic farming.
- Wat Don Chan: We contributed to improving the quality of life and the environment in the temple to help orphaned, needy and disadvantaged children and youth under its care.

Through reviewing our approach to supply chain management across the value chain this year, we found that consumables procured to create a safe, clean and hygienic environment for our customers such as cleaning products presented another avenue for us to support community development in a sustainable manner. We partnered with Patom Organic Living, a community producer of organic consumable goods that has a 30-rai organic farm in Nakhon Pathom province and is part of Sampran Model organic farmer network, to switch the cleaning products and hand sanitizers provided in restrooms from conventional to chemical free and organic alternatives to ensure safe and healthy surroundings for our customers. The products, which are accredited and certified under IFOAM, EU and CANADA standards, have been trialed at 13 shopping centers with 3% of the sales donated to Sookjai Foundation to help drive organic culture and generate income for communities and farmers in its network nationwide and build strong and sustainable local economies.

### 3. Circular Economy

Embracing circular economy principles, Central Pattana's waste management approach focuses on maximizing reuse and/or the processing and recycling of separated waste with key stakeholders engaged throughout the journey. Refer to the “Waste Management” section in our 2021 Annual Report for further information. Among the key stakeholders that we collaborated with and supported in 2021 were startups and eco-conscious employees. Examples of outstanding projects include:

1. Drive & Drop Recycle Station as summarized in 2021 Annual Report's “Waste Management” section.
2. g Garden (Rama 9) Grand Canal Land Plc Ltd., in collaboration with Central Rama 9, allocated a 4-rai of land awaiting construction to community groups and enterprises who turned it into a temporary farm - serving as a model for vacant land utilization that brings ecosystem services to city residents and makes efficient use of reclaimed water from the Yai Soon Canal and other waterways in neighbouring areas as well as creates an opportunity for farmers to earn extra income. The initiative, which seeks to elevate the quality of life of urban dwellers through organic farming, is also one of the projects we implemented this year to help low-income people affected by the COVID-19 pandemic become more self-sufficient and food secure through growing their organic vegetables. In addition to increasing their access to fresh ingredients, the activity also helps reduce expenses on food and in the longer term can grow into a supplementary job. A Farmer's Market is held every Saturday to provide an opportunity for farmers and small businesses to sell their products. Since launched ten months ago, more than 15 shops participate each week with each farmer earning an average of Baht 25,000-35,000 a month. Additionally, we collaborated with Khlong Toey Dee Jung, a group of young people working with children and youth in Khlong Toey community, to organize volunteering programs and arts and creative activities and sell second-hand goods to fund scholarships for disadvantaged children in the community. The Group is planning to open a small cafe, Sipping in Garden, which will be fully operational in 2022.
3. Sunflower Fields at Central Bangna is one of the projects that have been expanded from “Journey to Zero.” Spearheaded by Central Bangna employees, the initiative, in the beginning, focused on sorting fruit and vegetable



scraps to make EM fermented bio-extracts and compost, which were distributed and used in the Company. But with a surplus stock, the team had to come up with a way to utilize the remaining bio-extracts and compost. The solution was to use the surplus to fertilize a vacant plot awaiting construction behind Central Bangna, which is 8 rai in size, and turn it into a garden with plants such as sunn hemp. The garden, however, was later destroyed by a storm and the team had to start over. It was not until 4Q21 that they finally saw the fruits of their labour. Now open to the public, visitors can enjoy a relaxing break and take photos in the Sunflower Fields and revel in their beauty right in the middle of the city.



g Garden



Sunflower Filed

#### 4. Employee Volunteering

Central Pattana instills in our employees' civic mindedness and the core beliefs we live by including Community at Heart. Our employees can use normal work hours to volunteer in activities contributing to the wellbeing of society, community and the environment through CPN Volunteer. One of the practices we have long embraced is to encourage our employees to donate their skills and expertise to make a positive impact on society and the environment in times of need. For example, we send Central Pattana's firemen to assist in firefighting efforts in neighbouring communities and at the provincial level and give firefighting training to students and nearby communities. Our employees, together with Central Group employees, also take part in volunteering activities under "Centrality," a project seeking to create shared value in communities based on their needs. But as the pandemic continued on, the Company had to rethink the activities and how to conduct them under our 'Central Hygiene & Safe Plus+' measures while remaining true to our core belief, "Community at Heart." The result was Belief in Actions – Community Day. The initiative encourages employees to get involved in activities that they can do as part

of everyday work such as serving as non-medical volunteers at 26 vaccination centers across the shopping centers under the operations of Central Pattana and Central Group; packing relief packages for flood victims; and participating in the "Blood Challenge" Campaign at blood donation stations located at the shopping centers where they work, for instance. Activities under Community Days contributed to 120,084 volunteer hours with 1,284 employees participating in total (subject to data availability; include employees attending more than one activity).



Activities contributed to

120,084

volunteer hours

Employees  
participating

1,284

Additionally, we continue to provide equal opportunities to disadvantaged groups, for example, we offer free space for registered retail vendors with disabilities to sell lottery tickets legally. In 2021, 48 vendors participated in the initiative, representing 1% of total employees in the Company.

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Living Our 4 Beliefs

## Community at Heart



**centralplaza**

“ ยินดีเป็นส่วนหนึ่ง ในการเป็นจิตอาสาฉีดวัคซีน เพื่อความปลอดภัย ของพวกเราทุกคน มาฉีดวัคซีนกันเยอะๆ นะคะ ”

**หทัยฉัตร ทรัพย์ยอติเรก**  
Customer Service Ambassador  
Central Plaza Salaya

BROUGHT TO YOU BY  
**CENTRALPATTANA**

“It has been a real pleasure for me volunteering at the vaccination site. Let's all get vaccinated for our communities.”




**centralplaza**

“ ดีใจที่ได้เป็นส่วนหนึ่ง ที่มีส่วนช่วยให้วิกฤตครั้งนี้ดีขึ้น เราจะปฏิบัติหน้าที่อย่างเต็มที่ และเราจะผ่านพ้นไปด้วยกันค่ะ ”

**ปณิชา ดวงดี**  
Customer Service Ambassador  
Central Plaza Pinklao

BROUGHT TO YOU BY  
**CENTRALPATTANA**

“I'm glad to serve our community and contribute to the effort to end this pandemic. I'll continue to do my best. We'll get through this together.”



**ว่าจ้าง**

“ ภูมิใจที่เป็นส่วนเล็กๆ ของการช่วย ให้ประชาชนชาว จังหวัดนครราชสีมา ได้ฉีดวัคซีนกันทั้งจังหวัด ”

**ประคัลภ์ ศรีจุฑารัตน์**  
Team Leader Commercialization  
Central Plaza Nakhonratchasima

**CENTRALPATTANA**

“I'm honored to be part of the effort to help everyone in Nakhon Ratchasima province get vaccinated.”



“ ดีใจที่ได้เป็นส่วนหนึ่ง ของจุดบริการฉีดวัคซีน ช่วยแบ่งเบาหน้าที่ ของคุณหมอและพยาบาล ขอให้ทุกคนๆ มั่นใจในการฉีดวัคซีน และเข้ามารับบริการ ฉีดวัคซีนกันเยอะๆ นะคะ ”

**วรวรรณ เข้มหลอ**  
Convention Hall Agent  
Central Plaza Nakhonratchasima

**CENTRALPATTANA**

“It makes me happy being able to lend a helping hand and alleviate some of the burden from the doctors and nurses at the vaccination center. Come and get vaccinated with us.”


## Sustainability Performance: Corporate Responsibility and Community Development

Topic	2021 Performance	2022 Plan
<b>Sustainability Indicator</b> 	<ul style="list-style-type: none"> <li>Established community engagement as a key performance indicator and set a target of employee volunteering hours at 24,000.</li> <li>In 2021, our employees contributed 120,084 hours of volunteer service to co-create shared value with communities and participate in CPN Volunteer activities, which was above target.</li> </ul>	<ul style="list-style-type: none"> <li>Establish community engagement as a key performance indicator and target to deliver 25,000 hours of employee volunteer service.</li> </ul>
<b>Corporate Responsibility and Community Development</b> 	<p><b>Community Investment – In-Kind Contributions</b></p> <ul style="list-style-type: none"> <li>Supported Baht 13 mn of manpower and funding for shared value co-creation initiatives with communities and CPN Volunteer projects.</li> <li>Joined forces with Central Group to implement the social development project “Central Tham,” providing Baht 30.6 mn worth of service to community.</li> </ul> <p><b>Community Contributions</b></p> <ul style="list-style-type: none"> <li>Organized 711 activities, of which 475 were activities to support SME and local businesses worth Baht 52 mn from total Baht 79 mn.</li> <li>Provided Baht 101 mn worth of free space to government agencies and communities (including entrepreneurs and businesses affected by the COVID-19 pandemic).</li> </ul> <p><b>Charitable Donations</b></p> <ul style="list-style-type: none"> <li>Donated Baht 13.8 mn to charities (include funding for education programs and relief efforts).</li> </ul> <p>The Company did not receive any complaints regarding significant community and environmental impact.</p>	<ul style="list-style-type: none"> <li>Provide free spaces to government agencies and communities, representing at least 10% of all activities by 2025.</li> <li>Study appropriate frameworks for Social Impact valuation or Return on Shared Value measurement.</li> </ul>

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2. Resource and Environmental Management Excellence

Our Climate and Environment Policy encompasses focus areas including energy and water efficiency, climate resilience, environmental management, biodiversity and effective and sustainable waste management and is publicly available on our website:



Click

<https://www.centralpattana.co.th/th/sustainability/corporate-governance/policies-implementing-guidelines>

The Policy aligns with international standards including ISO 14001 Environmental Management System (EMS), ISO 14064-1 Greenhouse Gases, ISO 50001 Energy Management, LEED: Leadership in Energy & Environmental Design, the evaluation criteria for the Ministry of Energy’s Thailand Energy Awards and ASEAN Energy Awards, SBTs (Science Based Targets) and TCFD (Task Force on Climate Related Financial Disclosure) recommendations, with objectives to maximize resource efficiency, increase the share of alternative energy and achieve net zero emissions.

Management Approach

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Air Quality

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Green Building

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Ecosystem Management and Biodiversity

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Engaging Communities in Environmental Development and Management

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## 1. Energy Management

Our energy management policy focuses on energy efficiency to reduce our environmental footprint and combat climate change and establishes management approaches to increase the share of renewable electricity as well as improving energy efficiency across our operations.

### 1. Energy Management

In 2021, Central Pattana's energy consumption comprised usage from 36 shopping centers and 10 office buildings. Our energy supply came from two sources - non-renewable and renewable sources:

#### 1) Non-renewable Sources

- Grid supplied electricity 696,030 MWh of electricity were sourced from the Provincial Electricity Authority and the Metropolitan Electricity Authority in 2021, which represented 96.9% of our total energy consumption - a 12% decline from 2020. The grid-supplied electricity is used to power our HVAC systems, lighting and day-to-day operations.
- Fossil fuels and liquefied petroleum gas represented 0.4% of our total energy consumption. Energy from fossil fuels is used in our day-to-day operations, for instance, to power engines in lawn mowers, company vans and shuttle buses and equipment used during fire safety training as well as emergency power systems including power generators and fire pump systems.

LPG is used in activities in Food Parks managed by Central Pattana and during kitchen fire safety training.

#### 2) Renewable Sources

We continue to invest further in renewable electricity and install solar panels on the rooftops of our shopping centers and parking facilities to supply energy to our buildings and water pumping systems. To date, we completed the installations with a total installed capacity of 15.8 MW at 18 projects or 50% of all projects in operation in the current year.

In 2021, we generated 19,317 MWh of solar energy, which represented 2.7% of our total energy consumption. The 54% increase from 2020 levels in renewable electricity generation can be attributed to full year operation of on site solar energy installed in 2020 and new installation in 2021. This year, we completed the installations at two new projects, Central Si Racha and Central Ayutthaya, in October and November 2021, respectively. Since opening, both shopping centers have been producing electricity for their own consumption from the on-site solar panels.

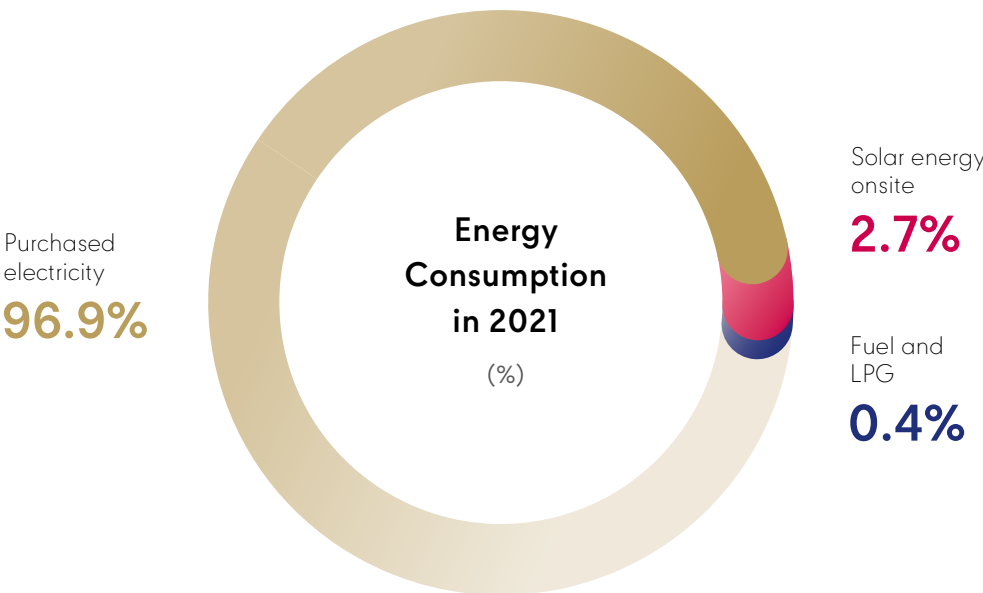
In 2022, we are planning to roll out solar installations across seven additional projects and have set a five-year goal for deployment of on-site renewables in 100% of our shopping centers (including existing and future projects).

Energy Source		Unit	2017	2018	2019	2020	2021
Non-Renewable	Purchased electricity from the Provincial Electricity Authority and the Metropolitan	MWh	903,475	944,828	972,153	793,431	696,030 <sup>1,2</sup>
	Energy from fossil fuels and liquefied petroleum gas (LPG)	MWh	4,224	5,265	5,471	3,940	2,844
Renewable	Electricity generated from solar panels onsite	MWh	899	6,175	9,045	12,566	19,317

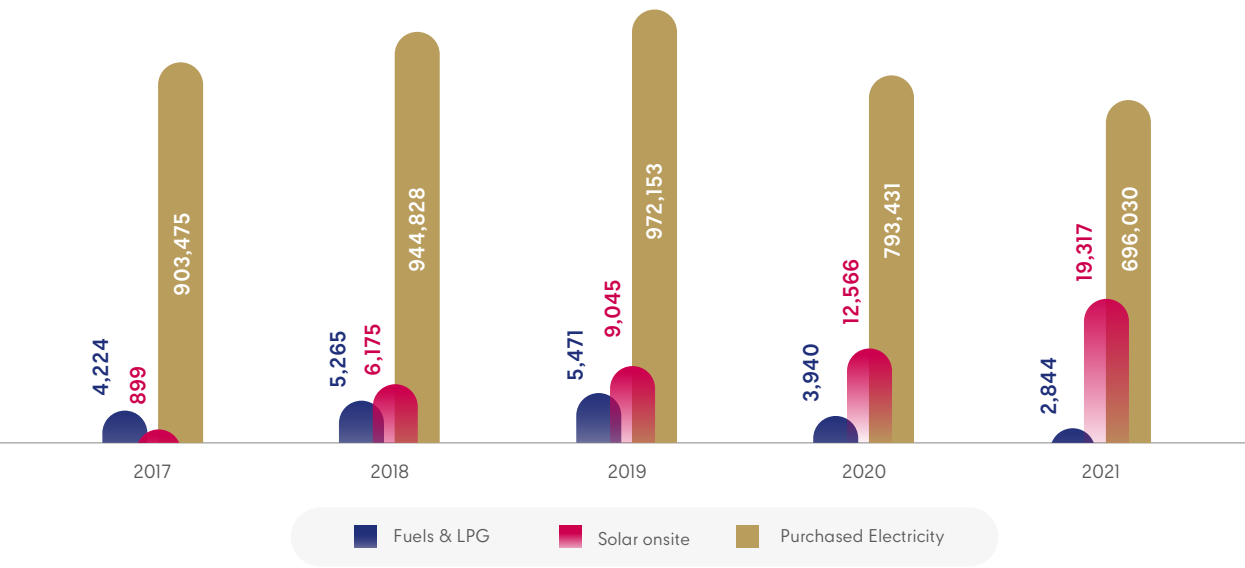
Remarks : <sup>1</sup> Grid supplied electricity accounted for 91% of our utility costs or Baht 2,689 mn.

<sup>2</sup> Does not include electricity consumption of Central Si Racha and Central Ayutthaya, which opened in October and November 2021, respectively.

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**Total Energy Consumption and Sources**  
(Unit: MWh)



**Energy Consumption (%)** Electricity / Fuels and LPG / Solar

2017	2018	2019	2020	2021
99.4/0.5/0.1	98.8/0.6/0.6	98.5/0.6/0.9	98.0/0.4/1.6	96.9/0.4/2.7



## 2. Electrical Energy Efficiency

1) **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 target to reduce our electricity intensity from 2015 levels by 20% 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)
  - High efficiency chiller replacements at two projects
  - Installation of AC Control Systems in shopping centers to regulate indoor air temperature and humidity and installation of Temperature & Humidity Sensors at four additional projects to enable semi-automatic control of the HVAC systems
  - Installation of Variable Speed Drives: VSD on chilled water pumps and coolant pumps at two projects
  - Upgrading high efficiency motor pumps on Chilled Water Pump - CHP and Condenser Pump - CDP in two project
  - Cooling tower system upgrades at two projects
  - Cooling tower filler replacements to boost the HVAC efficiency
  - Process improvement for machinery equipment and maintenance and operation of HVAC systems in shopping centers to optimize efficiency and better correspond to heat load fluctuations
- Central Pattana's implementation of government support measures including four measures under the Department of Alternative Energy Development and Efficiency's Investment Plan of Machinery Replacement or Upgrade to Improve Energy Efficiency 2021; and eight measures under the Metropolitan Electricity Authority's Management of Energy Achievement Index: MEA Index Energy Saving and Indoor Air Quality: IAQ Guidelines - yielded an energy saving of 6,432,689 kWh/year.
- Energy conservation training, we continued to provide environmental training to our employees through training and awareness raising on energy saving and efficiency to inspire green behavior change and instill in our workforce environmental and energy stewardship. In 2021, 82 courses had been held, which were

attended by 1,868 employees or 40% of employees (include employees attending more than one training). Additionally, we encouraged our employees to take part in Energy Day and "Dream Team," a company-wide challenge that invites employees to pitch ideas for innovations and energy efficiency solutions. The winning project in 2021 that is being piloted by the Company was the IoT-Based Motion Sensor Lights initiative.

- We use 'Passive Design,' which is a design approach that works with the local climate to maintain a comfortable temperature for users, in developing new projects as well as implementing major renovations. Utility systems are set up based on the Company's systems management practices, which include Preventive Maintenance, Machinery Efficiency Assessment, Re-commissioning and Deployment of Eco-Friendly Designs/Solutions, such as installing Active Skylights, adjustable movable shading fins that cut out heat from direct sunlight at different angles, at Central World; and exploring solar installations on metal sheet roofs and concrete surfaces at Central Ubon to improve thermal insulation and reduce solar radiation into the building.

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 2021, our total electricity consumption was 715,347 MWh (including from solar generation) - a sharp decline of 11% compared to 2020. Of this, 388,441 MWh were company usage and 326,906 MWh were tenant usage or 54% and 46%, respectively.

As a result of the COVID-19 pandemic, the Thai government put in place control measures to manage the risk of COVID-19 including a temporary closure of all shopping centers for about 60 days, in 29 "dark red" provinces under maximum control. The closure, together with our energy savings initiatives, drove down our grid

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energy consumption in 2021 by 90,651 MWh or a 11% decrease from 2020 levels. The energy savings achieved were above the adjusted target level, which had been set at 4% reduction in energy consumption in 2021 compared to 2019 levels.

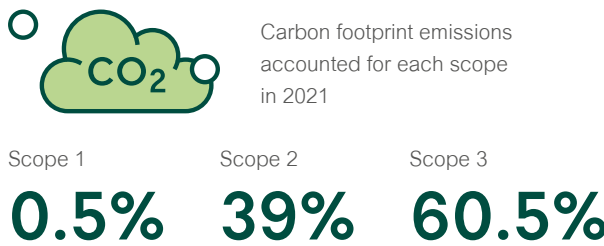
In 2021, the energy intensity across Central Pattana’s shopping centers (excluding tenant usage) was 107.5 kWh/m, which was 12% lower than 2020 levels as a result of the temporary closure of our shopping centers as well as our steadfast commitment to implement energy savings initiatives and deployment of high efficiency equipment and machines.



2. Climate Resilience

The rise in weather and climate extremes around the world have significant implications for our business value chain. A sustainability risk assessment conducted as part of our organizational risk management looked at the issue in the context of Thailand from its Nationally Determined Contribution (NDC) under the Paris Agreement to the pledge to reach carbon neutrality by 2050 and to achieve net zero emissions by 2065. Among our stakeholders including state agencies, financial institutions, investors and civil society, attention to climate change has also risen steadily. In 2021, Central Pattana, therefore, worked in collaboration with Thailand Greenhouse Gas Management Organization under the “Science-based Target: SBT” initiative to explore greenhouse gas emissions reduction target setting based on the SBTs (Science Based Targets) approach. The outcomes of the study were then used to set our short, medium and long term targets for GHG emissions. We also partnered with external consultants to complete two scenario analyses, in line with the Task Force on Climate-related Financial Disclosures: TCFD recommendations. They included - Business as Usual Scenario (RCP 8.5), which delivers a temperature increase of about 4°C and Transition Scenario (2 degrees Scenario: 2DS), which limits warming to 2°C. Each scenario analysis took into account policy and legal risks, physical risks and risks to business operations by 2030 and 2050. The outcomes and recommendations from the analyses will subsequently be integrated into our sustainability strategy to become a net

zero organization. In 2021, our Scope 1, 2 and 3 emissions accounted for 0.5%, 39% and 60.5% of our carbon footprint, respectively. This year, we continued to implement emissions reduction initiatives with a focus on lowering electricity consumption and increasing the share of renewable energy in our energy mix. Further details can be found in the “Energy Management” and “Electrical Energy Efficiency” sections of our 2021 Annual Report. We invested Baht 225 mn in implementing 20 GHG reduction initiatives in 2021 (including solar PV installations), which reduced emissions by 9,118.18 tCO<sub>2</sub>eq.



Compared to 2020 levels, our total greenhouse gas emissions were 0.2% lower. We achieved a 63% and a 16% reduction in Scope 1 and 2 emissions, respectively. The reductions can be primarily attributed to the temporary closures of shopping centers and successful implementation of our emissions reduction initiatives. We have also extended the collection of carbon emissions activity data to cover tenant LPG usage as well as external waste management activities to ensure a more comprehensive and accurate GHG inventory, which led to a 16% increase in our Scope 3 emissions or 285,309.96 tCO<sub>2</sub>eq.

We have established requirements for chiller selection for new developments and chiller replacements for existing projects, which include the use of refrigerants that are categorized as having low Global Warming Potential: GWP and zero ODP: Ozone Depletion Potential, to ensure lower impacts of emissions on atmospheric ozone and the climate system.

Reducing electricity consumption, which forms the largest source of GHG emissions for our business operations, has always been a priority for Central Pattana. We set out practices to reduce our electricity consumption, which also help lower energy costs as well as reduce our carbon footprint. This year,

we continued to accelerate our energy efficiency initiatives and promote clean electricity generation. We generated 19,317 MWh of solar electricity from 18 shopping centers, yielding an emissions reduction of 10,085 tCO<sub>2</sub>eq/year in 2021, and set a new target to increase the share of renewable electricity by 4.5% by 2022.

In addition, we have introduced measures to support deployment of technologies to reduce use of fossil fuels

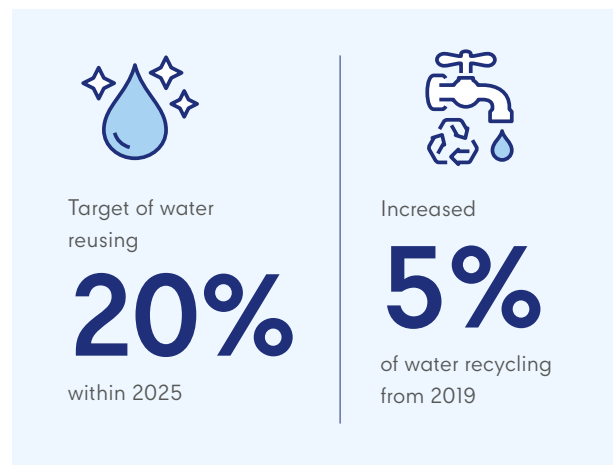
in transportation and lower our carbon emissions. They include setting up 55 EV Charging Stations for customers at 24 shopping centers with a plan to install EV Charging Stations across 100% of our shopping centers by 2022. To further translate our commitment and intention into action, Central Pattana has joined the RE100 Thailand Club as one of its founding members to accelerate transition to 100% renewable energy as quickly as possible.

### 3. Water and Wastewater Management



#### 1. Water Management

Central Pattana primarily operates in Thailand where the Mekong River and Chao Phraya River run through.<sup>3</sup> The country has a Medium-High Drought Risk and is ranked 45<sup>th</sup> 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 north-eastern region and Bangkok and its vicinity as vulnerable areas. We have established our water management and preparedness measures based on the 3R approach - Reduce, Reuse and Recycle. In 2021, the Corporate Governance and Sustainability Committee amended our long-term water reuse target to 20%<sup>4</sup> by 2025 with the aim to increase the share of water recycling by 5% in 2021, using the 2019 baseline.



Remarks : <sup>3</sup> GRI 303-1

<sup>4</sup> Comparing to projects which had installed water recycling system only



The second half of 2021 saw flooding in Thailand particularly in provinces near where our shopping centers are located including Ayutthaya, Phitsanulok and Chantaburi. In spite of this, the aggregate volume of water stored in the country's dams remained below 50% and provincial authorities had to issue drought prevention measures. This year, Central Pattana continued to implement 3R measures with a focus on reducing water usage, increasing onsite water reuse and improving overall water efficiency.

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**Reduce**

Install high-efficiency toilets to reduce the amount of water used per flush and adjust the sink valves and metering faucet cycle time 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. The treated water is used for activities such as watering plants, cleaning parking lots and toilet flushing. We have also been trialling 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 share of recycled water in our operations including utilizing ozone in the treatment of wastewater to ensure better water quality for the cooling towers.

**Efficiency**

In adapting the guidance for establishing and implementing a water efficiency management system, we have given considerations to several factors including indoor and outdoor water requirements; assessment of space requirements for water storage; costs and benefits of onsite recycling; commissioning and periodic re-commissioning within two years; and installation of water leakage detection systems (select projects), gutters with narrow openings and discharge pumps. This year, we introduced measures to improve water management and efficiency for tenants and customers. They included setting up water meters in tenant shops and stores and billing them based on their actual water usage to motivate tenants to use less water; installing water-saving faucets and motion sensor systems in restrooms; setting up drip irrigation and sprinkler systems for watering trees and shrubs around our projects to minimize water waste; selecting drought tolerant varieties to grow in our projects; and installing piping systems to supply reclaimed water for landscape maintenance and cleaning outdoor surfaces.

Due to the COVID-19 pandemic and the Thai government-mandated intermittent lockdowns of shopping centers nationwide, the water use from 38 buildings (including shopping centers and offices) managed by Central Pattana declined by 10.3% compared to 2020 levels. In 2021, our total water consumption was 7.54 mn m<sup>3</sup>. Of this, 6.92 mn m<sup>3</sup> were sourced from Metropolitan Waterworks Authority and Provincial Waterworks Authority; 0.199 mn m<sup>3</sup> were from groundwater in 5 projects; 0.424 mn m<sup>3</sup> were from reclaimed water; and 0.001 mn m<sup>3</sup> were sourced from rainwater tanks installed in 2 projects or 91.73%, 2.64%, 5.62% and 0.01% respectively. Because of the closures and implementation of our water savings initiatives, there was a significant decline in volumes of used water and wastewater going into our recycling systems, which resulted in lower production levels and efficiency.

## 2. Wastewater Management

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

- Installation of Sequencing Batch Reactor: SBR
- Installation of deep shaft reactors, in place of primary clarifiers and aeration tanks
- After the pre-treatment, the treated wastewater is discharged into the central public wastewater treatment system.

In 2021, the net volume of treated wastewater discharged into public water resources was 4.74 mn m<sup>3</sup>. Our procedure for wastewater discharge encompasses quality control,<sup>5</sup> record keeping and reporting as well as regular maintenance of sewage treatment equipment such as piping systems, grease interceptors, wastewater pumps, ponds and aerators, in accordance with 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 and report outcome to the ISO committee at branch level.

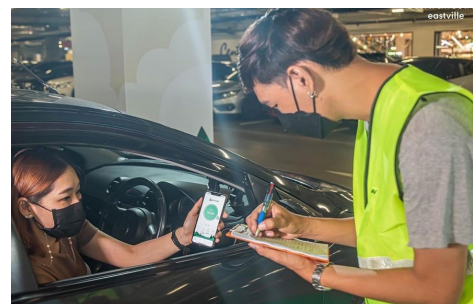
**Remarks :** <sup>5</sup> Include testing and monitoring of Biochemical Oxygen Demand: BOD, Suspended Solid: SS, Dissolved Solids: TDS, pH, Grease & Oil, on a monthly basis, conducted externally by an ISO/IEC 17025 accredited laboratory.



## 4. Waste Management

Central Pattana seeks to reduce the impact we have on the environment and have embraced circular economy principles to deliver on our zero waste-to-landfill commitment under "Journey to Zero." We set a long-term goal to reduce the amount of waste sent to landfill in half by 2025 and an annual target to achieve 15% landfill reduction in 2021 – 87% higher





and more challenging compared to our performance in 2020. Our waste management approach focuses on separation at source, processing and recycling of waste to maximize its potential benefits and engaging with key stakeholders including customers, tenants, employees and partners in the public and private sectors.





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1. Journey to Zero Performance - Customers

Plan / Project / Activity	2021 Performance
<p><b>Three-category waste sorting</b></p> <p>General waste, recyclables and hazardous waste</p> <p><b>PET bottle recycling bins</b></p> <p><b>Styrofoam food containers</b></p> <p>Ban use of all foam containers in all food courts managed by Central Pattana</p>	<p><b>Design and install bin covers on four types of waste bins</b></p>  <p>Following the success of the Wed Day initiative in which four types of waste bins had been set up to encourage waste sorting among employees, we adapted the activity to engage customers in learning about waste sorting by placing the bins at the B1 floor of Central World Offices. The results showed that 60% of the waste was sorted correctly.</p> <div><div><div>60%</div><div>of the waste was sorted correctly</div></div></div> <p><b>PET bottle recycling bins</b></p> <p>From our implementation of a pilot initiative in 2020 to set up PET bottle recycling bins in food courts and across Central Rama 9, the results showed that customers had understanding of waste separation and 50% of the bottles were sorted correctly. Therefore, in 2021, we expanded the model and installed covers on PET bottle recycling bins at all branches. Through the initiative, 53 tons of plastic bottles were collected this year.</p> <div><div><div>50% 53</div><div>of the bottles were sorted correctly</div><div>tons of plastic bottles were collected</div></div></div> <p><b>ReFun Machines</b></p> <p>Reverse vending machines for PET bottles or ReFun Machines are installed to collect empty PET bottles. Points are awarded for every bottle and can be redeemed for gifts or discount coupons for use in stores under Central Group. To date, two machines have been installed at Central World and Central World Offices. In 2021, 7,380 bottles or 170 kg of plastic waste were sent for recycling.</p> <div><div><div>170</div><div>kg of plastic waste were sent for recycling</div></div><div><div>7,380</div><div>bottles</div></div></div>



(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

## Plan / Project / Activity

## 2021 Performance

**Three-category waste sorting**

General waste, recyclables and hazardous waste

**PET bottle recycling bins****Styrofoam food containers**

Ban use of all foam containers in all food courts managed by Central Pattana

**“Empty Bottles, Full Possibilities”**

The campaign invited the public to donate used plastic bottles, which would be recycled into PPE suits for monks and trash collectors in Samut Prakan province through “Sort Bottles to Fight COVID-19 with Wat Chak Daeng.” The campaign collected more than 80,000 bottles or 1.2 tons of plastic bottles.



Collected more than  
**80,000**  
bottles

**1.2** tons

**Plastic film**

“Plastic Film Recycling Bins by Magic Hands (Facebook: Magic Hands) to collect plastic film

Since setting up “Plastic Film Recycling Bins by Magic Hands” across 17 shopping centers, we have been expanding the initiative to our tenants as well. This year, we invited Hthai (Thailand) Co., Ltd., importer and distributor of H&M, to join us in sorting plastic film at source. Through the initiative, 8.15 tons of plastic film were collected (including plastic waste collected from tenants) - a 31% increase compared to 2020.



**8.15 31%**

tons of plastic  
film were  
collected

increase  
compared to  
2020

**E-Waste**

E-waste drop-off points to collect e-waste including mobile phones, batteries, dry batteries and gadgets, for proper disposal



**4.26**

tons of e-waste were collected  
and properly disposed

Through our continued partnership with Advanced Info Service or AIS, e-waste drop-off points have been set up across all Central Pattana projects nationwide. In 2021, a total of 4.26 tons of e-waste was collected and properly disposed of, which included one ton of e-waste collected directly through the initiative and the remaining collected from tenant bins and the three-category waste sorting initiative. The activity contributed to more than 45 tCO<sub>2</sub>eq of avoided greenhouse gas emissions.

Plan / Project / Activity

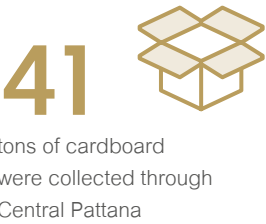
2021 Performance

Cardboard

Collection of cardboard to be recycled into field hospital beds for COVID-19 patients



We joined forces with SCGP and more than 10,000 tenants in our shopping centers to provide spaces for cardboard donations, to be recycled into field hospital beds for COVID patients, across 25 shopping centers nationwide. Through the project, 450 tons of cardboard were collected - of which 41 tons were through Central Pattana - exceeding the target by 112%.



Drive & Drop Recycle Station

Recycling stations offering reward points for gift redemption

We worked in collaboration with Recycle Day to set up Drive & Drop Recycle Stations deploying technology to motivate proper waste separation. In exchange for sorting and recycling their waste, users will receive reward points that can be redeemed for gifts or The 1 points to get special discounts or privileges from partners and stores in Central shopping centers. The initiative was piloted in November 2021 at two projects, Central Eastville and Central Si Racha. In 2021, 17.5 tons of recyclables were collected (Data from November 15 to December 31, 2021).



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## Plan / Project / Activity

## 2021 Performance

**“ThinkDee” Challenge for Thai Fight COVID-19**

Invite the public to donate recyclables, with the revenue from selling the waste going to support the “Help Thai Fight COVID-19” project



No. of waste collection points

**33**

We, in partnership with Central Group, encouraged the Thai public to sort two types of waste from deliveries - bottles/glass/clean containers and corrugated cartons - and drop them off at waste collection points across 33 Central shopping centers nationwide. The revenue from the sale of recyclables under the initiative will go to help Central Group's “Help Thai Fight COVID-19” project, which supports the research and development of COVID-19 vaccines by Thai researchers. The project has been extended one more year and will continue to accept donations until December 31, 2022.

## 2. Journey to Zero Performance – Tenants and Partners

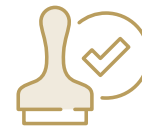
## Plan / Project / Activity

## 2021 Performance

**ISO 14001 Environmental management**

Continuous process improvement from waste separation to disposal

We are progressing towards applying for an ISO 14001 certification for one additional project, Central Mahachai. To date, 31 projects have been ISO 14001 certified or 75% of the total area.



**31**

projects have been ISO 14001 certified

**LESS**

or Low Emission Support Scheme under Thailand Greenhouse Gas Management Organization (Public Organization)

For the second year, we participated in the Low Emission Support Scheme or LESS to have our GHG emission reductions of 10,554 tCO<sub>2</sub>e from three waste reduction initiatives verified and certified, which were 13 times higher than 2020 levels. The initiatives included Sorting Recyclables at Source, Composting and Animal Feed from Food Scraps.



GHG emission reductions

**10,554**

tCO<sub>2</sub>e

**13** times higher than 2020 levels

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

## Plan / Project / Activity

## 2021 Performance

**Fruit and vegetable scraps and other food scraps**

Sort food scraps and fruit and vegetable scraps at source - restaurants and supermarkets - and turn them into agricultural supplies such as animal feed, fermented bio-extracts and organic fertilizers, and biogas

We continued our collaboration with Bangkok's Department of Environment and Nonthaburi Municipality Office to encourage restaurants and supermarkets across five shopping centers including Central Bangna, Central Pinklao, Central Rama 2, Central Rama 3 and Central Rattana Thibet, to sort fruit and vegetable scraps at source for processing. In 2021, 384 tons or 17% of the total organic waste (2,260 tons of food waste from food courts and Food Parks) were separated and diverted from landfill through the project.

We also partnered with Now End of Waste Co. Ltd., to deploy 'NOW Digester,' which is the same technology used in airports, leading hotels and shopping centers in Singapore and Norway that turns food waste into fertilizer in 24 hours.



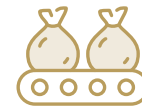
# 384

tons of the total organic waste were separated and diverted from landfill

**Source separation**

Join forces with tenants and partners to engage their employees in waste separation at source

We have expanded our partnerships with tenants and partners that are ready for adoption of circular economy principles. This included our collaborations with H&M, Uniqlo, Tops, Robinson and Bangkok's Department of Environment. Through the project, 224 tons of waste were properly sorted and recycled.



# 224

tons of waste were properly sorted and recycled

**"Sort Correctly, Get Your Rewards"**

Is a campaign to motivate sorting of waste among employees and workers in shops and organizations and across Central Pattana operations

We continued implementation of "Sort Correctly, Get Your Rewards" with tenants, food courts and workers responsible for collection and disposal of waste - offering rewards or incentives to individual workers and teams to sort and record the volume of waste they properly sorted in Central Pattana's waste management platform. Through the campaign, 51.7 tons of waste were sorted.



# 51.7

tons of waste were sorted



### 3. Journey to Zero Performance – Employees

#### Plan / Project / Activity

#### 2021 Performance

##### Journey to Zero Committee

is responsible for accelerating our waste separation and management efforts to deliver on Central Group's Journey to Zero Policy

The Journey to Zero Committee now has an expanded role with responsibilities encompassing Shared Value Co-Creation with Communities and a higher quorum number to include representatives from agencies and organizations responsible for waste management at the branch level. The Journey to Zero approach has also been rolled out in office buildings managed by Grand Canal Land Public Co. Ltd., or GLAND. Additionally, we developed a training video with interviews explaining the circular economy living model - Sampran Model - for our cleaning staff. After watching and doing the test, 85% of the attendees said they had a better understanding of the issue and were satisfied with the training.



# 85%

of the attendees were satisfied

##### Office paper waste sorting and reduction

Digitize processes with information technology to become a paperless organization

To enable digitization of our processes, we have rolled out information technology systems such as DMS or Document Management System, SI or Site Instruction, Car booking, Floorplan and Forms that replaces our paper-based audit checklists such as cashier audit checklist - resulting in a 100% reduction in paper consumption. In 2021, our total paper use declined by 11% when compared to the use in 2020. Therefore, the cumulative decline since 2020-2021 was at 47% from total use in 2019 levels.



# 100%

reduction in paper consumption

##### Upcycling waste materials

Transform waste materials through design and innovation to extend use or give a new life and function to discarded objects



We collaborated with artists to upcycle discarded event structures by adding new designs and functions to the materials. The event structures that had been used at Central World were turned into benches for g Garden, which is located in front of the Unilever building, where visitors can stop for a break and relax.

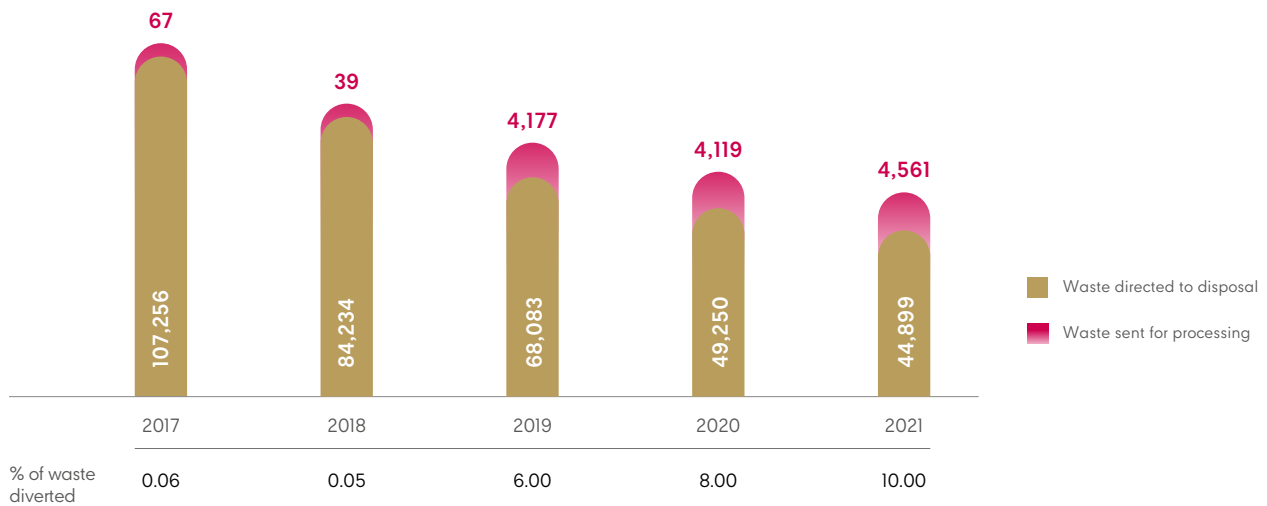
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In 2021, 44,899 tons of waste (including waste awaiting disposal at the end of December 2021) were generated by 38 shopping centers and offices - a 8% reduction from 2020 levels. Of this, 4,561 tons were sorted and diverted from entering the waste stream, 11% higher than 2020 levels, contributing to a 10% reduction in total waste taken to landfill.

**4,561** **11%**  
tons of waste were sorted and diverted  
higher than 2020 levels

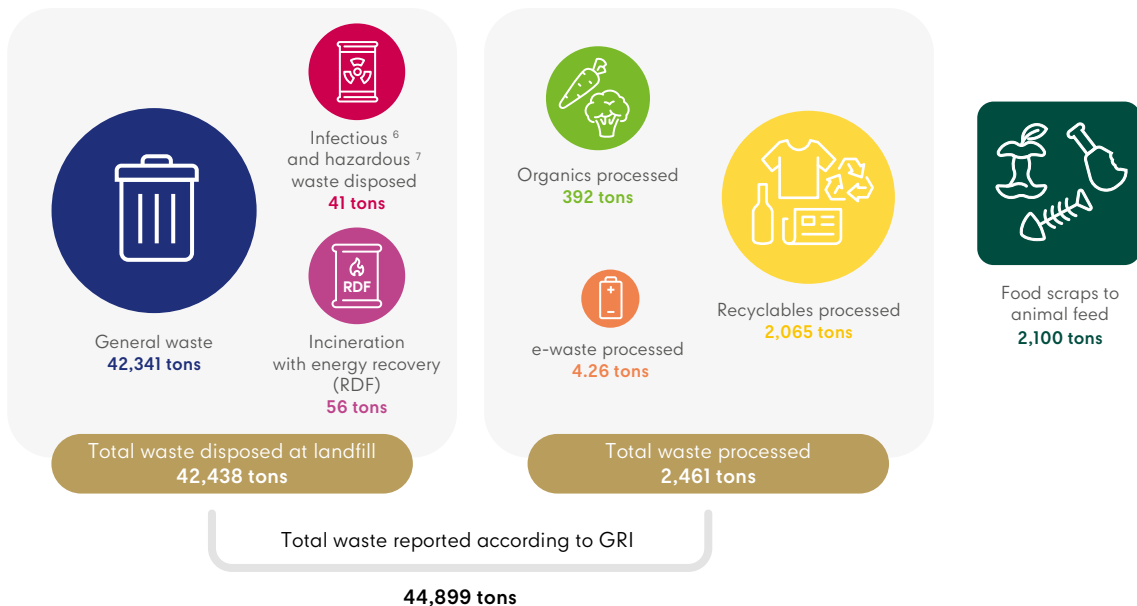
### Total Waste Generated by Shopping Centers Managed by Central Pattana

(Unit: Tons)



### Operational Waste by Stream in 2021

(Unit: Tons)



**Remarks :** <sup>6</sup> Any infectious waste produced from beauty clinics is managed by tenants who are responsible for arranging for the removal and disposal of the waste via contractors in accordance with ISO 14001.

<sup>7</sup> E.g. light bulbs, batteries, paint buckets





## 5. Air Quality

Central Pattana actively monitors and manages air quality in our shopping centers to ensure all applicable standards are met through quality control measures including testing of indoor air quality and toxic gases that can cause acute health effects. For instance, filters for fresh air systems and CO2 sensors have been installed to ensure sufficient fresh air is brought into the buildings; and if ambient air quality falls below acceptable levels, the fresh air systems would automatically shut down.

In 2021, we implemented measures 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 have been classified as carcinogenic to humans (Group 1) by the World Health Organization (WHO). Examples of the measures deployed to ensure customer confidence include:

- Actively monitor and test indoor air quality including PM2.5 levels in all shopping centers to ensure they meet required standards.
- Set out a plan to install air quality monitors for continuous indoor air quality monitoring 24 hours per day. The measure has been embedded into our standard requirements for new developments and project renovations.
- Install MERV Filters in Outdoor Air Units: OAUs across shopping centers that are located in the northern areas and affected by smog and dust particles.
- Install MERV Filters in Outdoor Air Units: OAUs and Air Handling Units: AHUs in new developments and existing projects including Central Ayutthaya and Central Si Racha, and Central Rama 2, respectively. The measure has been embedded into our standard requirements for all shopping centers to keep indoor PM2.5 concentrations in buildings within safe limits.
- Shut off or adjust the flow rate of the fresh air systems when outdoor PM2.5 levels exceed safe limits.
- 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 their buildings.

- 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 send their personal vehicles including motorcycles for regular inspections.
- Discourage in-person meetings and encourage remote meetings via conference call and VDO conference over satellite or over the internet.
- Reduce paper use to minimize deliveries by office messengers.
- Install ventilation fans across construction sites to protect the health and wellbeing of workers during construction.

Additionally, to manage the risk of COVID-19 transmission in shopping centers, we have installed UV-C air disinfection systems for HVAC systems, which can kill germs, bacteria, viruses, mold, yeast as well as the COVID-19 virus. The measure was embedded into our standard requirements for new developments and later expanded to existing projects as well.



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## 6. Green Building

Central Pattana incorporates Green Building frameworks and practices in the design and development of our shopping centers. They include LEED: Leadership in Energy & Environmental Design, which is established by the U.S. Green Building Council: USGBC, the evaluation criteria for ASEAN Energy Award and the Ministry of Energy's Thailand Energy Award.<sup>8</sup> Building energy and green building awards won by Central Pattana in 2021 included:

### MEA Energy Award Badges from Metropolitan Electricity Authority



Ten shopping centers located in the Metropolitan Electricity Authority's area of operation including Central World, Central Westgate, Central Chaengwattana, Central Pinklao, Central Rama 2, Central Rama 3, Central Bangna, Central Rattanathibet, Central Ramintra, Central Eastville and one office building, Central World Offices, received the MEA Energy Awards from the Metropolitan Electricity Authority. All buildings met the MEA's assessment criteria including the MEA Index: Management of Energy Achievement Index and IAQ: Indoor Air Quality.

### Thailand Energy Awards 2021

Four shopping centers received the Thailand Energy Awards in the following categories:

- Central Salaya and Central Chiang Rai - Outstanding Achievement in Conservative Energy - Designated Building
- Central Phuket Floresta - Outstanding Achievement in Conservative Energy - Energy Conservation Creative Building (New Building)
- Central Lampang - Outstanding Achievement in Energy Personnel - Energy Management Team - Designated Building

**Remark :** <sup>8</sup> 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.

## ASEAN Energy Awards 2021

In 2021, three shopping centers received the ASEAN Energy Awards in the following categories:

- Central Salaya - Winner in Retrofitted Building
- Central Phuket Floresta - 1<sup>st</sup> runner up in New Building
- Central Chiang Rai- 2<sup>nd</sup> runner up in Energy Management in Large Building



To date, 26 projects of Central Pattana have earned

# 10

ASEAN Energy Awards

and

# 41

Thailand Energy Awards

or

# 73%

of the projects in operation in the current year.

## Central Salaya and Sustainable Environmental Management

Central Salaya is Central Pattana's 22<sup>nd</sup> shopping center. Opened in 2014, it is a large and modern shopping center catered to increasing demand driven by the westward expansion of Bangkok - a large residential area with high population density spanning from Phutthamonthon, Nakhonchaisri, Sampran to Nakhon Pathom that is also a center of educational institutions and home to important government buildings.

### Design, Architecture and Building Materials

Bringing the outdoors inside, Central Salaya's design concept "Contemporary Botanical" showcases the cultural heritage of Salaya and Nakhon Pathom. Across the shopping center, different kinds of plants



are arranged in vertical and horizontal layers and configurations, serving as decorative elements as well as Photo Landmarks. Both the canalside houses and the building's lines take architectural inspiration from Sanam Chandra Palace and other historical landmarks in the province.

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Electricity Management

All Air Handling Units: AHUs used in Central Salaya have Variable Speed Drives: VSDs installed on the motors to adjust the input frequency in accordance with indoor air conditions. With current air-conditioning units controlling the temperature but not the relative humidity, Central Salaya has installed temperature sensors and humidity sensors in hallways and walkways to monitor indoor air quality and feed the data to the shopping center’s Building Automation System (BAS), which then sends commands to the AHUs’ VSDs or chilled water control valves. This change has reduced energy use for air-conditioning by 796,430 kWh/year and enabled the air conditioning system to maintain both temperature and %RH at appropriate levels.

With a 999.6 kWp solar rooftop power system installed, Central Salaya has been sourcing its renewable electricity onsite since 2020. The solar system generated 1,421,525 kWh of electricity in 2021 or 9.8% of the shopping center’s total electricity consumption - a reduction of GHG emissions of 678,067 tCO<sub>2</sub>eq per year.

In 2021



Solar Electricity Generation

1,421,525

kWh



Accounting for greenhouse gas emissions reduction

678,067

tCO<sub>2</sub>eq/year

Water Management

The SBR: Sequencing Batch Reactor has been installed at Central Salaya. In 2020, the shopping center received the Gold Award in Wastewater Management in a contest held by the Pollution Control Department and Environmental Offices 1-16.

At Central Salaya, treated wastewater goes through layer

filtration before it is used to water plants and in toilets and toilet fixtures where the water does not come into physical contact with customers.

In 2021



Water reuse and recycle

accounting for

22,212

m<sup>3</sup>

12%

of Central Salaya’s total water use

Waste Management

Through its participation in the “Journey to Zero” project, Central Salaya encouraged employees to stop using single-use plastics and sort their waste into three categories - general waste, recyclables and food scraps - and organized activities to offer employees rewards in exchange for recyclables.

Additionally, the shopping center invited customers, tenants and local communities to help sort waste at source into specified categories for processing or recycling to divert as much waste as possible from landfill.

Indoor Air Quality Management

Central Salaya has exhausts installed in the shopping center and actively monitors indoor and outdoor air quality on a regular basis including CO<sub>2</sub> levels and concentrations of particulate matter with a diameter of less than 10 and 2.5 micron. It has also introduced the UV-C air disinfection system for HVAC systems to manage the risk of COVID-19 transmission in the shopping center.

Green Building

In 2021, Central Salaya received the Thailand Energy Awards: Outstanding Achievement in Conservative Energy - Designated Building and won the ASEAN Energy Awards in the Retrofitted Building category.



foodwOrld@centralwOrld and G Tower Grand Rama 9 have also achieved a LEED Platinum certification in Commercial Interior Retail - Restaurant/Cafeteria and a LEED Gold for Core and Shell certification, respectively.

In addition, we have established a plan to develop our own environmental sustainability standards based on Green Building standards as part of our long-term environmental

management plans to motivate our shopping centers and to go beyond meeting required standards, we annually give Environmental Sustainability Awards to branches with outstanding environmental performance in reducing electricity and water usage, lowering greenhouse gas emissions, waste management and employee engagement since 2019. In 2021, the winner was Central Chonburi.

### Central Chonburi and Sustainable Environmental Management

#### Design, Architecture and Building Materials

Central Chonburi is our 11<sup>th</sup> shopping center. Opened in 2009, it is one of the largest shopping centers in Chonburi province and has a distinct building design that harnesses natural lighting.

#### Electricity Management

At Central Chonburi, an energy efficiency assessment of machines and equipment with significant energy uses is conducted annually to track and measure progress with energy performance indicators. The shopping center has installed an automatic ball cleaning system, which cleans off residue and prevents buildup of deposits on the chillers' condenser tubes, as well as chilled water pumps and condenser water pumps with efficiencies of over 75% to be used with high performance motors and automatic motor controllers.

With a 999.6 kWp solar rooftop power system installed, Central Chonburi has been sourcing its renewable electricity onsite since 2020. The solar system generated 1,463,597.0 kWh of electricity in 2021 or 9% of the shopping center's total electricity consumption - reduction of GHG emissions of 698,135.8 tCO<sub>2</sub> eq./year.



# 999.6

kWp solar rooftop power system installed

# 1,463,597

kWh of electricity in 2021 was generated

Accounting for GHG emissions reduction of

# 698,135.8

tCO<sub>2</sub> eq/year

(3.2 Sustainability Report for Stakeholder in Business Value Chain, Society, and Environment)

**Water Management**

Central Chonburi completed the installation of the Ultrafiltration (UF) and Reverse Osmosis (RO) systems in 2021, which enables the shopping center to use reclaimed water for many purposes including watering plants and cleaning the parking lot and flushing toilets.

**Waste Management**

Through its participation in the “Journey to Zero” project, Central Chonburi encouraged employees to stop using single-use plastics and sort their waste into three categories - general waste, recyclables and food scraps. Separated waste was sent for processing to produce Refuse Derived Fuel or RDF to maximize the diversion of waste from landfill. In 2021, 40% of the total waste generated from the shopping center was reused or recycled.

**Green Building**

Central Chonburi received the SD Environmental Awards, an internal award scheme to celebrate Central shopping centers with outstanding environmental performance across six areas of assessment: 1) GHG emissions reduction, 2) electricity use, 3) energy savings innovation, 4) water management, 5) waste management and 6) employee engagement in environmental management. Additionally, Central Chonburi, in 2017, won the Ministry of Energy's Thailand Energy Awards: Outstanding Achievement in Conservative Energy - Designated Building.

**7. Ecosystem Management and Biodiversity**

The wellbeing of people, plants and wildlife in the ecosystem is important to us. At Central Pattana, we set out a clear policy on ecosystem management and biodiversity in accordance with our Biodiversity and Zero Deforestation Policy, which is publicly available at:

**Click**

<https://www.centralpattana.co.th/storage/sustainability/cg/cg-policy/20210604-cpn-biodiversity-management-policy-en.pdf>

with guidelines expressly prohibiting development in restricted or protected areas and practices established for conducting ecological surveys and assessments with external experts and managing and preserving the ecosystems around all construction sites that are part of new developments and renovation projects. All Central Pattana projects occur outside restricted or protected areas. Before construction, we conduct Biodiversity Impact Assessment on project sites to ensure no net loss of biodiversity and ecosystem services and drive possible positive biodiversity outcomes through implementation of the mitigation hierarchy. In carrying out new developments and renovation projects in 2019-2021, there were no illegal encroachments into

protected or restricted areas and no losses in biodiversity in the project areas. Preliminary assessments were conducted in accordance with practices established by responsible agencies. For instance, we scouted and recorded perennial plants for transplanting and cats and stray dogs that were living around the projects to be rehomed.

In 2021, we also focused on managing the ecosystems around the projects under landscape management giving special attention to improving water efficiency in landscape maintenance. For instance, we have rolled out installation of sprinkler systems in gardens and areas around our developments. The initiative consists of two phases - Phase 1 Rollout across 17 projects in 2021 to cover an approximate area of 77,601 sq.m. and Phase 2 Rollout across 17 more projects in 2022 to cover an approximate area of 64,721 sq.m. Additionally, we have been sourcing and planting seeds of local and native plants that require little maintenance, such as sunn hemp, sunflowers, marigolds and cosmos, to introduce more variety and colors into the landscape throughout the seasons as well as to help enrich the land and transform vacant lots into public recreation areas for customers and neighbouring communities.

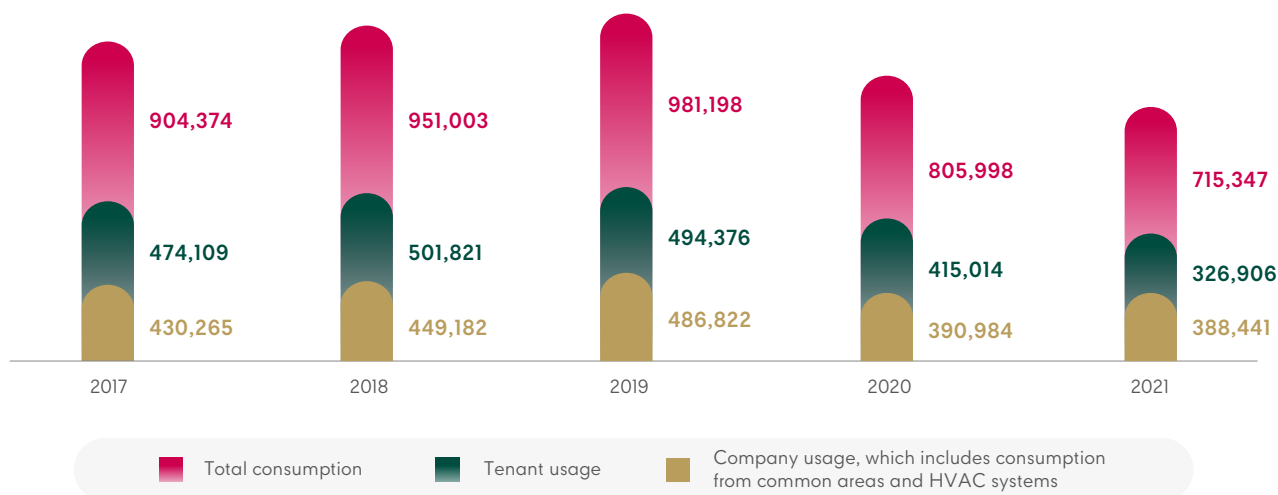


## 8. Engaging Communities in Environmental Development and Management

We work to minimize negative impacts 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, once the projects are in operation, engaging the community to manage public water resources and waste under two Central Group projects, "Central Group Loves the Earth" and "Central Green" and participated in 60+ Earth Hour 2021. Due to the COVID-19 pandemic, we had to suspend all activities under Engaging Communities in Environmental Development and Management.

### Electricity Consumption by Activity

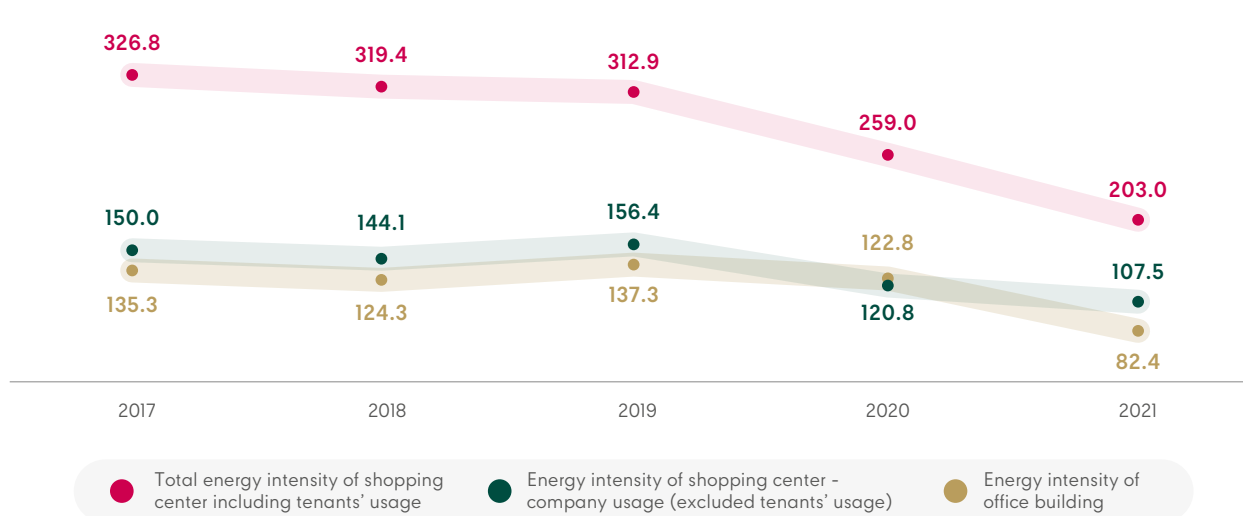
(Unit: MWh)



**Remarks :** The number of projects used in calculating annual electricity consumption during 2017-2020 is as follows: 32, 33, 34, 34 and 38, respectively. The figures include usage data from shopping centers as well as office buildings.

### Energy Intensity

(Unit: kWh/sq.m.)

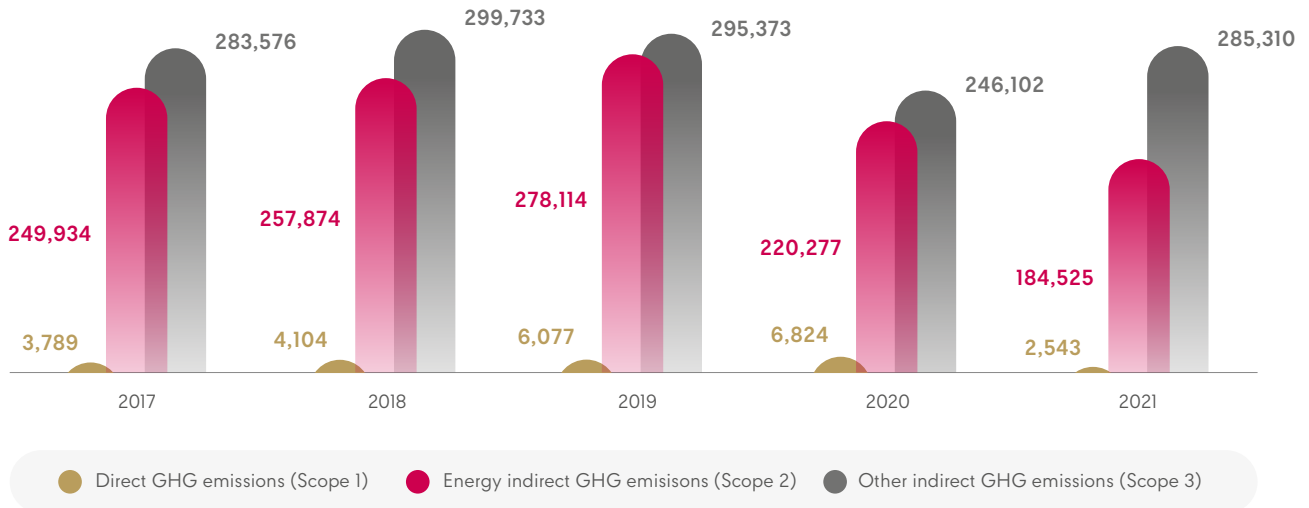


**Remarks :**

1. Include consumption data from projects that were in operation for the full calendar year and projects that did not undergo renovations. Usage by the Head Office is excluded. The number of shopping centers used in the energy intensity calculation between 2017-2021 is as follows: 28, 30, 30, 31 and 34, respectively.
2. The number of office buildings used in the energy intensity calculation between 2017-2020 is 7 while 2021's is 10.
3. The coverage is calculated based on net leasable area and common areas, in keeping with international measurement practices.

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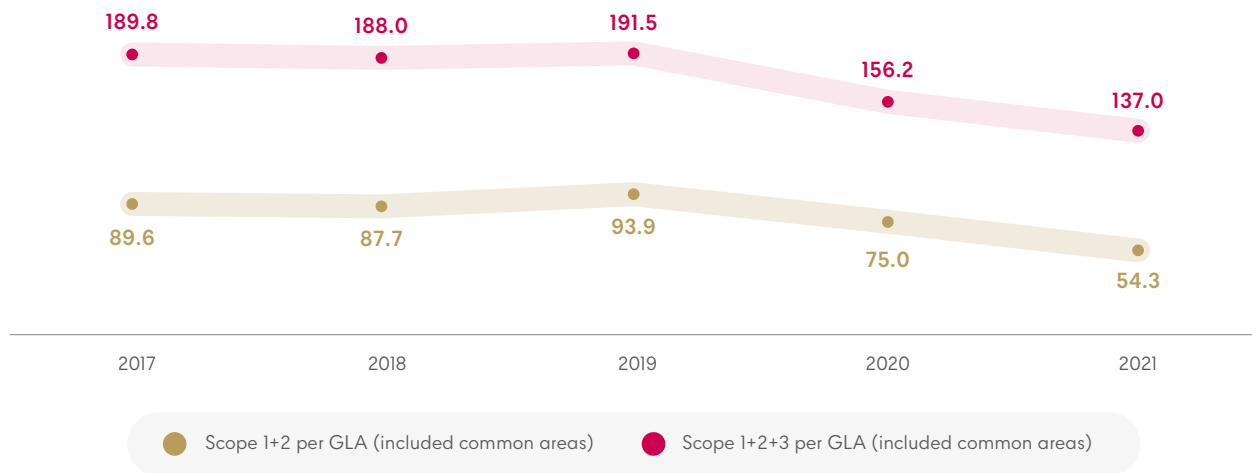
### Total Scope 1, 2 and 3 Greenhouse Gas Emissions

(Unit: tCO<sub>2</sub>eq)

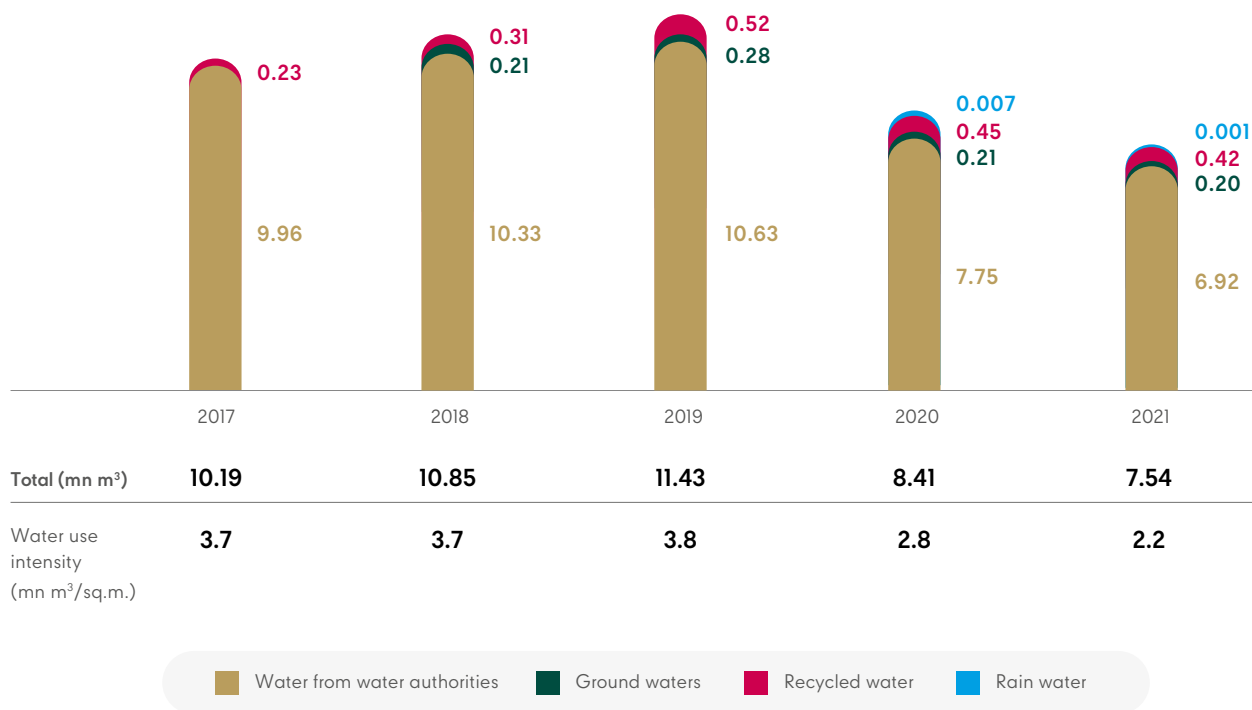
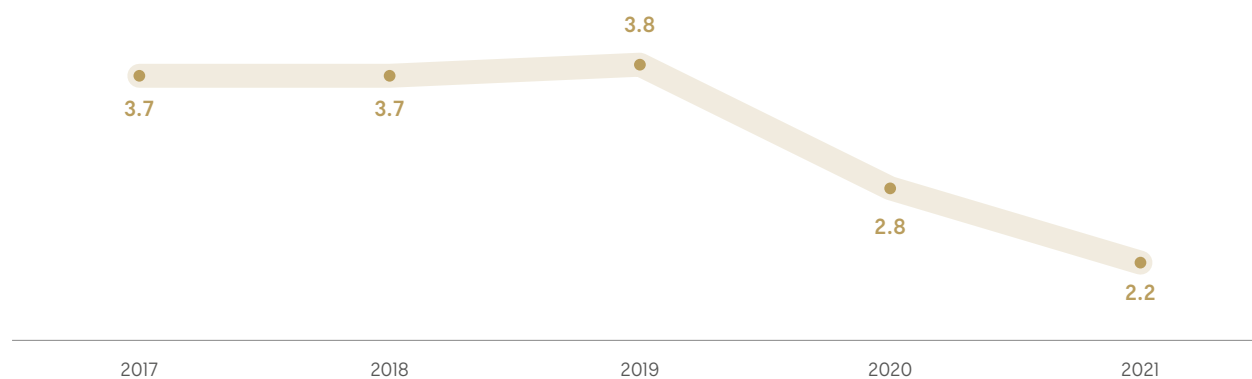
**Remarks :**

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 under operation controls. In 2021, the Scope 3 is included the emissions of liquefied petroleum gas (LPG) used by tenants and waste logistics and waste disposal.
2. Emissions are calculated based on the number of projects that are in operation each year and include one office building and the Head Office. The number of projects used in the GHG emissions calculation between 2017-2021 is as follows: 34, 35, 36, 36 and 38, respectively.
3. The coverage is calculated based on net leasable area and common areas, in keeping with international measurement practices.

### Greenhouse Gas Emissions Intensity



(Unit: kgCO<sub>2</sub>eq/m<sup>2</sup>)

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**Water Use**(Unit: mn m<sup>3</sup>)**Water Use Intensity**(Unit: m<sup>3</sup> /sq.m.)**Remark :** The water use intensity was declined in 2021 due to the impact from COVID-19.

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## Sustainability Performance: Resource and Environmental Management Excellence

Topic	2021 Performance	Plan for 2022
<b>Sustainability Indicator</b> 	<ul style="list-style-type: none"> <li>Establish “electricity consumption” as a key performance indicator and target to reduce total consumption by 4% compared to 2019 levels.</li> <li>Reduce grid-purchased electricity consumption (exclude energy consumption from tenant usage) by 22.7% compared to 2019 levels.</li> </ul>	<ul style="list-style-type: none"> <li>Set a target to reduce energy intensity by 20% by 2025 compared to baseline year (2015).</li> <li>Set a target to reduce grid-purchased electricity consumption by 8% compared to 2019 levels.</li> </ul>
<b>Management Approach</b> 	<ul style="list-style-type: none"> <li>Achieved 100% Carbon Footprint for Organization (CFO) certification for 34 shopping centers, 10 office buildings and 4 Head Offices.</li> <li>Established and implemented electricity conservation measures across 26 projects, which reduced Central Pattana’s energy usage by 27,510 MWh. The total cumulative energy savings since 2015 is 83,520 MWh.</li> <li>Onsite rooftop solar power systems (solar PV) across 18 projects generated 19,317 MWh of solar electricity.</li> <li>Installed the water recycling systems at 17 shopping centers, which increased the share of water use across shopping centers to 5.6%.</li> <li>Carried out “Journey to Zero” through separating waste at source, which reduced the volume of waste sent to landfill by 4,657 tons or 10% of the total waste generated, which was a 9% more diversion compared to 2020 levels, achieving 67% of the 2021 target. (Target at 15% diversion rate from landfill)</li> <li>Achieved an ISO 14001 certification for Central Mahachai.</li> <li>Conducted sustainability assessments (environmental, social and governance) on 1,000 suppliers and contractors.</li> <li>Central Pattana recorded no significant incidents of non-compliance with environmental management best practices or leakages.</li> </ul>	<ul style="list-style-type: none"> <li>Expand the boundary of certification for Carbon Footprint for Organization (Scope 3).</li> <li>Roll out rooftop solar installations (solar PV) across seven additional projects.</li> <li>Set a target to install clean energy systems in all projects including new developments, in alignment with SDG 7.</li> <li>Set the targets to increase the share of water reuse across shopping centers to 10% in 2022 and 20% by 2025 or an equivalent of 100% water reuse in activities wherever possible.</li> <li>Achieve an ISO 14001 certification for one additional project.</li> <li>Set a target to reduce the amount of waste sent to landfill by 22% in 2022.</li> </ul>