

## 3 Sustainable Development

### 3.1 Sustainable Development Policy and Goals

As a real estate developer and manager, Central Pattana operates six business groups including: 1) Shopping Centers and related businesses, which account for over 81% of the Company's total revenue, 2) Office Buildings, 3) Hotels, 4) Residential Projects, 5) Food Centers and 6) Investment in Property Fund and REIT (Real Estate Investment Trust). At Central Pattana, we maintain strong corporate governance and place a strong emphasis on transparency, fairness, accountability and stakeholder engagement in all three dimensions of sustainable development – the economic, social and environmental. We integrate sustainability across the company aligning our targets and goals with 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).



Central Pattana has been listed as a member of the Dow Jones Sustainability Indices-World Index (DJSI World) in Real Estate sector for the fifth consecutive year; the Dow Jones Sustainability-Emerging Markets Index (DJSI Emerging Markets) for the ninth consecutive year; and the Sustainability Yearbook by S&P Global for the fifth consecutive year. This year, we also earned a BBB in the MSCI ESG Ratings and a Green Star status for CPNREIT by GRESB, the global standard for portfolio-level sustainability reporting in the real estate sector.

#### Member of Dow Jones Sustainability Indices

Powered by the S&P Global CSA

Central Pattana Public Company Incorporated  
Real Estate Industry

**Sustainability  
Yearbook Member**  
S&P Global ESG Score 2022

**81** /100

As of February 7, 2023.

Position and Score are industry specific and reflect exclusion screening criteria. Learn more at [spglobal.com/esg/yearbook](http://spglobal.com/esg/yearbook)

**S&P Global**



**MSCI**  
ESG RATINGS

**BBB**

CCC	B	BB	<b>BBB</b>	A	AA	AAA
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## Materiality Assessment

In our most recent materiality assessment, we fully integrated the assessment with the enterprise risk management and the annual and five-year corporate strategy development processes. In 2022-2023, we re-assessed and re-classified our material issues to better align with the corporate strategy and insights from key stakeholder groups.

### Materiality Assessment Process

Mega Trend Analysis	Identify and Prioritize Material Topics	Validation and Reporting
<p>Conducted desk research to analyze:</p> <ul style="list-style-type: none"> <li>National and global mega trends</li> <li>Key and emerging enterprise risks</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>	<ul style="list-style-type: none"> <li>Reviewed mega trends together with enterprise risks as well as inputs from key stakeholder groups.</li> <li>Re-assessed material topics at our annual management workshop and during the strategic planning process at the function and division levels.</li> <li>Prioritized material topics through the lens of the Double Materiality Principle, which considers two perspectives: Inside Out - how the Company impacts the economy, society and environment; and Outside In - how the external factors impact the Company.</li> </ul> <p>Through this process, we identified eleven issues that are material to both our business and our stakeholders, in “Material Issues” on page 89.</p>	<p>Based on this list of eleven priority issues for sustainability, Sustainable Development and Risk Management worked together to develop our corporate strategy on sustainable development and enterprise risk management plan, which were subsequently embedded in the corporate strategy.</p> <p>Progress was monitored and tracked by the Corporate Governance and Sustainable Development Committee and the Risk Management Committee.</p> <p>The sustainability reporting and disclosure was prepared in accordance with the GRI-Standards and 56-1 One Report.</p> <p>The process was externally assured by an independent third party in accordance with the AA1000AS v3 assurance standard. The Assurance Statement is available at the end of the report.</p>

## Engaging and Listening to Key Stakeholders

Central Pattana divides our stakeholders into six primary groups and three secondary groups. Each group is supported by a dedicated team whose responsibilities include communicating with, listening to and managing

the stakeholders. This is to ensure that our stakeholder feedback and expectations are addressed in an effective and timely manner and their insights are regularly fed into our decision-making process and business activities.

## Our Value Chain

01



### Development

- 1.1 Land acquisition
- 1.2 Design and development
- 1.3 Contractor recruitment and material procurement

02



### Sales, Marketing and Property Management

- 2.1 Sales and service channels
- 2.2 Marketing
- 2.3 Property management

03



### Corporate Support Service

- 3.1 Human resource management
- 3.2 Financial management
- 3.3 Corporate governance
- 3.4 Risk management

## Central Pattana Sustainability Approach

### Land acquisition

Ensure successful project delivery that meet expected returns on investment

1.1

### Design and development

Enhance the quality of life and wellbeing of customers and communities in which we operate

1.2



### Contrator recruitment and material procurement

Uphold high standards and minimize negative impacts on all stakeholders

1.3



### Human resource managment

Nurture excellence in the workplace and create an engaged and motivated workforce committed to Central Pattana's goals

3.1

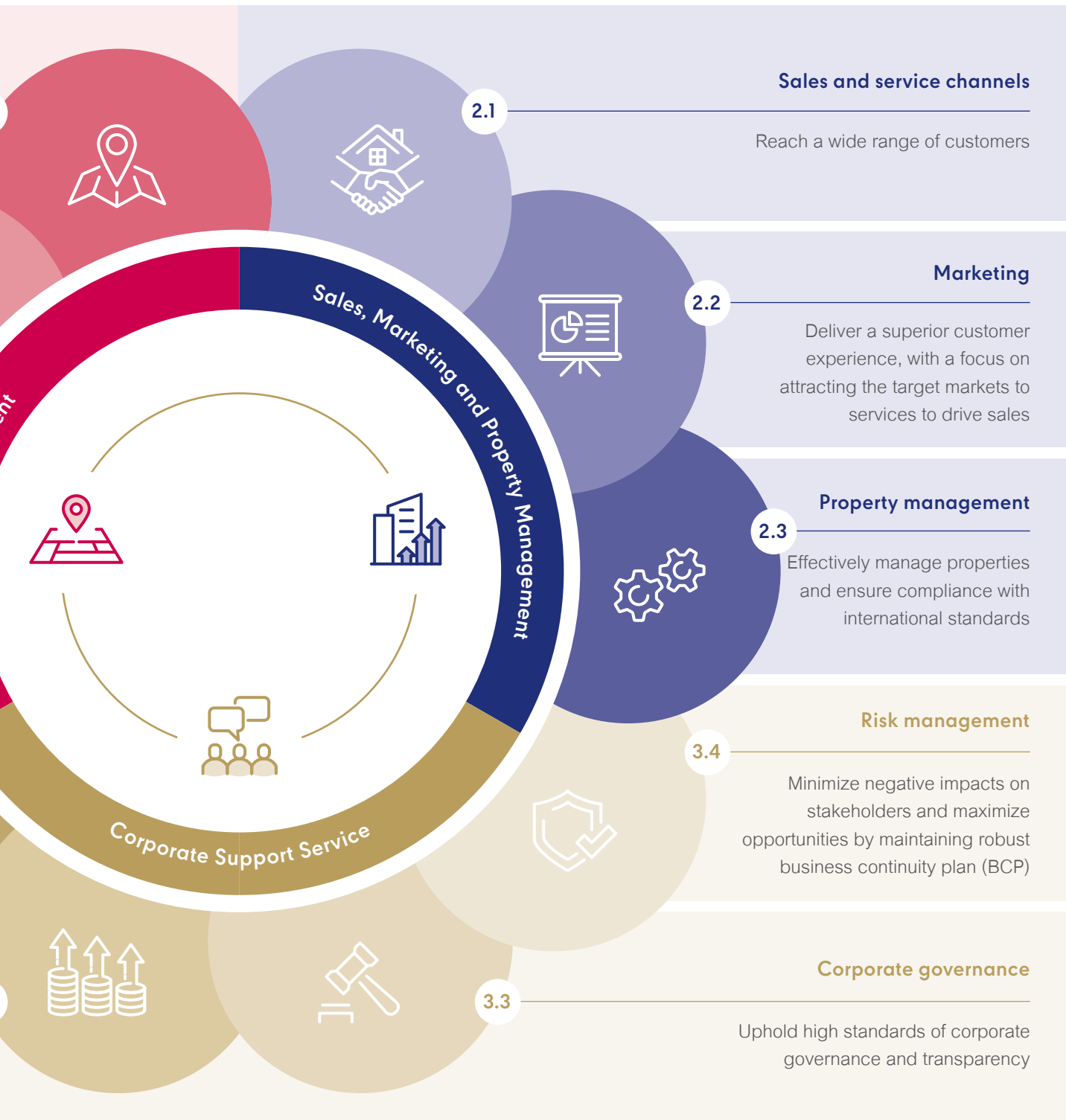





### Financial management




Maintain a strong balance sheet and ensure effective financial management and controls

3.2

Development



Development		
Our Value Chain	Description	Corporate Objective
1.1 Land acquisition 	<p>Central Pattana undertakes research to identify land that is suitable for the company's investment plans. When selecting sites, we not only look at a range of factors such as site location, potential for development, customer needs, competition intensity and urban expansion rates but also give consideration to the conservation of biodiversity. This includes no cutting down of trees and protecting and preserving water resources, species, habitats, and ecosystems. We acquire lands for development through direct acquisition as well as through agents and with every acquisition action a price analysis is performed to compare the price offered against the appraised and market values to determine price reasonableness. During the process, we also identify legal and other requirements that apply to the development and assess potential constraints in the construction project, to help ensure the success of the project.</p>	<p>Ensure successful project delivery that meet expected returns on investment</p>
1.2 Design and development 	<p>We incorporate Green Building frameworks and practices in the design and development of our properties. This includes installing solar rooftop panels on our buildings to increase the share of alternative energy across the operations; improving energy efficiency by reducing energy use and mitigating greenhouse gas emissions; applying for and securing any permits required by law and requiring every project to conduct a social impact assessment (SIA) and environmental impact assessment (EIA); and creating more green spaces to enhance the quality of life and wellbeing of our customers and the communities where we operate.</p>	<p>Enhance the quality of life and wellbeing of customers and communities in which we operate</p>
1.3 Contractor recruitment and material procurement 	<p>When recruiting contractors, we welcome eligible businesses of all sizes that meet the qualification criteria for the procurement concerned. To be selected, contractors must pass our sustainability assessment; have a proven record of positive performances, timely completion of construction projects and efficient and effective construction cost management; and have in place robust governance structures and practices that incorporate the environmental, social and governance (ESG) considerations such as achieving occupational health and safety certifications, implementing lawful employment practices, having environmental certifications and deploying energy-saving technologies to minimize negative impact for all stakeholders. At Central Pattana, we use both the competitive bid process and turnkey procurement process to select prime contractors for our projects.</p>	<p>Uphold high standards and minimize negative impacts on all stakeholders</p>

Sales, Marketing and Property Management		
Our Value Chain	Description	Corporate Objective
2.1 Sales and service channels  	<p>We put our portfolio of properties on the market directly through the Company's functions in charge of our sales offices and sales representatives and in exceptional cases or those that require specialized expertise through real estate agencies. Properties for lease including retail and office spaces are offered directly to target customers to curate a desirable merchandise mix for our customers and there are online channels and a call center to assist potential customers. Properties for sale including residential and condominium projects are sold through our sales offices and through real estate agencies.</p>	<p>Reach a wide range of customers</p>
2.2 Marketing  	<p>1) Marketing events / marketing promotions We organize marketing events / marketing promotions to add value to our properties and create marketing activities that enhance the customer experience with the aim of attracting the target customers as well as boosting tenant sales and creating and providing space for social participation, helping to expand access to and recognition of local and community products and small business operators. We also work to ensure responsible marketing communications across all platforms. This means communications that are not only honest but also not mislead customers by exaggerating the capability or performance of a product.</p> <p>2) Customer Relation Management: CRM is administered by the central customer service function or juristic persons whose duties and responsibilities include conducting satisfaction surveys; listening to the feedback and comments from tenants, residents and users and incorporating them into the business processes to ensure continuous improvement; and organizing customer relations activities to increase their satisfaction.</p>	<p>Deliver a superior customer experience, with a focus on attracting the target markets to services to drive sales</p>
2.3 Property management  	<p>This includes ensuring the services and facilities provided within our properties meet international standards and maximizing knowledge and technologies as well as partnership collaborations to implement further project enhancements. For instance security systems that also offer more convenience; common area cleaning; resource (energy, water and waste) management systems with a focus on refreshing management approaches to be in line with the principles of a circular economy, reducing energy use and lowering operating costs; information technology systems to maintain a quality customer database with careful consideration given to data security and privacy protection; ensuring compliance with sustainable building standards and procedures such as ISO 14001 Environmental Management System (EMS), ISO 14064-1 Greenhouse Gases and ISO 50001 Energy Management.</p>	<p>Effectively manage properties and ensure compliance with international standards</p>

Corporate Support Service		
Our Value Chain	Description	Corporate Objective
3.1 Human resource management 	This includes ensuring respect for human rights and labor and employment laws; and managing occupational health and safety, continuous employee development and motivation and retention.	Nurture excellence in the workplace and create an engaged and motivated workforce committed to Central Pattana's goals
3.2 Financial management 	This includes planning and organizing short and long-term finances to maintain positive cash flows and strong financial health; selecting appropriate sources of finance; managing working capital, diversification, and profit optimization; and directing and controlling the Company's financial activities.	Maintain a strong balance sheet and ensure effective financial management and controls
3.3 Corporate governance 	This includes ensuring that the Company operates in accordance with good corporate governance principles, Code of Conduct, all laws, rules and regulations applicable to the Company; and managing supply chain sustainability through meaningful stakeholder engagement.	Uphold high standards of corporate governance and transparency
3.4 Risk management 	This includes identifying and assessing risks that may affect the Company; and establishing and maintaining robust business continuity plans (BCP).	Minimize negative impacts on stakeholders and maximize opportunities by maintaining robust business continuity plan (BCP)

## Material Issues

Sustainability-Related Mega Trends, Risks and Opportunities	Sustainability Topics and Impacts Identified through Stakeholder Engagement	Material Sustainability Issues
<ul style="list-style-type: none"> <li>Intensified competition</li> <li>Slow domestic economic recovery and geopolitical challenges</li> <li>Economic polarization and widening of wealth gap</li> <li>Investment focus towards agile and sustainable businesses with profitable growth</li> </ul>	<ul style="list-style-type: none"> <li>Concerns, particularly from tenants, about revenues and the ability of their businesses and Central Pattana to recover from the economic slowdown</li> <li>Changes in behavior, lifestyle and decision-making by business operators, consumers, and workers</li> <li>Governance, anti-corruption, anti-collusion and prevention of misconduct</li> </ul>	Financial performance * 1. Risk management 2. Corporate governance
<ul style="list-style-type: none"> <li>Shifts in demographics</li> <li>Consumer lifestyle changes such as:               <ul style="list-style-type: none"> <li>Experience over products</li> <li>From multipoint service to one stop service</li> <li>'Being Digital' where everyone, regardless of age and background, is digitally literate.</li> </ul> </li> <li>Human rights considerations</li> </ul>	<ul style="list-style-type: none"> <li>Ability to meet the needs of every customer group</li> <li>Occupational health and safety measures in the workplace and service points such as restaurants</li> <li>Using materials and equipment that are safe and good for health</li> <li>Service quality and effective management of shopping centers and office buildings</li> <li>Creating added value for all stakeholder groups through harnessing innovation and growth</li> <li>Ability to engage and retain existing stakeholders, particularly, our employees</li> </ul>	3. Product and service quality 4. Innovation 5. Engagement with stakeholders including tenants, employee, and suppliers 6. Human rights considerations
<ul style="list-style-type: none"> <li>Digital disruption</li> <li>Technology Enablers</li> <li>Evolving data utilization such as:               <ul style="list-style-type: none"> <li>From Segmentation to Personalization</li> <li>From Reactive to Anticipative</li> </ul> </li> <li>Seamless customer experience with a single customer view</li> </ul>	<ul style="list-style-type: none"> <li>Leveraging digital transformation in service delivery and intercompany transaction</li> <li>Intercompany data sharing under the personal data security law</li> <li>Speed and clarity when sending and receiving messages in normal and emergency times</li> </ul>	7. Leveraging digital transformation for better stakeholder experience 8. Cyber security and privacy protection



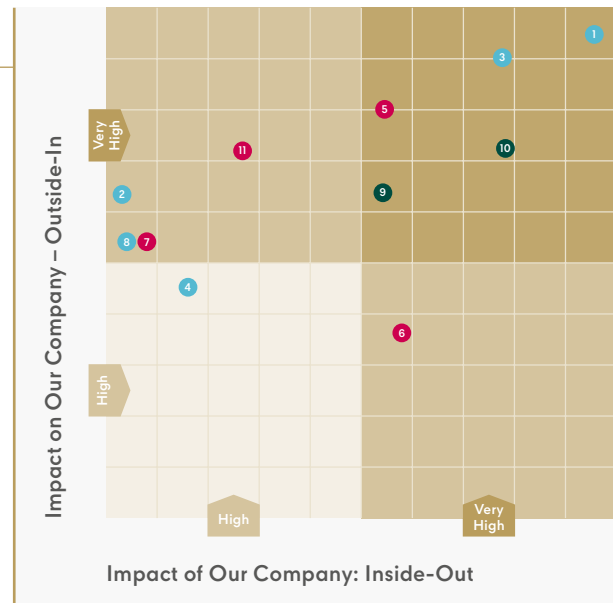
Sustainability-Related Mega Trends, Risks and Opportunities	Sustainability Topics and Impacts Identified through Stakeholder Engagement	Material Sustainability Issues
<ul style="list-style-type: none"> <li>• Risk/Opportunity and long-term plan for becoming net zero</li> <li>• Effective management of resources such as water and energy to mitigate the impacts of climate change</li> <li>• Climate-related risks e.g. global warming, droughts or floods</li> <li>• Circular Economy</li> <li>• Protecting biodiversity and ecosystems around our properties</li> <li>• Shared value creation for sustainable community development</li> </ul>	<ul style="list-style-type: none"> <li>• Setting clear policy and targets for reducing greenhouse gas emissions</li> <li>• Implementation of internationally-recognized systems and innovations for environmental management</li> <li>• Leveraging alternative energy and eco-friendly energy-saving technologies</li> <li>• Using eco-friendly materials and equipment</li> <li>• Waste reduction and waste separation for improved circulation and recycling</li> <li>• Noise, dust, pollution and odor management during construction and renovation</li> </ul>	<ul style="list-style-type: none"> <li>9. Becoming net zero</li> <li>10. Resource efficiency</li> <li>11. Sustainable community development</li> </ul>

\* Financial performance is reported in Chapter 4 Management Discussion and Analysis and, therefore, excluded from the issue prioritization process.

We identified eleven issues that are material to both our business and our stakeholders and prioritized them through the lens of the Double Materiality Principle, which considers two perspectives: Inside Out - examining how the Company impacted the economy, society and environment - and assessing each issue's importance to our stakeholders; and Outside In - examining the opportunities and risks generated by these material issues and the potential impact on the Company against our strategy and key enterprise risk indicators.

## Materiality Matrix

- 1 Risk management
- 2 Corporate governance
- 3 Product and service quality
- 4 Innovation
- 5 Engagement with stakeholders including tenants, employee and suppliers
- 6 Human rights considerations
- 7 Leveraging digital transformation for better stakeholder experience
- 8 Cyber security and privacy protection
- 9 Becoming net zero
- 10 Resource efficiency
- 11 Sustainable community development



Key opportunities and impacts on Central Pattana's operations



Economic



Social



Environmental

## How We Drive Sustainability and Set Our Goals

Through our materiality assessment, we identified eleven material sustainability issues and assessed each issue's importance to our business and our stakeholders. We then integrated the findings into the planning of our corporate strategy, risk management plan and 5-year business strategy 2023-2027. The findings also revealed new risks, which are summarized in Chapter 2 Risk Management under Emerging Risk section.

Our sustainability agenda is driven through the implementation of our annual business plan. We established sustainability indicators as the corporate key performance indicators, using the Objectives and Key Results (OKRs) methodology. In the past year, we set our corporate objectives and goals as follows:



In addition, we have also aligned our short and long-term sustainability indicators with the UN SDGs and set key results that cascade down to the division, department and individual contributor levels. Progress is tracked and measured by the relevant committees including the Management Committee, the Risk Management Committee and the Corporate and Sustainability Committee. The results are reported to the Management Committee according to the established timelines.

In this report, we group our sustainable materiality issues and align them with our corporate strategy and monitor performance through corporate sustainable key indicators and tracking enterprise risk indicators. Our performance data is made publicly available under the "Sustainable Development" framework section in our annual report and on our website.



## How We Drive Sustainability

### Corporate Objective

**Industry leader with strong growth in financial performance**  
**Top of mind brand to our partners and customers**



Sustainability Strategy	Sustainability Issue	Reporting
<b>Becoming the Center of Life</b> <ul style="list-style-type: none"> <li>Business expansion and diversification into shopping center-related and complementary businesses to achieve profitable growth</li> <li>Innovation product development to become the Center of Life - Shop Eat Work Live Play Stay</li> <li>Customer centric approach to product and innovation development ensuring service excellence with a focus on safety and health</li> </ul>	Financial performance *	Financial Report
	Risk management	Annual Report: Chapter 2 Risk Management
	Corporate governance	Annual Report: Chapter 6 Corporate Governance Policy and Central Pattana website under "Sustainability / Good Governance" sections
	Product and service quality Innovation	Annual Report: Chapter 3.2 Sustainability Report for Stakeholder, Environmental and Social Impact Management

**Corporate Objective****Maximize synergistic ecosystem through all businesses**

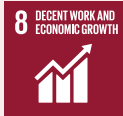
Sustainability Strategy	Sustainability Issue	Reporting
<b>Stakeholder engagement</b> <ul style="list-style-type: none"> <li>Supplier development and partnership to boost competitiveness and create shared value</li> <li>Better data utilization with due consideration to data security and compliance with relevant data protection laws</li> <li>Application of NPS-Net Promoter Score</li> </ul>	Stakeholder engagement	Annual Report: Chapter 3.2 Sustainability Report for Stakeholder, Environmental and Social Impact Management
	Leveraging digital transformation	
	Cyber security and privacy protection	Annual Report: Chapter 2 Risk Management
	Human rights considerations	Annual Report: Chapter 6 Corporate Governance Policy

**Corporate Objective****Sustainable organization with innovative, productive & efficiency DNA (Culture)**

Sustainability Strategy	Sustainability Issue	Reporting
<b>Purpose-led organization</b> <ul style="list-style-type: none"> <li>Building sustainable futures for the society and environment with a goal of being a valued partner of the communities in which we operate and achieving net zero</li> </ul>	Sustainable community development	Annual Report: Chapter 3.2 Sustainability Report for Stakeholder, Environmental and Social Impact Management
	<ul style="list-style-type: none"> <li>Enhancing corporate and employee capacities through empowerment and innovation</li> </ul>	Becoming net zero Resource efficiency Annual Report: Chapter 3.2 Sustainability Report for Stakeholder, Environmental and Social Impact Management and Central Pattana website under "Sustainability / Sustainability Reporting / Sustainability Performance" sections

## How We Set Our Sustainability Targets

We have mapped our sustainability indicators to the relevant UN SDGs and established short-term and long-term targets, which are summarized in the table below.



### Target 8 Decent work and economic growth

Indicator 8.1 At least 7% annual growth rate of real GDP per capita

Sustainability Strategy	Long-Term Target for 2030	Short-Term Target for 2022	Progress in 2022
Becoming the Center of Life	Achieve an annual growth rate of <b>16%</b>	Business recovery rate of <b>48%</b>	Achieved an annual growth rate of <b>47%</b>
Purpose-led organization: Corporate responsibility and community development	Achieve a Social Return on Investment (SROI) ratio of <b>20:1</b>	Local economic return of <b>107</b> million baht from marketing campaigns and activities	Local economic return of <b>139</b> million baht generated from marketing campaigns and activities

We report progress made on Indicator 8.3.1 Proportion of informal employment in total employment, by sector and sex and Indicator 8.8.1 Fatal and non-fatal occupational injuries per 100,000 workers



### Target 11 Sustainable cities and communities

Indicator 11.7 Provide universal access to safe, inclusive and accessible, green and public spaces for all

Sustainability Strategy	Long-Term Target for 2030	Short-Term Target for 2022	Progress in 2022
Becoming the Center of Life	Allocate <b>20%</b> of space for green areas and community use	<b>2.5</b> million people used the community spaces	<b>2.2</b> million people used and visited our community spaces



### Target 7 Affordable and clean energy

Indicator 7.2.1 Renewable energy share in the total final energy consumption

Sustainability Strategy	Long-Term Target for 2030	Short-Term Target for 2022	Progress in 2022
Purpose-led organization: Resource and environmental management	Increase the share of renewable energy to <b>20%</b> of total energy consumption	<b>4.5%</b> of total energy consumption under Central Pattana operational control	<b>4.87%</b> of total energy consumption under Central Pattana operational control

We report progress made on Indicator 7.3.1 Energy intensity measured in terms of primary energy and GDP



## Target 12 Responsible consumption and production

Indicator 12.5.1 Recycling rate, tons of material recycled

Sustainability Strategy	Long-Term Target for 2025	Short-Term Target for 2022	Progress in 2022
Purpose-led organization: Resource and environmental management	Reduce the amount of waste sent to landfill in half	<b>22%</b> reduction in the amount of waste sent to landfill	<b>28%</b> of the total waste diverted from landfill
We report progress made on Indicator 12.3.1 (b) food waste index			



## Target 13 Climate action

Indicator 13.2.2 Total greenhouse gas emissions per year

Sustainability Strategy	Long-Term Target for 2030	Short-Term Target for 2022	Progress in 2022
Purpose-led organization: Resource and environmental management	Reduce Scope 1 and 2 GHG emissions intensity by <b>30%</b> (compared to 2015) and become Net Zero by 2050	<b>8%</b> reduction in Scope 1 and 2 GHG Emission (compared to 2019 levels)	<b>22.5%</b> reduction in Scope 1 and 2 GHG Emission (compared to 2019 levels))
	Reduce energy consumption by <b>30%</b> (compared to 2015)	<b>8%</b> reduction in energy consumption (compared to 2019 levels))	<b>8.65%</b> reduction in energy consumption (compared to 2019 levels)

## Non-related UN SDGs Targets

Sustainability Strategy	Long-Term Target for 2030	Short-Term Target for 2022	Progress in 2022
Stakeholder engagement	Become an Employer of Choice	<b>80%</b> employee engagement score	<b>76%</b> Employee engagement score
		<b>53%</b> customer Net Promoter Score (NPS) (compared to industry's average index at 30%)	<b>54%</b> customer NPS Score
		28,000 employee volunteer hours	26,426 employee volunteer hours

## Sustainability Reporting Approach

Central Pattana Sustainability Report and Disclosure has been published annually for ten years to showcase our economic, social and environmental sustainability performances. Our 2022 reporting and disclosure is prepared in accordance with the Global Reporting Initiative (GRI) Standards, ISO 26000:201 Guidance on Social Responsibility, the AA1000AS assurance standard, the United Nations Global Compact: UNGC and the UN Sustainable Development Goals: SDGs.

### Scope and Boundaries of Reporting

The Report is an account of the sustainability performance of Central Pattana and its subsidiaries in Thailand from a financial period between 1 January to 31 December 2022 (It excludes Central Pattana's operations outside Thailand). It describes our sustainability performance in economic, social and environmental aspects reflective of our sustainability priorities. The Report contains the performance data of 37 shopping centers located in Thailand (Central Phuket consists of two shopping centers: Central Phuket Festival and Central Phuket Floresta), 10 office buildings, 17 community malls and related and complementary businesses that operate in Thailand and are managed by Central Pattana. Details can be found in Chapter 1.2 Nature of Business. Please note that the environmental performance data of Central Chanthaburi, 3 hotels and residential projects, and the supply chain performance data of Central Pattana's subsidiary, CPN Residence, have not been included.

Engaging with all stakeholder groups including shareholders, tenants, customers, suppliers, creditors, employees, competitors, community and society, the environment, public organizations, independent organizations and other entities is an important part of our approach to sustainability. 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, which serve as the central quality control team 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

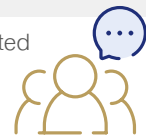
The Report and key performance indicators have been assured to be in conformance with the GRI-Standards and the AA1000AS assurance standard by an independent third party that is specialized in real estate. The Independent Assurance Statement is available at page 238-239. Refer to the 2021 GRI Content 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, which encourages the reduction of paper use, 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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## 3.2 Sustainability Report for Stakeholder, Environmental and Social Impact Management

At Central Pattana, we recognize the importance of engaging all stakeholders across our value chain on our sustainability journey and align our approach to stakeholder engagement with our purpose of “Imagining Better Futures for All” and beliefs - Community at Heart, Place Maker, People and Planet. We actively work with our stakeholders to understand what matters to them and use their insights to evolve our management approaches at the corporate policy and operational levels. To involve stakeholders in our work, each function and branch conducts surveys and seminars, carries out internal and external communications and organizes activities to build and nurture relationships with its stakeholders. Insights and feedback from this process are then used by us to continuously assess and improve our processes and products. For our workforce, we also hold quarterly meetings between management and employees and conduct surveys to measure employee satisfaction and engagement as well as organize group discussions to learn how we can better respond to their needs.

### Engaging with and Listening to Key Stakeholders

Stakeholder Group	Engagement Platforms (*)	Frequency
<b>Customers</b> 	Pre-development customer behavior surveys	At the start of every new project
	Customer satisfaction surveys	At least twice a year and after the purchase/service
	Online media and social media (*)	24/7
	Online complaints channels (*)	
<b>Tenants</b> 	Tenant satisfaction surveys	Quarterly
	Annual Tenant Feedback Meeting and branch meeting with tenants (*)	Quarterly
	Trainings e.g. fire drills	Annually
	Communication and incident reporting via CENTRAL PATTANA Serve application	24/7
	Online complaints channels (*)	
<b>Employees</b> 	Online surveys (*) <ul style="list-style-type: none"> <li>CG Individual Assessment (organization-wide)</li> <li>Human Right Impact Assessment</li> <li>360 Manager Performance Reviews (organization-wide)</li> <li>People Voice surveys</li> </ul>	Annually Biennially Biannually Biannually
	Meetings (online, offline and/or hybrid) (*) <ul style="list-style-type: none"> <li>C-Suite: Annual Management Conference</li> <li>Middle Management: Management Information Meeting</li> <li>Branch-, function-and division-level meetings: Communication Day</li> <li>Town Hall, with both in-person participants and virtual attendees</li> </ul>	Annually



Stakeholder Group	Engagement Platforms (*)	Frequency
	Online and offline trainings	According to the timelines
	Employee activities such as volunteering and Community Day	According to the work plans
	Communication via Workplace and Workchat applications (*)	24/7
	Online complaints channels (*)	
<b>Suppliers and Business Partners</b> 	Pre-qualification screening Evaluation after delivery of goods and services Re-evaluation of suppliers	Annually
	Meetings and trainings	According to the timelines
	Online complaints channels (*)	24/7
<b>Communities / Community Representatives including Regulators and Government, Academia and Independent Bodies</b> 	Community relief and support (*)	At the start of every new and renovated project
	Community relief and support (*) Donation of retail and commercial spaces for community use Volunteer activities with local communities	When a disaster occurs and according to the work plans
	Discussion meetings and listening sessions (*) on issues such as traffic management, waste management, energy management and greenhouse gas emissions and labor management	According to the timelines
	Online complaints channels (*)	24/7
<b>Shareholders</b> 	Annual General Meeting (AGM) / surveys / reporting and disclosures SET (The Stock Exchange of Thailand) Opportunity Day ESG Assessment	Quarterly / Annually
<b>Creditors</b> 	Opportunity Day (*) Company disclosures	Quarterly Annually
<b>Business Competitors</b> 	Annual meetings (at least twice a year) and group communication via social media on topics including government policy, safety and business sustainability	According to the timelines and 24/7 via social media

## 01

## Becoming the Center of Life

## Management Approach

1. Diversification and business ecosystem development
2. Creating 'Center of Life' by becoming retail-led mixed-use developer
3. Customer centricity in product and innovation development by delivering service excellence and prioritizing health and hygiene

## Progress in 2022

- Financial performance (For further detail, see Section 4 Management Discussion and Analysis)
- Established Shopper Net Promoter Score (NSP) as a key performance indicator and achieved an NSP score of 54 or 101% of our target



## 1. Diversification and Business Ecosystem Development

We remain focused on generating and driving sustainable long-term growth both for our business and shareholders and target to deliver a compound annual growth rate (CAGR) return of more than 10% over the five years from 2021. To achieve this, we strategically diversify our development and real estate management portfolios through:

## 1.1 Geographic and Property Type Diversification

Our property development and management strategy to deliver strong and consistent returns involves developing shopping centers first in high potential locations in the Bangkok metropolitan region and in the following years in provinces with strong growth potential that are best placed to become major hubs in their respective regions. This not only helps reduce concentration risk in our portfolio but also enables us to capitalize on growth opportunities and contribute to the economic prosperity of the regions where we operate. Our shopping center portfolio now comprises 16 shopping centers in Bangkok and its vicinity, 21 shopping centers in other provinces and one shopping center in Malaysia as well as 17 community malls and one joint venture project. Before developing a project, we conduct extensive research to identify the right location in a particular area that would be convenient for customers, tourists as well as those who visit our buildings. To become the "Center of Life" for people of all ages, our shopping centers provide a wide range of products and services complete with a full spectrum of spaces and activities that anticipate and respond to changing consumer needs and lifestyles. When designing our shopping centers, we seek to showcase a unique aspect of the location

by integrating architectural features that celebrate local culture into our properties to achieve a harmonious blend with the surrounding environment. It is our way of honoring the rich heritage of the communities where we operate and fostering a sense of local pride, while also helping to attract more visitors to these provinces and contributing to the prosperity of Thailand through job creation and economic growth. This will, in turn, create long-term value for our stakeholders and enable us to deliver on our vision to be the region's leading real estate developer and achieve sustainable long-term growth. In recent years, we have expanded our business to other fast-growing countries in Southeast Asia such as Malaysia and Vietnam as part of the strategy to create a more resilient portfolio and reduce dependence on the domestic market.

In addition, we continue to progress our development pipeline under our Retail-led Mixed-Use Development strategy, which includes shopping centers, residences, office buildings and hotels to add more value to our shopping center operations, which is our core business, and maximize land uses and synergistic ecosystem. Since 2016, we have been developing residential projects that offer a wide spectrum of modern amenities and facilities on the same properties

as our shopping centers or in neighboring areas to meet our customer needs and lifestyles. So far, 28 residences, comprising 19 vertical projects, such as condominiums, and nine horizontal projects, which include single detached houses, twin houses and townhomes, have been launched with positive feedback from our customers. Ongoing plans are in place to roll out new residential projects every year and explore opportunities to invest in other types of properties.

#### Case Study 2022

- In 2022, we launched a new shopping center Central Chanthaburi, which has since become a new landmark in the province. The Baht 3,500 mn project is the most comprehensive mixed-use development in the eastern region, packed with a shopping center, a convention hall, a condominium and a hotel. It utilizes a semi-outdoor design that includes a four-rai of green space featuring a running track, bike parking stations, outdoor fitness equipment, a social park, a family playground, a pet playground and a café. With a large multi-purpose area of 4,000 sqm, the project is home to our first Sport Destination outside of the Bangkok metropolitan region.
- We continue to execute on our 5-year plan to invest Baht 10,000 mn in hotel expansion and develop 37 hotel projects in 27 provinces with a focus on elevating hotel experience and standards and pioneering a travel ecosystem that serves travelers of all types including leisure, business and work. We expect these projects would generate a total of 3,900 jobs, while contributing to local economic growth. Our partnership with Centara Hotels & Resorts provides an unmatched variety of travel experiences for all types of travelers, delivered to the international standards, under three brands:
  - 1) 'Centara,' an upscale brand piloted by the newly-opened Centara Korat, an all-in-one leisure and lifestyle destination that aims to be the best hotel and top dining spot in Korat for multi-generational families as well as business travelers. The hotel offers modern spaces and fully-equipped facilities for MICE events. Visitors can enjoy international buffets that will delight all generations of diners

at House of Kin, a contemporary all-day dining restaurant, or a la carte menus with stunning views of Korat cityscape at our rooftop restaurants or have a fun day out shopping at Central Korat.

- 2) 'Centara One,' a lifestyle brand targeting travelers in the midscale segment
- 3) 'Go! Hotel,' a premium budget offering that will open locations in Nakhon Ratchasima, Ubon Ratchathani, Ayutthaya, Rayong, Si Racha, Chon Buri and Chiang Rai, for example. The GO! Hotel Bowin, located next to the shopping center Robinson Lifestyle Bowin, was launched in December 2022.

- During the year, we have made significant progress growing our residential development business with six new projects launched under the concept of "Central Homes" aiming to generate Baht 5,500 mn in sales and Baht 3,000 mn in revenue. They include four ESCENT condominiums in Surat Thani, Suphan Buri, Chachoengsao and Trang, and two horizontal projects, NINYA Ratchaphruek and NIRATI Chiangmai.



## 1.2 Joint Ventures and Mergers and Acquisitions

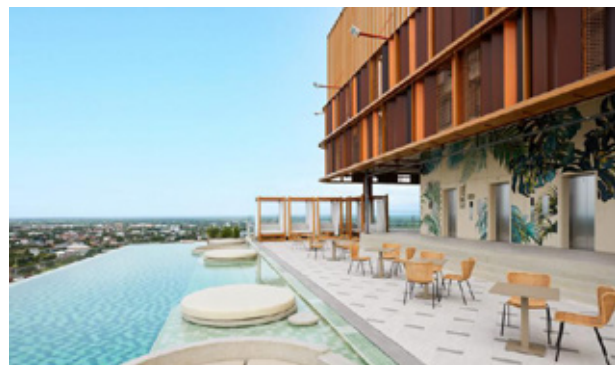
In addition to developing, owning and managing properties as one individual proprietor, Central Pattana continues to pursue various investment opportunities by entering into joint ventures and partnerships with our business partners, which allows for additional resources, knowledge and expertise to be spread across businesses.

### Case Study 2022

- In 2022, we have embarked on a partnership with ASEAN's top logistics and supply chain solutions service provider JWD and STORE IT! MANAGEMENT PTE. LTD, Singapore's leading self-storage company, to expand into the self-storage service business, investing over Baht 100 mn to acquire a 30% stake in JWD Store It!. By leveraging our combined expertise, the self-storage service caters to a wide range of users from condominium residents and hotel guests to B2B customers such as tenants across our shopping center and office portfolios that need more space to store inventory or equipment, enabling better supply chain operations and enhancing tenant capacity to grow and expand with us.
- We continue to progress our development of Central Village, a 70:30 joint venture with Mitsubishi Estate Asia (MEA) to deliver a world-class luxury outlet shopping experience and become Southeast Asia's top luxury outlet. In addition to launching Phase Two of the project in January 2022, we are also exploring opportunities to develop a luxury outlet in a new tourist spot. The design of the second phase of Central Village follows the original concept of 'Thai modern,' taking inspiration from the Thai way of life, arts and culture to attract consumers across three segments:
  - Families by expanding offerings of Japanese brands and services by 15%-20% and adding a full-scale playground, a pet park for pet owner community and Japanese-style cafes and tea rooms to broaden our customer reach
  - Wealth by organizing activities such as supercar meetings to attract customers with high purchasing power and big spenders at Central shopping

centers across the country and enhancing our CRM to optimize customer experience

- Sport Lifestyle by developing more sport destinations for people who enjoy playing sports starting with skateboarding enthusiasts and adding new brands and stores including specialty running store Rev-Runner, outdoor gear and camping equipment store Columbia Sportswear and others such as bike shops, golf shops and running shops as well as a skate park





## 2. Creating 'Center of Life' by Becoming Retail-led Mixed-Use Developer

At Central Pattana, we have prioritized our focus on serving the diverse needs of our broad-ranging customers to deliver a superior customer experience with utmost comfort and convenience by progressing our retail-led mixed-use developments with Central shopping centers serving as the anchor stores. Each project features a blend of retail, hotel, residential and office as well as curates tailored promotional events and activities that appeal to different groups of customers who visit our properties or destinations. Eight types of destinations available across our developments are:



1

### Family Destination

a destination and services for families



5

### Pet Destination

a destination for pet owners and animal lovers



2

### Food Destination

a dining destination



6

### Sport Destination

a destination for sports and e-sports fans and health and fitness enthusiasts



3

### Fashion Destination

a destination for every lover of styles



7

### Tourist Destination

a destination for tourists, both Thais and internationals



4

### Lifestyle Destination

a destination for emerging consumer lifestyle trends such as health and wellness



8

### Center of Community

flexible, adaptable spaces that can be used for several community purposes such as health and wellbeing, medical and healthcare, charitable causes and education.

## Four Key Elements of Central Pattana Mixed-Use Development

### Shopping Centers

Creating shopping and living spaces and activity spaces for people and communities



#### Progress in 2022

This year, we launched one new development project, Central Chanthaburi. The Baht 3,500 mn development is the most comprehensive mixed-use development in the eastern region and since its opening the shopping center has become a new landmark in the province.

We also completed the Baht 1,200 mn renovation of Central Rama 2, updating the shopping center with a fresh look of 'The New Urbanist.'





## Offices

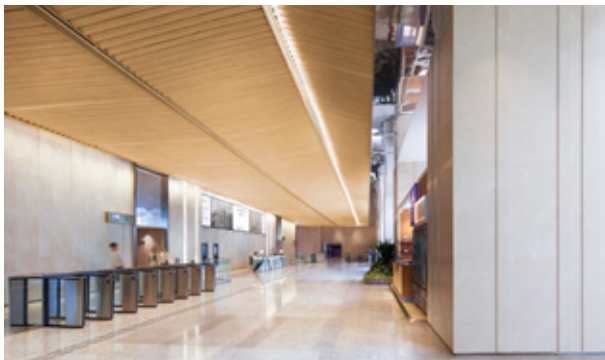
Creating modern and convenient workspaces for workers



### Progress in 2022

We implemented upgrades to centralwOrld Offices to better meet the changing needs and lifestyles of our workers. These included installation of smart lift and gate systems, rollout of co-working spaces and a wider mix of retail and restaurants to increase healthy offerings and launch of sustainable waste management initiatives.

Grand Canal Land Plc. (GLAND), of which Central Pattana is a major shareholder, has entered into an agreement with Huawei Technologies (Thailand) Co. Ltd. to develop smart offices and digital spaces that support future workspace needs, by harness the full power of the information and communications technology and the Internet of Things in real estate development.



## Residences

Accelerating horizontal and vertical residential developments to deliver superior community experience for our residents



### Progress in 2022

We continued to progress our residence development pipeline using our expertise to deliver residential properties that offer quality living and lifestyle. This year, we launched six new projects under the concept of “Central Homes.” These included four condominiums: ESCENT VILLE Surat Thani, ESCENT VILLE Suphan Buri, ESCENT VILLE Chachoengsao and ESCENT Trang, and two horizontal projects, NINYA Ratchaphruek and NIRATI Chiangmai.



## Hotels

Evolving our hotel business by elevating hotel experience and standards and pioneering a travel ecosystem that serves travelers of all types including leisure, business and work to drive local economic growth



### Progress in 2022

We launched Centara Korat, an all-in-one leisure and lifestyle destination that aims to be the best hotel and top dining spot in Korat for multi-generational families as well as business travelers. The hotel offers modern spaces and fully-equipped facilities for MICE events and diverse dining experiences from international buffets that will delight all generations of diners at House of Kin, a contemporary all-day dining restaurant, to savoring a panoramic view of Korat at the rooftop restaurants. Hotel guests, who are The 1 members, will receive special privileges that include discounts on food and beverages when dining at any restaurants at Centara hotels. They can also transfer The1 points to CentaraThe1 via The 1 Application to pay for their stay.





### 3. Customer Centricity in Product and Innovation Development by Delivering Service Excellence and Prioritizing Health and Hygiene

Central Pattana maintains our focus on service excellence by driving continuous improvement throughout the operations. In 2022, we shifted from Customer Satisfaction Score to Net Promoter Score (NPS), a globally recognized customer experience method used by many of the world's leading companies, as a new metric to measure where we stand with our customers. The standard NPS formula is to subtract the percentage of promoters (scores of 9-10) by the percentage of detractors (scores of 0-6). This year, our market research team conducted two NPS surveys via online.

We also continue to make progress on the planning and delivery of our services on many fronts. Below are the issues that our customers have prioritized in the surveys:

#### 3.1 Commuting

This includes parking facilities, traffic convenience and traffic and safety management inside the parking facilities. This year, we continued the implementation of our plan as follows:

- 1) Reduce time spent at the entrances/exits and the areas around our shopping centers. We continue to coordinate and integrate our traffic management plans with local traffic police and traffic volunteers to reduce congestion and facilitate a smoother flow of traffic at our parking entrances/exits during peak periods. More digital display stands to show real-time traffic conditions outside our buildings have also been installed to help customers make informed decisions.
- 2) Quick and easy ticketing through the implementation of the automated car park ticketing system and License Plate Recognition (LPR). The initiative has helped reduce the amount of time spent at the entrance and exit points to just eight seconds. Last year, we rolled out the integration with Cashless Payment Parking and piloted it in two projects, centralwOrld and Central Ladprao. The initiative has

since been expanded to seven more projects in Bangkok and Phuket. Before leaving, customers can check and pay their parking fees using their mobile devices. There are three payment options available: mobile banking, payment via True Money Wallet and Dolfin at self-service kiosks, and cash at information counters in the shopping centers. If a customer needs assistance, they can press the SOS button on the parking ticket machine at the entrance and exit.

- 3) Ready assistance and support via 'QR Smart Help+' service, the country's first customer assistance and support system in parking facilities. With the launch of the initiative, we want to offer both safety and convenience to our customers when calling for emergency assistance. The development of the service was informed by the insights discovered from customer feedback regarding common parking-related issues they face such as unable to find their parked vehicle, getting blocked or boxed in, forgetting the exit and vehicle breakdown. The service has been available at 37 Central shopping centers nationwide since November 2022.

## 4) Parking Facilities Management, Transport Services and Other Related Services



Priority parking  
**919**  
 slots  
 available at all  
 projects



Lady parking  
**319**  
 slots  
 available at  
 5 projects



Family parking  
 (for parents with prams)  
**229**  
 slots available at  
 30 projects



Carpool parking  
 (for vehicles carrying  
 more than 4 passengers)  
**24**  
 slots available at 1 project



EV charger parking  
**331**  
 slots available at  
 24 projects



Supercar parking  
**325**  
 slots available at  
 35 projects



Big bike parking  
**546**  
 slots available at  
 23 projects



Bicycle parking  
**5,870**  
 slots available at  
 25 projects

- Intelligence parking : 26,614 slots available at 10 projects
- Transport hub : Available at 26 projects
- Shuttle bus : Available at 8 projects
- Delivery parking : Available at all projects
- Taxi service for elderly : Available at 4 projects including centralwOrld, Central Bangna, Central Chiangmai and Central Phitsanulok
- Cashless payment parking : Available at 4 projects including centralwOrld, Central Ladprao, Central Rama 9, Central Rama 3, Central Rama 2, Central Bangna and Central Phuket





### 3.2 Services and Amenities

This encompasses services and amenities that are available at our shopping centers designed to enhance customer comfort and convenience during their time with us as well as signage in locations across our portfolio, services provided by our staff and safety and health equipment and systems.

#### 1) Services and amenities that are available to shopping center customers

##### Families and People with Special Needs



Nursing room

**101**

rooms available at 34 projects



Baby changing room/station

**460**

rooms/stations available at 34 projects



Kid's restroom

**194**

rooms available at 34 projects



Baby stroller

**315**

strollers available at 36 projects



Kiddy car

**655**

kiddy cars available at 36 projects



Wheelchair

**458**

wheelchairs available at 28 projects



Happy Train

**26**

happy trains available at 25 projects



Pet stroller

**91**

strollers available at 6 projects



Accessible restroom

**341**

rooms available at 37 projects



Kids' Corner in Food Park

**27**

available at 25 Food Parks that are managed by Central Pattana



Playground

**40**

playgrounds available at 28 projects

##### Tourists



Group tour counter Available at

**6**

projects



Tourist information center Available at

**7**

projects

VAT refund for tourists is available at centralwOrld and Central Village.



Luggage storage and delivery (paid/non-paid service)

**9**

centers available at 7 projects

##### Others



Muslim prayer room

**20**

rooms available at 20 projects



Rest area

**72**

spots available at 14 projects



Work area with power outlets

**64**

spots available at 32 projects



Free wifi Available at

**10**

projects



Charging station

**12**

stations available at 6 projects



Power Bank rental

**120**

units available at 37 projects



International Concierge Service

**36**

projects

2) Service Standards Our quality management systems are guided by our service philosophy “Service with the Heart” and aligned with ISO 9001 Quality Management System (QMS) with ensuring continuous improvement and quality service, increasing customer satisfaction and reducing complaints and recurring issues continuing to be our primary focus. Service standards improvements across 36 projects and other initiatives we have implemented this year included:

- Enhancing service standards under “Service with the Heart” philosophy with a focus on communication, training, inspection, and appreciation and recognition. We utilize procedures and channels in the workplace that are best for engaging with each team. Morning briefings are held daily between customer relations employees and outsource workers in which we reinforce, among other things, the company service standards - greet, smile and be respectful when speaking and interacting with customers; expected standards of dress and appearance; customer service do’s and don’ts - appropriate and inappropriate behavior towards customers; how to handle and resolve simple complaints on the spot, which include role-play scenarios that allow workers to prepare for potential customer questions and problems; honest customer service through the program “Found and Returned”; and tracking real-time restroom feedback from customers through QR codes. The briefings are also
- an opportunity for the staff to review and keep up to date with ongoing marketing campaigns in the shopping centers and promotion spaces as well as newly rolled out services such as EV Charging Stations.
- Implementing Central's Hygiene and Safety Master Plan, which was established during the COVID-19 pandemic. As the situation evolves, we continue to adjust our health and safety measures and keep in place those that do not inconvenience our customers. These include protective shields to facilitate social distancing at Information Counters, UV-C fixtures for Air Handling Units (AHU) and touchless lifts and automatic handrail sterilizers.
  - Adopting ISO 20121 Event Sustainability Management System in the management of our multipurpose convention halls to support Thailand's national strategic plan to raise the Thai MICE (Meeting Incentives Conventions Exhibitions) industry standards. To date, nine of our 13 convention halls have been submitted for ISO 20121 certification; and nine meeting rooms, four exhibition venues and five special event venues for certification under the Thailand MICE Venue Standard (TMVS) from the Thailand Convention and Exhibition Bureau (TCEB). The TCEB certification's assessment components comprise Physical Component, Technology Component, Service Component and Sustainability Component. Two projects continue to maintain the ASEAN MICE Venue Standards (AMVS) certification.

### 3.3 Safety and Security

We use ISO 45001 Occupational Health and Safety as a framework to establish the safety objectives and targets and documentation standards pilot for five projects including Central Rama 3, Central Rama 9, Central Salaya, Central Eastville and Central Mahachai. At Central Pattana, the Safety, Occupational Health and Environment Committee is responsible for embedding a culture of safety and ensuring standards are consistently implemented across the company. We establish plans for daily site security management and incident response exercises and measure our safety performance by tracking the number of incidents recorded in our Smart Property system. These include incidents experienced by employees, contractors, customers or workers hired by our tenants. Progress is regularly reported together with matters related to safety and security to the Risk Management Committee and the People Development Committee. Under Development, we record and track incidents experienced by workers hired by our construction contractors separately with a safety goal set at zero fatalities. This year, we have also updated the incident response training to cover safety criteria, which is provided to relevant employees and workers including loss prevention officers and outsource workers such as security guards. Below are the safety and security procedures that we put in place:



- 1) Prevention Focusing on surveillance, we use the crime clock to identify patterns and allocate resources accordingly and deploy the 32 channel security systems across our portfolio. To date, we have completed the installation of 7,785 CCTV cameras in all projects and 2,044 Call Point Service in 31 projects.



- 2) Operation under the Color-Code Condition\* system to assess and determine the severity of the situation each month. The overall situation in 2022 remained largely Blue or Guarded except for the project in Hat Yai city, Songkhla province, which was Orange or High indicating that there were risks of explosive attack, terrorism and other threats. This year, we have enhanced our emergency response capabilities by integrating CCTV surveillance with incident response by the Emergency First Responder Team (EFRT) to improve security incident response speed and effectiveness, resulting in a faster response time of two minutes.



- 3) Employee Engagement - One of the essential topics that are reinforced at the daily morning briefings for loss prevention officers (LP) and security guards are safety and service standards under "Service with the Heart." These include the Five Knows of Service Best in Class - Know Your Area, Know Your Duty, Know Your Emergency Codes, Know Your Supervisor and Know How to Resolve Situation; remaining alert and watching for unusual activities such as damage or irregularity of equipment, ceilings, light bulbs, elevators and escalators; and being proactively helpful and ready to assist customers without having to be asked.

**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.

## 02

## Stakeholder Engagement

## Management Approach

1. Tenant management and development
2. Employee management and engagement
3. Supply chain management
4. Harnessing digital and technology \*

\* Progress made in harnessing digital and technology is reported across the 1-3 management approaches in the table above.

## Progress in 2022

- Established Shopper Net Promoter Score (NSP) as a key performance indicator and achieved an NSP score of 54% or 101% of our target.
- Established the score of employee engagement as a key performance indicator with a target of 95%. We achieved an overall employee engagement score of 76% in 2022.
- Established local supplier spend as a divisional key performance indicator. This year, we reached 71% of supplier spend from local businesses and entrepreneurs (excluding construction procurement).



## 1. Tenant Management and Development

## 1.1 Tenant Engagement

Central Pattana remains steadfast in our commitment to helping 15,000 businesses including SME operators, retail stores, manufacturers, distributors and service providers across our shopping centers navigate the ongoing economic impacts of the pandemic. Under our Tenant-Centric Business Partnership, we continue to focus on ensuring prompt and professional support and leveraging new platforms and services to create new sales opportunities that will generate sustained growth for our tenants and our shopping center business. Examples of our tenant relief and support programs include:

## 1) Liquidity boost

We continue to assist 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 and utilize 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 implement the Supply Chain Financing Program to help increase their cash flow and working capital and lower the interest rates on their loans.

## 2) Rental and revolving credit assistance

Since the start of the outbreak of COVID-19, we have been providing rent waivers to tenants as appropriate to the evolving situation. Central Pattana was the first business operator in the market to lower our rents and continues to do so. Reductions are adjusted based on actual circumstances including waivers in the case of temporary closure of shopping centers due to the government order. A flexible-leasing program is also being implemented to help our tenants expand their businesses to new projects such as Central Si Racha and Central Ayutthaya.

## 3) Tenant-Centric Marketing

We implement year-round marketing campaigns to help boost sales across the board by utilizing big data from The 1 database to develop Super Powerful CRM Marketing and partnering with companies under Central Group and stores in our shopping centers across the country to create new sales opportunities with big campaigns and big promotions under the "Thais Help Thais" project, which aims to stimulate the country's economy. In addition to collaborating with over 100 food influencers and bloggers to showcase delicious dishes from our tenants

and reaffirm our position as the absolute Food Destination, we also work with partners such as Shopee, Major, SF, Grab, AIS and other bank partners, to launch tailor-made marketing campaigns. Leading the way for safe shopping centers, we have offered spaces in our properties to serve as mass vaccination sites and launched the marketing campaign, “I’m Vaccinated” with offers and benefits from more than 100 partners to encourage COVID-19 vaccine uptake.

#### Case Study:

##### Fashion

##### Hermes Fit Bangkok at centralwOrld



was launched in March 2022 at centralwOrld under the concept “A free spirit” Hermès is more fun, contemporary and accessible.” As consumers are embracing healthier, more active lifestyles, we partnered with French luxury fashion house Hermès to bring a unique fitness-inspired pop-up to the heart of Bangkok with the debut of Hermès Fit in Southeast Asia.

##### Ghibli Exhibition “My Style My Ghibli”



was held from February to March 2022 at centralwOrld. The exhibition, held in collaboration with Studio Ghibli, Uniqlo Thailand and Central Pattana, was the first of its kind in Thailand and featured some of the studio’s most beloved works including the beloved classic animation My Neighbor Totoro and a photo spot with a life-sized replica of the famous Cat Bus to delight fans of ages.

##### Black Friday 2022



was held in November 2022 across 37 Central shopping centers. Joining the world’s biggest end-of-year retail sales event, we partnered with shops and stores to drive consumer spending with exclusive offers and deals from top international fashion brands and special promotions throughout our shopping centers - reaffirming our position as the ‘Lifestyle Destination.’



## Food and Beverage

### SCB Kin Khao Kun Mai



(Wanna Grab Something to Eat?) Summer 2022, an extension of SCB-Siam Commercial Bank's signature campaign, was held from March to May 2022 at centralwOrld and Central Rama 9, as part of the "Blooming Summer 2022" campaign to celebrate our 40th anniversary. Every shopping center was transformed into a flower garden to create memorable summer mall and dining experiences for our customers with up to 40% discount for dining at Michelin Star restaurants and popular restaurants from Thailand and around the world. The campaign, in partnership with SCB, which is one of the country's largest card issuers, aimed to help drive the country's economic recovery by supporting tenants and business operators and encouraging consumer spending in the post-COVID Thailand.

### AIS Chim Chan



was held from May to July 2022 at Central Chanthaburi, in partnership with Thailand's leading telecom operator Advanced Info Service Plc (AIS), which has the largest subscription share in the eastern region. Taking inspiration from Chanthaburi's symbol, 'Rabbit,' the food campaign was rolled out to celebrate the opening of Central Chanthaburi and highlight some of the food, drinks and other offerings to elevate the lifestyle of Chanthaburi residents. The campaign was promoted via online and offline channels of Central Chanthaburi and AIS, aimed at local residents and those in the neighboring provinces.

## LINE FRIENDS Special

### Collections Embracing Happiness 2023



was held from November 2022 to January 2023 across 37 shopping centers. Continuing with the theme of LINE FRIENDS, which decorated our shopping centers during the New Year celebrations, we collaborated with leading food brands to create the first-ever collections of Line Friends-inspired products with popular characters getting adorable makeovers and turning into different kinds of desserts, treats and drinks and limited-edition packages, available only at Central shopping centers.

### Specialty Electronics Pro Day



was held from September 2022 to January 2023 across all shopping centers nationwide. Reaffirming our position as the 'Innovative Lifestyle Destination,' the campaign offered deals and promotions with CRM support from The 1 on Mobile, IT & Gadget products from more than 700 shops and stores.

### “Bring Any Container for Popcorn”



at SF World Cinema, centralwOrld, was held on 28 November 2022. The first-ever event in Thailand went viral overnight as customers showed up with all sizes and types of containers to purchase an unlimited amount of popcorn for Baht 199 and free refills on soft drinks.

#### Leveraging new platforms and services

To boost sales and respond to changing consumer behavior, we have developed new platforms and services to provide worry-free omni channel customer experience. Tenants can join or co-create promotions with us through different channels such as The 1 Unlimited point system, Chat & Shop and Credit Card Month program. Additional services we have rolled out include Take-Away Food Destination, which allows customers to order quick and convenient takeaways from over 300 restaurants; and delivery services such as GrabFood and Drive-Thru Pick-Up, which are available at all shopping centers.

The application, CentralPattana 'Serve,' has also been enhanced with improved mobile and tablet user experience to further facilitate tenant service under the concept, “Self-Service, Anywhere, Any Time – All in One.” Through the application, tenants can, among others, submit maintenance requests, manage their rent contracts, make rent payment online and use CRM services. To date, the application adoption rate among tenants is 94% with 87% of the users interacting with the app on a regular basis, however, is slightly below our target. In 2022, we have added the new function “Coupon” to the application to help generate more sales opportunities for our tenants. This enables our tenants to create and join co-marketing campaigns with us as well as their business partners. With the success of the SERVE application rollout, we have expanded the use of the application to the Offices business unit managed by Central Pattana and our subsidiaries such as GLAND.

### 1.2 Tenant Development

In the 40 years of Central Pattana, our tenant centric focus has provided a strong platform for creating sustained value for our business and partners. Many of our tenants and business partners have now been listed on the stock exchange, ventured into new markets or rapidly expanded and scaled up their operations, while e-commerce retailers that started out online are opening physical outlets at our shopping centers to provide seamless customer experience. With the goal of enhancing the capabilities and competitiveness of our tenants, our tenant development plan focuses on:

#### 1) Modern Trade Training and Development

Under the LEAD program, we partnered with Thammasat University to enhance our modern trade training course that has empowered more than 150 small and medium-sized enterprises with the skills needed to build sustainable and profitable businesses. Now in its fourth year, the program has seen more than half of the graduates successfully grow and scale up their operations, opening new locations and expanding with our shopping center business. Apart from hands-on mentoring by Central Pattana, we also held the “LEAD Pop-up Market” at centralwOrld in September 2022 giving the fourth batch of LEAD graduates an opportunity to open their own shops and showcase their learnings and creative collaborations with fellow classmates. This year, we updated the course to include sustainable business as one of the key topics to



encourage new generations of entrepreneurs to embrace sustainability, which is an increasingly important issue for consumers and the global market.

Below are the brands that were crowned the winners of the LEAD Batch 4 Pitch Competition:

- Salapao Kooan - New Concept Store for Business Growth category for the proposal to expand its business with a new brand Rongcha Chongdee
- Moreover - Partnership & Collaboration for Business Growth category
- Nineties Design - Omni Brand & Omni Channel for Business Growth category
- Tempered - Omni Sustainability for business & Community category
- Amatas - Supply chain Management & Scalable for Business Growth category

## 2) Retail Academy

This workshop-based training aims 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. Retail Academy primarily targets small local business operators who only have time to attend courses that take no longer than one or two days. It is conducted in a group of 100-300 people and held in every region. After completing 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. This year, the training was held in December at Bangkok Convention Center, Central Ladprao, and, for the first time, livestreamed to 37 shopping centers across the country.

## 3) Enhancing tenant competitiveness

We remain focused on helping our tenants make the most out of our CRM application The 1 Biz, which has been developed in collaboration with The 1, a company under Central Group that has over 15 years of expertise in Established Database, to gain a competitive advantage with a customer champion approach. The application enables our tenants to utilize big data analytics without having to make substantial investments to build their own CRM systems. With The 1 Biz, our tenants can learn about their customers and use the data to develop targeted marketing strategies that meet customer needs as well as track performance and see tangible results, which, in turn, would allow our tenants to foster enduring relationships with customers and prospects.

This year, we supported small and local entrepreneurs to operate 5,375 modern trade stores, which was 10% higher than in 2021 or 12% when measured against the total retail space allocated to small and local entrepreneurs. (This figure includes data of stores operated by the same brands but excludes new tenants or those whose contracts ended at 31 December 2022.) We attribute the increase to several factors including the continued execution of action plans under Central Pattana's Sustainability Strategy to support small businesses with potential that offer unique products but may have limited experience, knowledge and funds.





## 2. Employee Management and Engagement

Central Pattana aims to be an organization that not only creates 'opportunities' for people, cities and Thailand but also raises the competitiveness of Thai real estate and retail industries globally to imagine better futures for all. As an equal opportunity employer, we are committed to hiring locally to help drive rural prosperity and improve residents' quality of life. No person will be excluded from consideration for employment because of physical appearance and conditions or disabilities. At Central Pattana, we cultivate a workforce of global citizens who value and respect human rights, diversity and equality and the environment and foster an open culture that makes it easy for our employees to innovate and bring their solutions to life. Our management approach to become an Employer of Choice is summarized below:

### 2.1 Prioritizing Human Rights and Employee Safety

#### 1) Respect for Human Rights

With our focus on employee wellbeing, respect for human rights and corporate governance has been embedded throughout our business, as summarized in Section 6.3 in the "Changes to Governance Policy, Procedure and Process" of the 2022 Annual Report. At Central Pattana, we strive to cultivate a safe and healthy work environment where everyone is treated equally and fairly and promote the human rights of our employees and stakeholders as well as remain vigilant in our efforts to make sure our business is not complicit in human rights violations by strictly complying with all applicable laws, rules and regulations and integrating human rights risk assessment into existing business systems and work processes as described in the table below:

Work process	Tools
Pre-merger, acquisition and joint venture study	Human Right Due Diligence (HRDD) carried out by Financial Management
On-site audit and inspection especially during construction phase	Random welfare and safety audits and inspections on construction sites carried out by third-party organizations and site managers to ensure human rights are respected
Pre-qualified vendor assessment and biannual vendor audits	Supplier sustainability assessment carried out by Purchasing/ Procurement
Organization-wide Human Rights Impact Assessment	Online survey on human rights for employees at all levels with avenues for relevant functions and departments to provide input from outsource's perspectives
Whistleblowing and complaint	Users can raise concerns on violations of human rights by selecting the item from the dropdown menu on our whistleblowing portal at: <a href="https://services.cpn.co.th/WhistleBlowerUser/register.aspx">https://services.cpn.co.th/WhistleBlowerUser/register.aspx</a>
Reporting on human rights complaints	Compile and investigate complaints and other grievances in accordance with the Company's complaint handling procedures. Refer to "Reporting on Complaints" under 8. Corporate Governance Report section in our annual report for more information.

The human right risks identified as part of the human rights due diligence we conducted along the whole value chain in 2021-22 informed our plans for reducing and mitigating adverse impacts from human rights violations that occur within the Company as summarized in the table below:

2022 Human Rights Mitigation Plan	Progress in 2022
1) Right to safe and nonthreatening workplace	<ul style="list-style-type: none"> <li>• Included air and water quality testing for employees and outsource workers on the workplace inspection checklist.</li> <li>• Developed a guide for handling verbal and physical harassment by customers complete with details on remediation for employees in service functions including outsource workers.</li> </ul>
2) Aligning with international human rights standards	<ul style="list-style-type: none"> <li>• Reviewed human rights frameworks and guidelines that are established by UN entities such as UN Women, WEPS Awards and UNDP.</li> <li>• Provided the Corporate Governance and Sustainable Development Committee with updates on complaints in progress and disclosed details as appropriate. In 2022, Central Pattana received two complaints concerning human rights issues, which accounted for 3% of the total complaints. Both have been handled and resolved.</li> <li>• Completed the 2022-23 Human Rights Impact Assessment. The outcomes will help inform us when we develop our mitigation plan 2023-24.</li> </ul>
3) Evolving procedures on employee management on the basis of equity and equality	<ul style="list-style-type: none"> <li>• Undertook a review of employee benefit packages to increase some of the offerings to be higher than the legal requirements and mobilized sub-working groups to advocate for the changes.</li> <li>• Expanded flexible work arrangements company-wide.</li> <li>• Encouraged employees to work remotely at least once a week.</li> <li>• Rolled out the application Time Attendance Mobile to enable employees to record and manage their attendance when working remotely.</li> <li>• Expanded employee health benefits to include coverage for mental health and office syndrome.</li> <li>• Expanded the Your Choice Your Protection program to offer employees more health insurance options including family coverage.</li> <li>• Target to achieve a gender balanced workforce, with 50:50 ratio of male and female employees. Establish salary ranges base on individual experience and professionalism regardless of their gender with a compensation market analysis carried out on an annual basis.</li> </ul>
4) Training on Human Rights	<ul style="list-style-type: none"> <li>• Launched a new training course “Non-threatening workplace: how to protect employees and their rights from harassment” on CneXt. As of 31 December 2022, 183 employees or 51% of the target of 362 have completed the training.</li> </ul>

## 2) Employee Safety

Central Pattana has a Safety and Occupational Health Policy, which is publicly available on our website at [www.centralpattana.co.th/en/sustainability/corporate-governance/policies-implementing-guidelines](http://www.centralpattana.co.th/en/sustainability/corporate-governance/policies-implementing-guidelines), and discloses the progress made in 2022 on our website at [www.centralpattana.co.th/storage/download/sustainability/reporting-library/en/2022-sustainability-performance-en.pdf](http://www.centralpattana.co.th/storage/download/sustainability/reporting-library/en/2022-sustainability-performance-en.pdf). We have established safety and occupational health issues as one of our operational risk indicators and fully integrated the safety risk assessment with our human rights risk assessment process as described in the table above. We have also expanded the process to cover the receipt of goods and services and target to achieve zero fatalities in construction sites.

We apply the ISO 45001 Occupational Health and Safety standards to our procedure for collecting and recording workplace incidents, which requires that all incidents whether experienced by customers, workers hired by our tenants, subcontractors or employees be reported and recorded into our Smart Property system, which would then send notifications to all relevant stakeholders. This is so that appropriate action can be taken to resolve the incidents in a timely manner with proper documentation throughout the process from occurrence to resolution and remediation to facilitate incident investigation and progress tracking, and help prevent recurrence of similar incidents.

### 2022 Progress on Safety, Occupational Health and Environment

Group	Details
Full-time employees	We recorded nine incidents in 2022, in which six considered as lost-time injuries, with most of them resulting from carelessness and attempts to avoid a bigger accident.
Contractors including construction and outsource	We recorded six incidents, which were caused by the negligence of workers and customers. Thorough investigations into the incidents were carried out, which helped to identify improvements to our procedures and processes to prevent recurrence of similar incidents. Regular safety inspections were conducted, and corrective actions implemented and tracked until completion, and reported to all relevant bodies.

Additionally, we have established 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 361 members - 165 members representing the employer and 196 members representing the employees – who represent

7% of the workforce (excluding contract employees). The corporate OSHC that provides oversight of the overall process is chaired by a C-Suite executive, while at the branch level general managers of the shopping centers serve as the committee chairs. Quarterly incident reports are provided to the Risk Management Committee and the Risk Policy Committee with updates on the number of recordable incidents.


## 2.2 Engaging Employees through Recruitment, Retention and Professional Development

Central Pattana believes in creating an equal, fair and inclusive workplace where good governance and human rights principles are respected and upheld, as disclosed in Chapter 7 “Corporate Governance Structure and Information About Board of Directors, Sub-committees, Management, Employees and Others” of the 2022 Annual Report. Our management approach to employee engagement is summarized below:

### 1) Recruitment and Retention

We are an equal opportunity employer and embed human rights and good governance principles into our recruitment process. This means we provide equal opportunities in employment for everyone without regard to gender, ethnicity or other differences. In 2022, we continue to make improvements to our recruitment process and manpower planning by utilizing the Human Resource Information System, “CneXt,” which allows us to automate and streamline the entire HR functions and processes across companies under Central Group, by rolling out people analytics and predictive analysis capabilities in the “Build & Buy” feature.

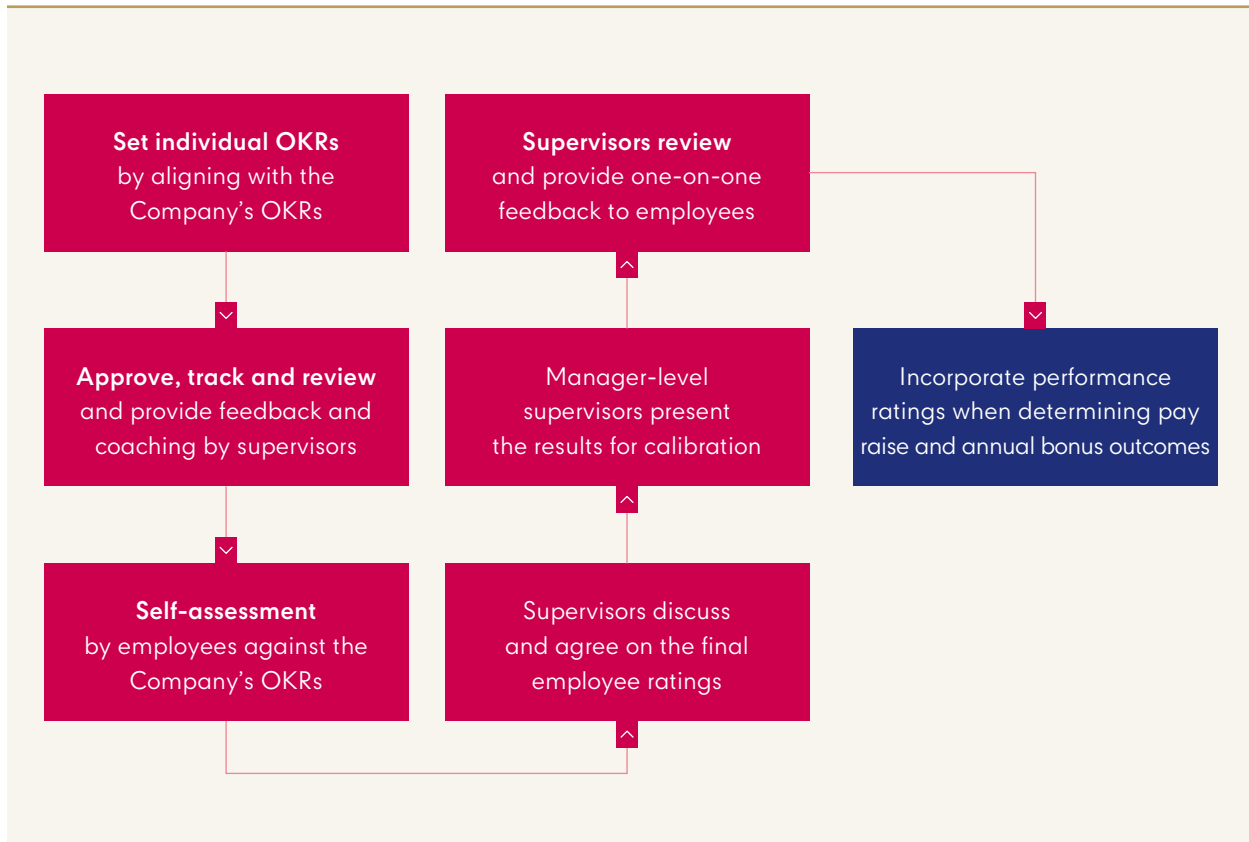
This year, we used the following channels for staff recruitment:

Recruitment Channel	Hiring Progress in 2022
Internal recruitment	
1) Opportunities for Internal Transfers program	1) 1,133 positions or 59% of all open vacancies were filled through internal recruiting.
2) “Extended Employment for Retiring Employees,” a program offering re-employment contract of 1-2 years on a case by case basis	2) In 2022, 5 employees participated in the program.
Recruitment within companies under Central Group	
3) “Transfer Within Central Group,” a program that allows employees to transfer between Central Pattana and other companies under Central Group, with their years of service transferred to the new positions	3) 32 employees submitted a transfer request. Of these, ten moved to companies under Central Group and 22 moved to Central Pattana accounting for 31% and 69% of total employee transfers, respectively.
4) Central Group Management Associate (MA), which is now in its twelfth year	4) In 2022, three employees or 8% of all MAs participated in job rotation with Central Pattana.
5) Online and social media including through recruitment agencies and our own recruitment portal at  <a href="https://jobboard.central.tech/">https://jobboard.central.tech/</a> <a href="http://www.centralpattana.co.th/en/job-opportunity">www.centralpattana.co.th/en/job-opportunity</a>	5) 779 of open positions were filled with the recruitment costs reduced by 1.4% compared to 2022 and a reduction of 53% in the cost-per-hire

## 2) Employee Retention and Management

### • Employee Performance Review

In 2022, Central Pattana uses the goal-setting framework Objectives and Key Results (OKRs) for the performance review of employees at all levels. The six-step process is described below.



The finalized OKR scores are used to determine pay raise and annual bonus outcomes and assessed together with the results across three other areas of the evaluation - core competency, leadership competency and Individual Development Goal (IDP) - for promotion consideration and development of individual development plans in the following year.

### • Improving work environment and benefits

Where appropriate, we continue to implement Work from Home (WFH) and hybrid work arrangements reducing on-site days from 5 to 4 days a week for some functions and departments. Under the "Smart office" initiative, we

have upgraded our office design and workspace to better fit our employees' needs and their work functions as well as changing lifestyles, while enhancing occupational safety and health. With virtual meetings becoming a part of the day to day work life, we have rolled out an online system for meeting room booking so that our employees can join and organize a meeting from anywhere. In addition, we offer part-time opportunities for those who are on re-employment contracts and evolve our Special Leave Policy, which now includes special leave for employees who need to care for a family member or make arrangements for and attend the funeral of an immediate family member, for instance.

- **Building Strong Corporate Culture**

Our corporate culture is underpinned by our strategy to become the 'Center of Life' for everyone and every community where we operate by connecting 'People' - individuals and communities who are drivers of change and 'Planet' - the world and environment. With our belief that development, people and a healthy and sustainable environment go hand in hand, we concentrate our focus on transforming Central Pattana into a positivity and impact-driven organization that creates positive change for employees, communities and the environment and fostering a high-performance culture in which employees work efficiently and effectively and are productive members of their community and society and responsible global citizens.

Our four beliefs define the qualities and behaviors expected of all Central Pattana employees, which are instilled through awareness activities and internal communications as well as actions and experience sharing by fellow employees and management from C-suite executives to middle and operations managers, under two key programs:

- **Beliefs in Stories:** Learning and understanding our core beliefs through watching in-depth interviews with management and seasoned employees, which are part of our internal training resources or video clips for external distribution within Central Group and on national platforms. Other platforms for engagement include Communication Day, a branch-level activity with the managing director of each project acting as the champion for change and communication, and Town Halls, which are held at the functional and corporate levels featuring the top executive of each function and our CEO as champions for change sharing their stories and experiences.
- **Beliefs in Actions:** Employees sharing and discussing hands-on experiences from their participation in

activities and campaigns held by Central Pattana throughout the year that embody our four beliefs:

1) Customer Champion Through "Customer Day," employees gain first-hand experience from spending one day working in one of the customer service roles such as customer relations; 2) Dynamism Through "Power of Dream," employees can explore new ideas and turn them into pilots helping to drive continuous innovation throughout the Company; and 3) Community at Heart Through "Community Day," employees can choose a mission or volunteer opportunity to support a community, social and environmental cause of their choice. They can work with employees from other departments or organizations to organize group activities or join individual ones such as donating blood and serving as non-medical volunteers at vaccination centers. (For further information, refer to the Corporate Social Responsibility section.)

- **Measuring Employee Engagement**

Central Pattana uses our "People Voice" survey, which has been designed based on Kincentric's Employer of Choice methodology, to get a better understanding of our employees' needs and wants. In 2022, two online surveys were conducted in which 93% of our employees took part. They revealed an overall employee engagement score of 76%, which is 2% lower than in 2021. The survey results and factors influencing employee engagement will be analyzed and incorporated into action plans to lift engagement established by management teams.

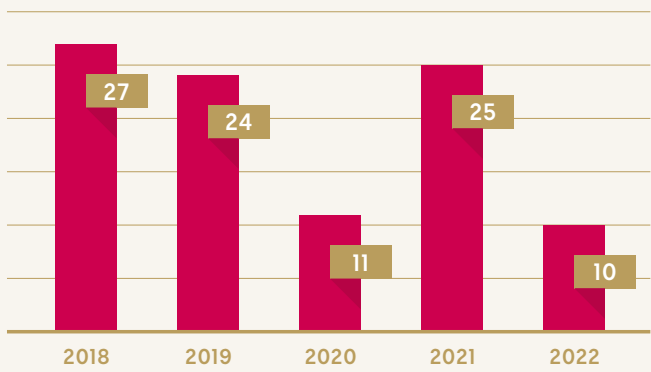
For the second consecutive year, Central Pattana won the Kincentric Best Employers Thailand Awards 2022, which measures organizations against four people factors critical to success: High Employee Engagement, Agile Working Environment, Engaging Leadership and Strong Talent Focus, alongside 11 leading organizations in the country.

### 3) People Development

Our approach to people development comprises two dimensions - leadership development and succession, and employee development to enhance our capability to respond to change and attract talent in the labor market.

Leadership Development	Progress in 2022
<p>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 seventh year, has been further improved in 2022. As part of their training, GM trainees now have to undertake a special work assignment for which they will be evaluated.</p>	<p>This year, we welcomed eight GM Trainees. Of these, six were internally recruited and two were recruited from companies under Central Group.</p> <p>As a training program designed to prepare future leaders to help drive and support Central Pattana's growth and expansion, we plan to continue implementing GM Trainee in 2023.</p>
<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 2022, 77% of target employees (2,230 out of 2,891 employees) attended the training. Additionally, five 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>

Leadership Development	Progress in 2022
<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 97% of target employees took part in the program (474 out of 485 employees). We tracked individual progress on a quarterly basis. In 2022, we offered different forms of development opportunities to our employees including Leadership and Business Management program, Functional Development Program through action learning and expert sharing platform.</p>

People Development	Progress in 2022												
<p>70:20:10 Model with emphasis on completeness, accuracy and reliability of data in line with the Management by Fact approach</p>	<p>We continued to use e-learning as our primary platform for employee training. Of the 390 training courses provided to our employees, 93 were online courses, which focused on equipping new skills and preparing our employees to faster adapt to changes in an agile environment.</p> <p>Our training evaluation surveys showed that 87% of employees were satisfied with the training they received (lower than in 2021). This year, our employees, on average, received 10 hours of training per year (lower than in 2021), in accordance with the plan, which prioritized on-the-job learning.</p>  <table border="1"> <thead> <tr> <th>Year</th> <th>Training Hours per Employee</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>27</td> </tr> <tr> <td>2019</td> <td>24</td> </tr> <tr> <td>2020</td> <td>11</td> </tr> <tr> <td>2021</td> <td>25</td> </tr> <tr> <td>2022</td> <td>10</td> </tr> </tbody> </table>	Year	Training Hours per Employee	2018	27	2019	24	2020	11	2021	25	2022	10
Year	Training Hours per Employee												
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2020	11												
2021	25												
2022	10												



People Development	Progress in 2022
<p><b>Functional Competency</b></p> <p>We set out capabilities for each function and develop a training roadmap accordingly, which include training courses for each unit and job role and perform regular monitoring and evaluation.</p>	<p>We executed our plan to develop the Functional Competency frameworks for three core frontline functions, which were used in this year's performance review. The outcomes are being finalized and will be incorporated into employee professional development plans in the following year.</p> <p>In addition, we have also completed the Functional Competency framework for one more function, Excellence and Sustainable Development, for 16 job roles, with individual development plans and training courses defined after the performance review is done.</p>
<p>Skills and ethics training under Central Pattana's core beliefs 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; basic and advance firefighting- which were attended by 735 people (include those attending more than one activity); and environmental management courses - ISO 14001 internal auditor training; and wastewater treatment training - which were attended by 143 people (include those attending more than one activity).</p>
<p>Educational Grant Program under the "Grants for Master's Degrees, Skills of the Future," program. The grants are awarded to employees who meet the qualification as follow</p> <ul style="list-style-type: none"> <li>- have at least two years of service</li> <li>- have received a B or above level rating in consecutive years</li> <li>- able to manage time between full-time work and studying for a master's degree</li> </ul>	<p>To date, the program has awarded educational grants to 22 employees with 12 employees already graduated, eight employees still completing their degree and two employees preparing for an admissions test. Five of these employees are Talent.</p> <p>The program prioritizes disciplines such as 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 special degree programs under the Executive Program.</p> <p>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.</p>



## 2.3 Impact and Innovation-Driven








“Dynamism,” one of Central Pattana’s core beliefs, supports and guides how we innovate and harness new technologies to improve internal process efficiency and facilitate a more agile people management approach.

In 2022, we continued to enhance our Human Resource Information System “CneXt,” a software solution that provides real-time and self-service human resource management on both desktop and mobile devices. The system currently supports the following human resource functions:

- Time and Attendance Management enables employees to track leave of absence and time attendance in accordance with their chosen work arrangement including Flexible Hours and Work from Home.
- Benefits Administration enables employees to access and manage benefits and perks offered at each job level such as health and dental insurance, health check-ups, travel expenses, mobile and internet stipends, children’s tuitions and health insurance for family members.
- Internal and External Recruitment enables recruiters from the business units and functions and Recruitment to streamline the sourcing process by working directly with recruitment agencies and candidates from start to finish from submitting a request, candidate selection and interview to announcement and hiring. Employees can also explore job opportunities within Central Pattana and Central Group on job boards and make appropriate onboarding plans.
- Training and Development enables employees to sign up for a training session, take a class online, evaluate the courses they have completed and track their training records, which are also linked to individual development plans. For supervisors, they can monitor their team’s training progress, manage training approval requests, engage in evaluation of the On-the-Job Training program and track progress against individual development plans.
- Performance Management allows for setting and approving individual goals and objectives, performance tracking and review by employees and their supervisors and calibration as well as probation review, offboarding and exit interview.
- Additionally, employees can request their personal files such as payslips, income tax payment certificates and letters of employment, receive training notifications, engage in 360 performance reviews and calibration, and conduct performance evaluations and interview evaluations, for instance.

Other upgrades include linking the information systems to the cloud; implementation of e-workflow to support remote working management within the Company; and deployment of artificial intelligence (AI) and machine learning in information management and communications and for some human resources tasks including predictive HR analytics. Examples of how we are using data analytics and integrate artificial intelligence and machine learning across our systems are described in the table below:

Work Process	Analytics/Management System
 Manpower planning	Analyze the “Build & Buy” data set - job applications, selections, turnovers, transfers, promotions, retiring and current employees and vacancies, which resulted in a 41% success rates for internal recruitment and replacement and a 73% success rates for preparing successors for executive’s succession plan.
 Budgeting for employee benefits	Analyze the data sets on usage of employee benefits with the analytics system “Business Intelligence” (BI) to improve our flexible benefits initiative “Your Choice Your Protection,” to better meet employee needs.

Work Process		Analytics/Management System
	Designing training courses	Analyze the data sets on talent competencies and skills against and role-specific competencies and leadership competencies with the analytics system "Business Intelligence" (BI).
	Performance review and consideration for annual promotions and pay increases	Analyze individual employee performance data pulled from Cnext in comparison to other employees across departments, divisions, functions and organization to manage pay raise and annual bonus outcomes ensuring fair, quick and more systematic decision-making.
	Employee engagement and talent retention	Analyze employee engagement scores and factors influencing each area of employee engagement of the Talent pool as well as by department, division, function to improve plans for uplifting employee engagement as well as examine the data from exit interviews and use the insights to enhance retention efforts.
	Internal communications and network building	Utilize data from internal social media platforms and chatbots to create sub-groups and networks within internal chat rooms for sharing ideas and experiences. We also analyze the data on access, participation and group usages to inform our decision when selecting channels for organization-wide communications.
	Electronic signature	Implementing a legally-binding e-signature solution, which offers levels of identity assurance and is compliant with Section 26 of the Electronic Transactions Act, 2008, to eliminate the reliance on paper. We have been trialing the technology for signing new employees since Q3 of 2022, which accounts for 100% of all new employment contracts, with 91% satisfaction rate, and expanded the use to the signing of a lease with a term of less than one year in 11 projects across the country since December 2022.
	External communications	Utilizing Chatbots for one-to-many organization-wide communications, which include basic human resources functions through CNEXT BOT, health screening through HEALTH BOT, sustainability awareness and understanding through Cee, and group-specific communications such as sending pulse surveys, providing updates on training courses and professional development opportunities through ACADEMY BOT and fostering a culture of appreciation and recognition through CHOM BOT.
	Task-specific improvement	Some of the examples include meeting room reservation, memo request for e-approval, online surveys, disbursements, company car booking, tracking of document delivery, budget planning, sales and leasing, request for approval for marketing activities, greenhouse gas inventory, daily records on waste management and dashboard reporting.

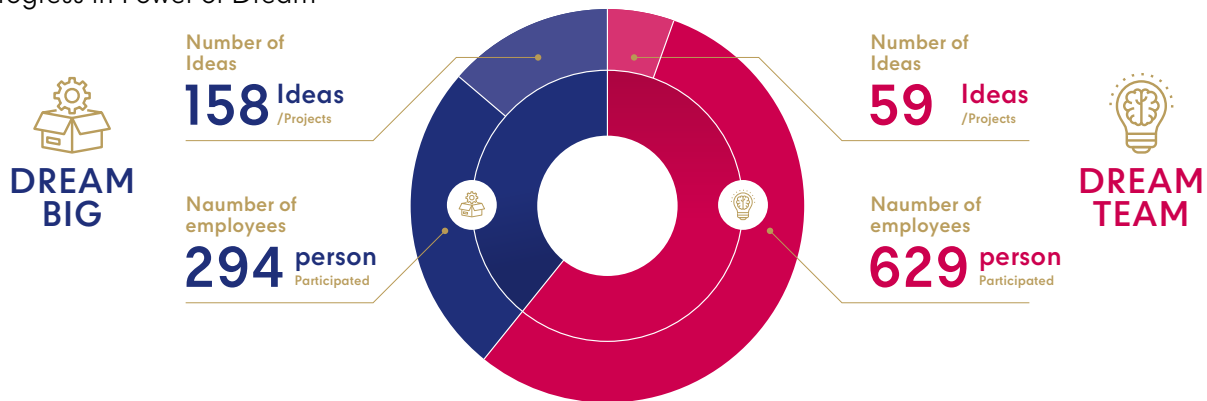
## Engaged and Innovative Workforce

At Central Pattana, employees at any level are encouraged to share 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 under the program “Power of Dream,” which is now in its twelfth year. The focus in 2022 was harnessing digital and technology in development and LEAN, which emphasized on establishing clear and effective work procedures and processes, effective allocation of roles and responsibilities and effective workload management by assigning work

to a team in a way that gets the most out of its skills and abilities, simplifying procedures and reducing overlapping tasks to reduce delays and constraints and optimizing the approval workflows. The initiatives under Power of Dream are categorized based on application and usage - Dream Team and Dream Big. The program is open to all employees under Central Group.

The objective of the program is to create solutions that will improve process efficiency, productivity and effectiveness at the corporate and branch levels.

### Progress in Power of Dream



#### Dream Big

is a challenge for big solution ideas through design thinking. The objective of the initiative is to create innovations that will support the implementation of the Company's strategy and create deliver returns. The innovations may require funding to develop and implement and need time to yield results. It is organized in the form of a competition and 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. There are four competition categories: customer experience, tenant experience, work or operational efficiency and new business opportunities.

This year, we also deployed an array of technological solutions including Microsoft's Future of Work Platform, Google Workato's Process Automation, Automation Anywhere, Mixed Reality, Augmented Reality and Microsoft's Virtual Reality to empower our employees with digital upskilling. Several of the pilot projects that are trialing these tools and platforms have seen improved functional efficiencies and less time spent on tasks and are being implemented across our portfolio nationwide.

#### Dream Team

is a competition for creative solutions that are viable and match 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 LEAN concept. The winning project in 2022 was “Magical Air Curtain” by Central Korat, which improved the energy efficiency of air curtain fans (installed at all shopping center doors). The upgrade resulted in a reduction of 225.6 kWh/month/door and contributed to 92% lower electricity tariffs. With portfolio-wide implementation, this will enable significant energy savings.



### 3. Supply Chain Management

Central Pattana has established a Supply Chain Management Policy that guides our operations and relationships with suppliers. The policy focuses on promoting ethical and transparent business conduct across the supply chain. Together with our suppliers, we strive to minimize our impact to minimize our impact on communities, society and the environment and ensure respect for human rights and safety considerations in all supply chain activities. Our Supplier Management Plan applies to all suppliers in our value chain and encompasses development and construction, shopping center management, marketing and organizational management, which are further subdivided into twelve procurement categories. Refer to our website for more details on how we categorize our suppliers:

Click



[www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/supplier](http://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



[www.centralpattana.co.th/en/sustainability/corporate-governance/policies-implementing-guidelines](http://www.centralpattana.co.th/en/sustainability/corporate-governance/policies-implementing-guidelines) and  
[www.centralpattana.co.th/storage/sustainability/corporate-governance/code-of-business-conduct/cpn-code-conduct-en.pdf](http://www.centralpattana.co.th/storage/sustainability/corporate-governance/code-of-business-conduct/cpn-code-conduct-en.pdf)

We embed 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 sourcing and selection to supplier risk assessment and performance monitoring and evaluation. We also support

and collaborate with our suppliers to realize shared value for society, communities and the environment.

In 2022, we maintained our focus on sourcing and procuring goods and services from within the same regions where we operate to support livelihoods and contribute to local economic growth, which is in line with our strategic plan for sustainability on job and income generation for communities. This year, 71% of our procurement spending was with local suppliers (includes transactions by Central Procurement only), generating a local economic return of Baht 2,981 mn.

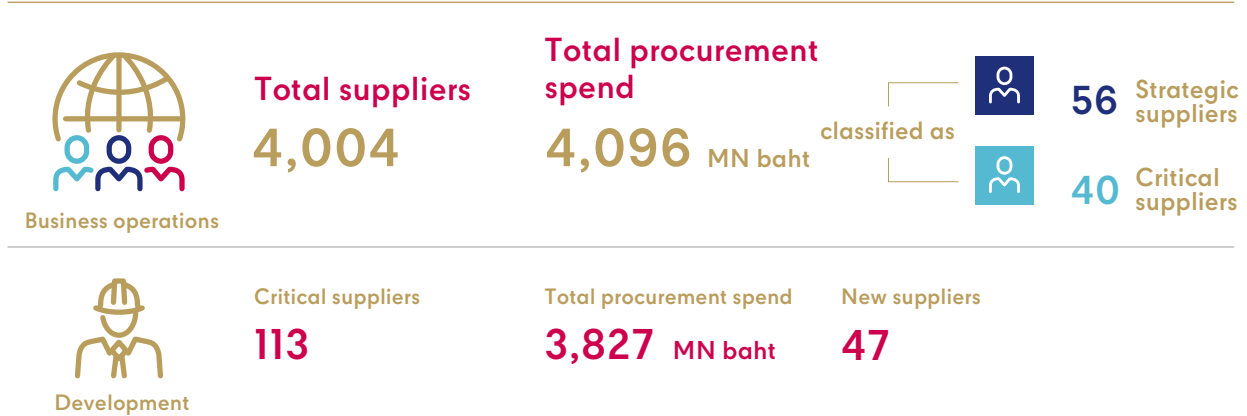
#### 3.1 Supply Chain Risk Management

At Central Pattana, supply chain risk management is divided according to the risks facing our value chain that could impact revenue generation and may cause business disruption. This means our business development and construction supply chain, overseen by the Chief Officer of Business Development, is managed separately from the supply chains of other business units and Construction to reduce risk exposure from critical suppliers, particularly construction contractors. Management of shopping center management, marketing and organizational management supply chains is overseen and managed by Procurement Division.

After mapping and segmenting our entire supply chain, we identify and evaluate potential risks associated with working with our suppliers in our shopping center management, marketing and organizational management supply chains by analyzing the spend analysis, critical analysis and dependent analysis data to determine our strategic or key suppliers. We then assess these suppliers under the lens of sustainability risk on the following aspects: policy alignment with Central Pattana's sustainable development framework and approach, being sole source of commodity/service in the market, contract duration and supplier's ability and capacity to grow and scale, and use the outcomes to define our critical suppliers. According to our 2022 spend analysis (which excluded utility providers for electricity and water supply), we sourced products and services from 4,004 suppliers, with a total procurement spend of Baht 4,096 mn. Of these, 56 are strategic suppliers and 40 are critical suppliers.

We also engaged with 113 key suppliers under business development and construction, with an annual spend of Baht 3,827 mn. Of these, 47 are new suppliers, who accounted for 67% of our total spend. Based on our risk assessments, we have determined that these suppliers present varying levels of sustainability risk from the risk of failing to complete or deliver a project on time, construction safety risks and the risk of adverse impact on the surrounding communities.

## Supplier Risk Assessment



### 2022 Supplier Spend Analysis

Supplier Tier	Spend Tier <sup>1</sup> (excludes business development and construction and utility providers)	Number of Suppliers	Spend (mn)	% of Spend
Tier 1	More than Baht 10 mn	56	2,333	57
Tier 2	More than Baht 1 mn but not exceed Baht 10 mn	432	1,264	31
Tier 3	Less than Baht 1 mn	3,516	499	12
Total		4,004	4,096	100

We use the spend analysis in the table above to identify critical suppliers and group them into sub-categories of products and services we purchased / procured in 2022 <sup>1</sup>. We then use these insights to make further improvements to our purchase / procurement process and develop plans for supplier risk mitigation and supplier development according to needs and readiness.

**Remarks:** <sup>1</sup> 1) Office Administrative 2) IT/Service Standard/Audio Visual 3) Building & System Supplies 4) Outsource & Subcontractor 5) Marketing Relevance



## Supply Chain Risk Mitigation Plan

Risks/Opportunities	Action Plan	Progress in 2022
<p>Opportunity to boost procurement efficiency and effectiveness</p> <p>Reduce the risks of over dependency on one supplier or a small group of suppliers</p>	1) Strategic sourcing to reduce the transaction frequency per year	<ul style="list-style-type: none"> <li>• Evolved our Total Cost of Ownership approach to consider the risks that may arise from the duration of a contract.</li> <li>• Developed supplier lists for six key service categories by setting the median prices of services for Building &amp; System Supplies and implementing effective maintenance planning and scheduling to reduce procurement costs and improve project management efficiency.</li> </ul>
<p>Reduce the risk of supply shortages</p> <p>Improve forecast accuracy for suppliers - manufacturers</p>	2) Strategic purchasing	<ul style="list-style-type: none"> <li>• Executed blanket orders for goods under Office Administrative to lower administrative costs and ensure supply when it is needed.</li> <li>• Established 'local vendor' as a key purchasing / procurement criterion to support community income generation, in line with the corporate strategy and our efforts to reduce carbon emissions from long distance transport. In 2022, we reached 71% of supplier spend from local businesses and entrepreneurs.</li> </ul>
Reduce inventory risk	3) Core data structure for Inventory	<ul style="list-style-type: none"> <li>• Expanded online catalog buying and utilization of supplier inventory management systems, eliminating the need for internal inventory management.</li> <li>• Piloted the process Procure to Pay with critical suppliers whose business with Central Pattana accounts for 40% of their revenues to reduce over reliance on major customers.</li> <li>• Conducted one onsite supplier audit to review their manufacturing process, on time delivery capability and sustainability policy.</li> </ul>
Business continuity	4) Supplier development and partnership	
Operational risks and anti - corruption	5) Improving e-procurement	<ul style="list-style-type: none"> <li>• Postponed to 2023 the rollout of the new Procure-to-Pay features that automate procurement processes from purchasing / procuring to paying for products and services - integrating procurement in a single platform.</li> </ul>

### 3.2 Supplier Assessment

Central Pattana's supplier assessment consists of three stages: (1) pre-qualified vendor assessment, which all new and prospective vendors are required to do; (2) Inspection of goods and services upon receipt by the buyer and (3) vendor audit, which includes a bi-annual assessment of our suppliers' organizational standards, conducted by Purchasing / Procurement. Sustainability aspects are fully integrated into all three stages, while supplier risk assessment is conducted during the third stage.

We manage and minimize the risks in the business development and construction process by requiring contractors to undergo audits conducted by an independent construction audit firm, which focus on construction safety, legal and ethical employment and adverse environmental impact on the surrounding communities. In 2022, six construction contractors or 100% of our contractors underwent the audits. In addition, regular inspections are performed by relevant departments through the program Service with the Heart to review safety and ethical recruitment and hiring practices as well as the performance of workers hired by outsource contractors for shopping center management. This year, we conducted pre-job inspections on 41 outsource contractors onsite.

Upon receipt of goods and services, the Buyer or User within the Company - is required to complete an inspection by scanning a QR Code on every purchase order and every item purchased through the Company's Purchasing / Procurement system. Suppliers will be automatically notified if quality issues are found with the 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 have failed to fulfill their obligations, they will be put under consideration for Seller - Service Provider blacklisting. 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 according to the procedure.

In 2022, 96% of all active suppliers were evaluated under the A-D rating system. More than 97% of suppliers received an A grade with no suppliers scoring less than a C rating.

### 3.3 Co-Creating Value and Innovation

Central Pattana continues to work collaboratively with our suppliers to co-create value and innovation, as set out in 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 outsource contractors for shopping center management. Value co-creation with suppliers is realized in two dimensions - the environment and safety.

#### 2022 Innovation Initiatives with Vendors

##### Environment



Utilizing Building Information Modeling (BIM) to create digital models of underground structures and design facility management and retail stores to improve design precision and the efficiency of store expansion or modification planning.

Using crushed aggregate from concrete piles as temporary road surfaces in Central Eastville and creating Recycled Concrete Aggregates (RCA) from waste concrete as a replacement for natural aggregates for road construction in Central Nakhon Pathom. The recycling of 2,200 tons of concrete piles contributed to a GHG reduction of approximately 218 tCO<sub>2</sub>eq.

## 2022 Innovation Initiatives with Vendors

Utilizing the most of food waste and leftovers by training 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 sites. The initiative has been expanded to composting by feeding food scraps to worms and turning it into a rich soil conditioner, which is used in the project sites as well as sold to farmers. The money earned from selling the surplus is used to buy rice, milk and stationery for students in the surrounding communities and workers in the project sites.

## Implementation of Reduce Reuse Recycle:

- Reusing temporary partitioning from Central Chanthaburi in the Central Ramindra renovation project.
- Reusing metal sheets from Central Chanthaburi in the Central Nakhon Pathom construction project.
- Transporting excavated soils from the Central Nakhon Sawan construction project to other project sites for backfilling.
- Turning 20 shipping containers into temporary offices and living quarters for workers in the Central Nakhon Pathom construction project site.

## Using alternative energy – solar energy

- Installing solar carports that can shield the entire parking facility of Central Chanthaburi and for small sections within the parking spaces as a pilot initiative that would become the standard for other shopping center projects.
- Progressing a solar lighting upgrade initiative that would become the standard for all new projects, by installing solar lighting systems, which power 50% of all street lighting and illuminations in Central Westville, Central Nakhon Pathom and Central Nakhon Sawan.

## Social



## Human rights considerations

We have 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 2022, all migrant workers employed by 15 contractors were legally registered. Of this, 17% were Cambodian, 18% were Burmese and 0.6% were Laotian, respectively.

## Safety considerations

We have established safety and environmental measures at construction sites and expect all our contractors to maintain strict compliance. Construction management consulting firms are hired to monitor 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 2022, 60 SIRs were issued to the contractor of the Central Chanthaburi project who already completed all corrective action plans. While minor accidents occurred at the construction sites, they resulted in little or no damage and we reached 5.8 million hours without a reportable accident in all construction and renovation projects underway this year.

## Others



- Incorporating energy efficiency considerations including reduction of greenhouse gas emissions as a selection criterion for high efficiency transformers, which were then purchased in bulk for several projects at a time.
- Preparing the Procure-to-Pay system for trial by business development and construction's Purchasing / Procurement.



For more information on how we are co-creating value and innovation with our suppliers, please refer to page 134 in Central Pattana's 2020 Annual Report and page 130-133 in Central Pattana's 2021 Annual Report as well as on our website at [www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/supplier](http://www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/supplier)

## 03

## Purpose-Driven Organization

## Management Approach

1. Corporate Responsibility and Community Development
2. Resource Efficiency

**Remark:** We are currently working with an external consultant to realign our emissions reduction targets based on the Science-Based Target Setting approach and have established 2019 as a new baseline year for reporting.

## Sustainability progress in 2022

## Social

- 2.1 million people used the community spaces from the target of 2.5 million people.
- Generated a local economic return of Baht 139 mn from the target of Baht 107 mn.

## Environment

- Achieved a 22.5% reduction in Scope 1 and 2 emissions intensity from 2019 base year.
- Achieved a 8.65% reduction in energy consumption compared to 2019 base year.
- Diverted 28% of the total waste from landfill, achieving 127% of our 2022 target.



## 1. Corporate Responsibility and Community Development

Central Pattana demonstrates our commitment to corporate responsibility and community development by living our core belief “Community at Heart” and executing our objectives of minimizing the impact we have on communities and the environment and fostering community partnerships and supporting community development, which is underpinned by our Creating Shared Value (CSV) framework.

Click



[www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/community](http://www.centralpattana.co.th/en/sustainability/sustainability-strategy/stakeholder-engagement/community)

We have 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 in accordance with the sustainable business and circular economy principles.

## 1.1 Center of Community to promote education and positive health outcomes in communities

## 1) Providing Educational Opportunities

In partnership with Central Tham we provide two types of educational support to communities: infrastructure - buildings, classrooms and tools and equipment; and skill development for students and teachers. In 2022, we, together with Central Group, carried out three development projects in one province: 1) installing a large 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; 2) supporting the creation of sufficiency economy learning stations for the schools under the Partnership School Project; and 3) building a multipurpose sport court at Ban Kong Khaek School - Ban Mae Lu in Mae Chaem district, Chiang Mai province. Additionally, 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.

## 2) Promoting Positive Health Outcomes

- Promoting preventive health behavior among customers and visitors by incorporating Sport Destination into our project designs with spaces that can be used for sport and recreational activities to contribute to positive behavior adoption such as regular exercising and eating nutritious foods.

One of the highlight initiatives in 2022 is our new shopping center Central Chanthaburi, which utilizes a semi-outdoor design that includes a four-rai of green space featuring a running track, bike parking stations, outdoor fitness equipment, a social park, a family playground, a pet playground and a café. With a large multi-purpose area of 4,000 sqm, the project is home to our first Sport Destination outside of the Bangkok metropolitan region - serving as a center of life that promotes the health and well-being of the people living in the province.

- Supporting public health activities by utilizing and adapting our assets including common areas and parking lots to help drive better health and quality of life outcomes.
- Ongoing Initiatives: Fixed Station for Blood Donation For more than 34 years, Central Pattana, in collaboration with Central Group, the Thai Red Cross Society, provincial public health offices, provincial hospitals and provincial red cross chapters, has been providing spaces in our shopping centers to serve as temporary blood donation stations. In 2022, we partner with Maharat Nakhon Ratchasima Hospital to open a station for blood, organ and eye donation at Central Korat. It is the second Fixed Station for Blood Donation at Central shopping centers after Central Hatyai. With a national blood shortage caused by the COVID-19 pandemic, we set a target to help collect 10 mn cc of blood by 2022 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 10.08 mn cc of blood. (The figure includes the total volume of blood donated through activities held under Central Group's "Plus 1 More Donations, More Lives Saved" campaign, which aimed to collect 10 mn cc of blood.)

- Special Initiatives: Provincial Vaccination Centers Since 2021, we have been working with partners in the public and private sectors as well as the Ministry of Public Health, the Thai Chamber of Commerce, hospitals and public health centers in Bangkok and at the provincial level and businesses affected by the pandemic, to help drive the country's mass vaccination efforts, by turning our shopping centers into Provincial Vaccination Centers. In 2022, we lowered our vaccination target and adjusted the number of the Provincial Vaccination Centers in response to the government's public health measures from 33 to 28 centers nationwide. Despite being temporary vaccination sites that were set up upon request by the agencies involved, the operations delivered one more million COVID-19 vaccine shots to people across the country this year, bringing the total between 2021 and 2022 to 4,294,670. In addition, under "Central Tham," we donated personal protective equipment donations (PPE) and made Baht 16.6 mn contributions to support COVID-19 patients.

## 1.2 Center of Community to drive economic, social and environmental prosperity and stability

Central Pattana's community development plan is developed together with our business development plan, with the aim of helping to drive local and national prosperity by generating income at the community and household levels through job creation, purchasing / procurement, entrepreneurship promotion and development of local agriculture and community-based tourism. Through expanding and operating our business in provinces with strong growth potential, we help contribute and support the growth of Thailand's Leading Cities into quality residential areas with an environment that is well-cared for as well as major business- commercial-job hubs.

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. We measure our progress by tracking the revenues the communities generate or payments they receive from our operations or from doing business with us. At Central

Pattana, community development is carried out in three formats including: 1) retail space for community products, 2) local and environmental procurement and 3) promoting local ways of life, arts, cultures and tourism. In 2022, there were no substantiated complaints or grievances regarding negative community and environmental impact.

**1) 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 2022 Annual Report. This year, “Hug Craft: Northern Edition @ Hug Thai” was launched at centralwOrld, the new retail zone offers a great collection of handicrafts and products made by local artisans and communities from across Northern Thailand and from Thai brands that are supporting their communities and the environment. Every item on sale from local fabrics and embroidered products, home decors and accessories, stationery to silver handicrafts and jewelry, for example, is high quality, made from local materials and designed with usability and environmental sustainability in mind. In addition, Central Chiangmai has opened a new zone under the brand “Tham Dee” to sell upcycled products such as bags, hats, tote bags, dolls and home decorations and accessories that are made by northern villagers from leftover materials from the shopping center’s campaigns and activities. We have partnered with renowned local artists to design these products and provided hands-on training to the villagers in Ban Huai Som community in San Pa Tong district, Chiang Mai province, Wat Don Luang community in Pa Sang district, Lamphun province and Ban Don community in San Kamphaeng district, Chiang Mai province, equipping them with skills and opportunities for sustainable livelihoods. We also continue to allocate retail spaces for local artisan brands and businesses including Mae Fah Luang Foundation Shop, OTOP shops, Sai Jai Thai Foundation Shop, as well as offer free retail spaces to local farmers during marketing campaigns, to bring farmers and customers together.

In collaboration with “Central Tham” and Central Group, we are progressing the “Jing Jai Farmers Market” initiative, which aims to provide retail opportunities to farmers who grow organic fruits and vegetables. To date, we have launched Jing Jai Farmers Markets at 18 out of 32 at our Central shopping centers across 28 provinces countrywide. There are 38,000 farmers joining this program, which supporting more than 9,696 families and generating over Baht 255 mn in local economic returns.



Jing Jai  
Farmers Markets  
launched at  
**18** out of 32  
at Central shopping  
centers

#### Social impact

More than	across
<b>9,696</b>	<b>28</b>
farming families	provinces supported

Generating more than Baht  
**255 mn**  
in local economic returns



At Central Pattana, we have a policy to support the expenses for marketing and advertising activities for community impact to create shared value with our partners. For instance, the Royal Project has been held consecutively for 52 years to sell community products sourced from programs supported by foundations under royal patronage and/or under the queen patronage, or Ruamjai Market, launched in collaboration with Central Group, which aims to help generate jobs and incomes to rebuild the country's economy that has been hard hit by the COVID-19 pandemic. Through the Ruamjai Market initiative, sales are conducted under a local market omni-channel format to help increase opportunities for communities, farmers and small business operators to boost sales and incomes, driving sustainable returns to local economies. In 2022, our retail space contributions reached Baht 52.8 mn from holding 533 activities for the communities and 413 activities to support small businesses, totaling Baht 139 mn in contributions with a local economic which accounted as 129% achievement from our target (based on the data provided by businesses that voluntarily disclosed their information).

Putting the concept of Creating Shared Value to work, we have created "Signature Event," a marketing campaign initiative that honors and celebrates the diversity of Thailand's unique offerings by bringing everything from local arts to cultural highlights and community products to audiences across the provinces, regions and countries. Some of the highlights this year included "Sanee Chan Sisan Chanthaboon," a special event featuring local handicraft wisdom and hidden gems from ten districts in Chanthaburi province such as Chanthaboon mats from Ban Samet Ngam community, hard-to-find desserts from ancient recipes from Khanom Plaek Nong Bua community and Chanthaboon coffee and cacao with a all-you-can-eat durian buffet, and "Chan Fruitful Market," where customers and visitors can find and buy all the delicious tropical fruits for province is known in a modern retail store.

2) **Local and Environmental Procurement** In collaboration with all departments, functions and business units across Central Pattana, we focus on local sourcing and purchasing of ingredients, materials and supplies and services from locally-owned businesses and promote partnerships with local manufacturers and skilled

workers in communities and work with them to produce consumables that can be used within the Company. Examples of the selections of our locally sourced and eco-friendly materials and community products include:

- **Corporate New Year Gifts under the Concept "Tham Dee"** In partnership with the Department of Juvenile Observation and Protection, Maejo University, Thailand Institute of Justice (TIJ), Maesa Elephant Conservation Park and Maetha Organic Farmers Group in Chiang Mai, we delivered an opportunity for Chiang Mai's disadvantaged youth and families in the North of Thailand to earn extra income, making custom corporate gifts for the New Year that tell a story of 'doing good'. The heart touching gifts included packets of seeds made from elephant dung paper that took inspiration from the Thai word "Plook" or planting the seeds in English and bags and tote bags made from leftover fabric scraps from previous projects with complementary embroidery decorations depicting the community way of life, as a way to help spread awareness about climate change, while also being part of the solution. These gifts are a reflection of our longstanding commitment of 40 years to the community.
- **Consumables** We continue to partner 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 offer our customers chemical free and organic cleaning products and hand sanitizers across our properties. The products are accredited and certified under IFOAM, EU and CANADA standards. Patom Organic Living commits to donate 3% of the sales to Sookjai Foundation to help drive organic culture nationwide and build strong and sustainable local economies. Since we began the trial in 2021, the initiative has contributed Baht 85,373 to the communities.

3) **Promoting Local Ways of Life, Arts, Cultures and Tourism**

- **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.

Case Study: Design of Central Chanthaburi under the concept “Charming Chanthaburi.” Taking design influences from the province’s many unique cultural elements, the shopping center’s façade borrows references from their immediate surroundings from the texture of fruit skin to the pattern of Chanthaboon mat and the sparkling of Chanthaburi’s gems and jewelry, which is brought to life through hidden lights placed behind the panels creating stunning a warm stunning glow that illuminates the project during the night. The interiors have been designed to reflect the charms of waterfront residences by using a combination of wood and concrete to achieve a sleek and airy feel. Restrooms are decorated with vintage brick-look and zinc tiles to enhance the community feel, while the

Food Patio incorporates the design of Chanthaboon mat with materials such as tiles to create a visually and physically arresting array of patterns. Some of the Photo Landmarks around the shopping center include:

- Chanthaboon House,’ where visitors can take in a classic landscape scene with a river and mountains
  - ‘Moon Gazing Spot,’ tree house-inspired design with a cafe on the ground floor and a 360-degree scenic view of Bhakti Rambhai Canal on the top
  - ‘Chan-in Square,’ a rest area sheltered by a row of the provincial trees Jan In with calamansi, mangosteen and durian as decorations, plus an organic food market
  - ‘Baan Chan,’ a co-working space with a cafe
  - ‘Art Feature,’ with Chanthaburi’s symbol, ‘Rabbit,’ in various acts and poses
- Co-Designing Community-Based Tourism Routes We have been partnering with communities under the program Local Tourism, which aims to curate bespoke travel itineraries for every type of guest that bring together a perfect mix of local and contemporary culture and community ways of life. By sharing our knowledge and skills, we are helping to lay a strong foundation for the communities to themselves run the operations and manage tourism resources, contributing to direct economic benefits and better quality of life in these provinces.

The initiative is being trialed first in Ayutthaya province, in collaboration with the community-based tourism startup Local Alike in 2022. In addition to working together with the communities, we also provided training to help strengthen their tourism skills and helped leveraged different marketing and sales channels including Local Alike’s own platform and application to promote and sell the one-day trip packages, in which visitors can explore three different routes traveling through three local communities, while using Central Ayutthaya as the base for exploration.



The community-based tourism activity will not only yield direct economic returns to the communities but also deliver value to our tenants and suppliers to grow together with these communities. The participating communities include:

- Ban Koh Kerd community Experience River Life in Bang Pa-In district, Ayutthaya province. It is believed that this 'tiny island' in the middle of a river gets its name from how it came to be - accumulation of layers of mud and other sediments that transform into a mound and over time a fully fledged community. Central to the community's identity is authentic traditional 'food and desserts' and herbal medicine and therapeutic Thai acupressure massage to relieve muscle tension - a unique local wisdom that is still preserved and passed down from one generation to the next. The full-day tour activities include: banana chili paste-making, unique local food tastings and lunch, learning about herbal medicine and Thai dessert class.
- Ban Sai Noi community Discovering Local Wisdom and Culture through learning about nine auspicious Thai desserts that are still used for traditional ceremonies today, taking a trip back in time to the glorious days of Ayutthaya. The full-day tour activities include: a cycling tour that explores the community's rich heritage, Thai dessert class, Mon brick workshop, a tour of the magnificent temple ruins of Ayutthaya and unique local food tastings.
- Khu Salot Farm Tour Exploring Self-Sufficient Lifestyle under Central Tham. Central Pattana has partnered with Local Alike to develop a one-day trip that leads guests through the whole process of high-quality melon production that meets Central Pattana's standards at Little One Farm Stay, with a walk around the farm and fresh melon tasting, a chance to bake your own pizza in a wood fired oven and a relaxing free time to choose your own self-sufficiency adventure.

### 1.3 Center of Community to deliver public benefit

In alignment with Creating Shared Value, 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 construction, management, convenience improvement, engagement and rehabilitation activities including:

- 1) **One Stop Service Government Center under G Point, Government Center and Amphoe Yim** Recognizing the need for people to access public services on holidays or weekends, we partner with state agencies and local administration organizations\* to launch one-stop-service points in our shopping centers, in support of 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

\* Government departments and agencies offering the services 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; Immigration Offices; Provincial Legal Execution Offices; and Thai Red Cross Society.

anywhere else. Available services include national ID and civil registration, utilities services, labor and social welfare, consular services and public health services. To date, there are 18 Government Centers in Bangkok and beyond, with all of them operating under our hygiene and safety measures.

- 2) **Public Commitment** As we progress our development projects, we also seek to utilize our resources to contribute to the communities where we operate. For example, during the construction of Central Westville, we helped reduce traffic congestion around the project by widening the road in front of the project entrance and made improvements along the canal to give people a clean, accessible and beautiful walkway. During the last rainy season, we partnered with Maha Sawat Municipality Office to fill and stack sandbags from our construction site to create a flood prevention barrier for the surrounding communities.

- 3) **Transforming Land Awaiting Construction into Community Assets** In 2022, we continued to progress our initiative to offer temporary use of our lands that are

awaiting construction for no more than 2 years, which is underpinned by the 'Creative City' concept and the Sustainable Development Goals (SDGs) framework. Integrating land, nutrition and agricultural dimensions, we have been trialing and expanding the pilot initiative in the G Land project on Rama 9 Road in Bangkok, together with the social enterprise The Farm Concept and more than ten other partners including Big Trees Project, Ageekculture, JaiTalad, Khlongtoey Dee Jung and Poonsuk Market. As part of the program, we provide land for small-scale urban agriculture with parking space that can accommodate more than 50 vehicles as well as resources for landscape maintenance. The highlight activities included: 1) Farm & Folk Market, where visitors can shop for different kinds of organic foods and products, 2) Donation Station by Khlongtoey Dee Jung, 3) Urban Farming Workshop, 4) Learn & Playground for Kids, and 5) Waste Sorting, carried out in partnership with Huai Khwang District in Bangkok and the startup Recycle Day, aimed at tenants and residents in the surrounding areas.

- 4) **Disaster Relief** Under Community Disaster Management, we contribute to disaster relief efforts by utilizing our resources and expertise to help victims of natural and man-made disasters and other tragedies during response, rehabilitation and recovery phases, in collaboration with Central Group and Tiang Chirathivat Foundation. In 2022, we provided immediate relief and rehabilitation assistance to flood victims in ten provinces including Rayong, Chanthaburi, Saraburi, Ayutthaya, Phitsanulok, Sisaket, Ubon Ratchathani, Surin, Chaiyaphum and Khon Kaen, by delivering 3,100 relief packs and essential supplies worth more than Baht 1.1 mn to 3,100 flood-hit families.
- 5) **Donations to Charities and Other Organizations** We made direct donations to foundations, non-profits and state agencies and organizations to support activities such as "Bangkok for All" and programs for people with disabilities in partnership with the Bangkok Metropolitan Administration.
- 6) **Employee Volunteering / Belief in Actions - Community Day** We encourage and enable our employees to get involved in volunteering opportunities that they can do

as part of everyday work such as serving as non-medical volunteers at vaccination centers across the shopping centers, packing relief packages and filling sandbags to help flood victims, donating blood, providing basic firefighting training to young people and students, participating in canal and waterway clean-ups around the shopping centers on Big Cleaning Day, cooking and handing out meals, distributing trees and crafting breast prosthesis, for instance. This year, 2,498 employees engaged in all the activities (calculated based on available information and included employees attending more than one activity) and collectively served 26,426 hours of volunteer service, which was lower than 2021, due to the closure of some of the Provincial Vaccination Centers.

#### 7) Supporting People in Need:

- We supported the creation of ten practice spaces, specifically designed to help athletes with disabilities train and prepare for the disciplines they will be competing in the 2024 CYBATHLON ETH in Switzerland, and also hired people with disabilities to test the wearable Walking Assistive Exoskeleton robots that will be used in the competition.
- We provided support to several sports programs including table tennis, badminton and football at 13 Juvenile Observation and Protection Centers and Youth Centers across the country under the HRH Princess Bajrakitiyabha R908 Office's project, encouraging positive time use in kids and young people to prevent drug use and reduce reoffending.
- We are sponsoring the first Central All Thailand, in partnership with the Table Tennis Association of Thailand, with the aim to promote greater visibility for the sport and inspire more kids and young people to take up table tennis as well as empower the next generations of athletes to forge their path towards the national and international stage. The event will feature a competition for players aged 5-7, an exhibition game between members of the Thai national team as well as singles and doubles competitions for youth athletes, the general public and national athletes with disabilities. The matches will be played at convention centers across our shopping centers including Central Westgate, Central Udon, Central Ayutthaya and Central Chiangmai.

- We continue to provide free space for vendors with disabilities, taking into consideration their needs and wellbeing, to legally sell lottery tickets on our properties. In 2022, 43 vendors participated in the initiative and one person with disability was employed, representing 1% of total employees in the Company.
- In 2022, we have aligned our Social Return on Investment reporting with the Business for Societal Impact and DJSI frameworks, which covers community investment, procurement for social impact and business innovation for social impact.

#### Our Business for Societal Impact (B4SI) Framework: Three routes to social impact

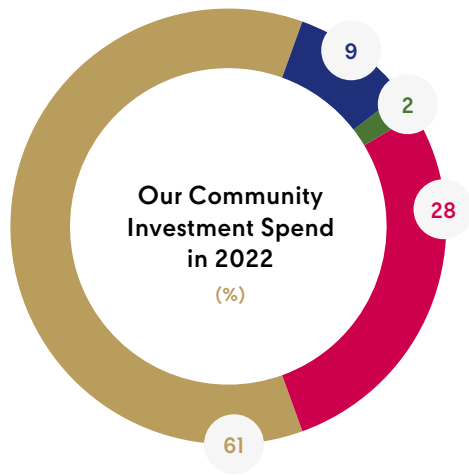
Input	Output	Impact
<b>Community Investment - In-kind Contributions</b>		
Providing free retail spaces for: <ul style="list-style-type: none"> <li>Public health activities to promote positive health outcomes in communities through establishing mass vaccination sites, blood donation stations and fitness and exercise spaces across 90% of our properties (shopping center and office portfolios only)</li> <li>18 One Stop Service Government Centers in shopping centers and nine Passport/Immigration Offices, two Fixed Stations for Blood Donation and one Health Center.</li> <li>People with disabilities provided with space for commercial purposes and sporting activities in 17 shopping centers</li> </ul>	<ul style="list-style-type: none"> <li>2.2 mn people accessed and received the services provided at our premises</li> <li>Contributed to an additional one million or more people accessing and receiving services at One Stop Service Government Centers</li> <li>43 people with disabilities received support to earn a living from selling lottery tickets</li> </ul>	<ul style="list-style-type: none"> <li>Contributed to the national vaccination drive, with more than 1.1 million people receiving COVID-19 vaccinations from the program</li> <li>10.08 mn cc of blood delivered to the Thai Red Cross Society and their local chapters</li> <li>Contributed to better health outcomes of 4,850 vulnerable youths and those in need from playing sports and positive time use through their participation in sports activities supported by Central Pattana</li> </ul>
Financial and Time and Skills Contributions: <ul style="list-style-type: none"> <li>Honoring local identity and heritage through the design of Central Chanthaburi, with financial contributions included in the construction budget</li> <li>Co-designing local tourism routes with communities in Ayutthaya province</li> </ul>	<ul style="list-style-type: none"> <li>Providing convenience and attracting more than 640,000 customers and visitors per year from in and outside Chanthaburi province</li> <li>Implementing communication and marketing activities to help promote local tourist destinations in three communities in Ayutthaya province</li> </ul>	<ul style="list-style-type: none"> <li>More than 1,500 jobs created in Chanthaburi province during the construction</li> <li>Target has not been met due to heavy flooding after the launch of the program</li> </ul>

Input	Output	Impact
<ul style="list-style-type: none"> <li>Encouraging and enabling employee volunteering during paid working time, with Baht 4.5 mn contributed to support these activities and 120,084 hours of volunteer service achieved</li> </ul>	<ul style="list-style-type: none"> <li>2,498 employees (include those attending more than one activity) participated in activities to address community and environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>More than 100 communities benefited from employee volunteering activities</li> </ul>
<ul style="list-style-type: none"> <li>Contributed Baht 2.1 mn to support the One Million Trees Movement</li> </ul>	<ul style="list-style-type: none"> <li>100,000 trees planted in Pa Khlong Takhian National Reserved Forest, Chon Buri province** (Section 04 Environmental Management of the Annual report provides additional detail on the activity.)</li> </ul>	<ul style="list-style-type: none"> <li>Removal of an estimated 200-300 tCO<sub>2</sub>eq per year</li> </ul>
<ul style="list-style-type: none"> <li>Contributed Baht 56.6 mn to implement initiatives in partnership with Central Tham, with Baht 12.7 mn for community programs, Baht 4.8 mn education programs and Baht 1.1 mn for disaster relief efforts.</li> </ul>	<ul style="list-style-type: none"> <li>Baht 255 mn of shared revenue generated to communities through Jing Jai Farmers' Market</li> <li>146 students in 40 provinces and 60 vocational-technical students in three provinces including Udon Thani, Saraburi and Trang provided educational opportunities</li> </ul>	<ul style="list-style-type: none"> <li>More than 38,000 farmers from 9,696 families, who are the drivers of sustainable local economies, provided with business opportunities</li> <li>More than 6,100 students and teachers in 3 schools in Chiang Mai province gained knowledge and skills on sufficiency economy and enjoyed better health outcomes through having access to clean drinking water and nutritious foods</li> </ul>



Input	Output	Impact
<b>Creating Shared Value Contributions</b>		
Retail spaces for free or under special conditions: <ul style="list-style-type: none"> <li>Baht 75.3 mn worth of permanent and temporary spaces for community products through implementation of marketing campaigns and activities across all shopping centers</li> <li>Baht 52.8 mn contributed to implementing marketing and advertising activities for community, social and environmental impact</li> <li>Transforming land awaiting construction under the GLAND project into community assets</li> <li>Space for a startup partner to operate 'Recycle Station' at 4 shopping centers and one building as well as space for running 17 Green Shelters to accept washed milk cartons under the "Green Roof Project for Princess Pa Foundation" project (More information under 'Waste management')</li> </ul>	<ul style="list-style-type: none"> <li>711 community activities organized, with 475 activities that provided support to small businesses</li> <li>Enjoying partnerships with more than 10 social enterprises and organizations</li> <li>89 tons of waste diverted from landfill through sorting waste and washed milk cartons for recycling</li> </ul>	<ul style="list-style-type: none"> <li>Local economic return of Baht 139 mn generated (calculated based on the data provided by businesses that voluntarily disclosed their information).</li> <li>More than Baht 4.6 mn in revenue generated for social enterprises</li> <li>2,200 people in the target groups (include those who participated more than once) encouraged and enabled to sort waste</li> <li>Removal of 116 tCO<sub>2</sub>eq of GHG through recycling initiatives</li> <li>128 fiber cement boards, walls, roofing sheets and window and door frames made from recycled milk cartons delivered to Tham Dee Foundation and Klongpai Central Prison.</li> </ul>
<b>Donations to Charities and Other Organizations</b>		
<ul style="list-style-type: none"> <li>Baht 19.4 mn donated to charities, with some of the contributions made with Central Group through Central Tham</li> </ul>	<ul style="list-style-type: none"> <li>Cash donations to more than 36 projects, organizations and agencies, with 56% going towards hospitals and public health promotion initiatives and 24% towards education</li> </ul>	<ul style="list-style-type: none"> <li>Contributing to improved health, education and quality of life outcomes in the wider society</li> </ul>
<b>Procurement for Social, Community and Environmental Impact</b>		
<ul style="list-style-type: none"> <li>Baht 4.3 mn spent in community and environmental impact procurement under consumables for shopping center management and gifts and souvenirs for special occasions.</li> </ul>	<ul style="list-style-type: none"> <li>Economic returns generated for over 300 people in 20 groups and 5 communities</li> </ul>	<ul style="list-style-type: none"> <li>Incomes earned by young people, employees and farmers through their contribution to landfill waste reduction</li> </ul>

## Our 2022 Community Contributions reports by route to social impact and strategic objective



**217**  
MN. Baht

**Total**

**19**  
MN. Baht

**Donations to charities and other organizations**

**4**  
MN. Baht

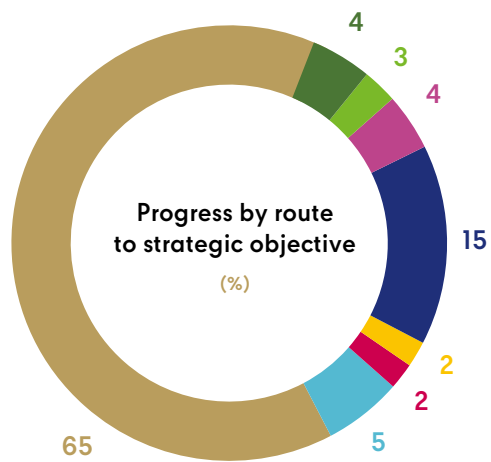
**Procurement for social, community and environmental impact**

**61**  
MN. Baht

**Community investment and contributions to institutions**

**133**  
MN. Baht

**Community investment - in-kind contributions**



Health  
**12.4**  
MN. Baht

Other  
**31.9**  
MN. Baht

Environment  
**9.1**  
MN. Baht

Procurement  
**4.3**  
MN. Baht

Social welfare  
**5.7**  
MN. Baht

Economic  
**141.3**  
MN. Baht

Education  
**7.7**  
MN. Baht

Volunteer and crisis relief  
**4.8**  
MN. Baht





## 2. Environmental and Resource Management

### Management Approach

1. Energy Management
2. Climate Resilience
3. Water and Wastewater Management
4. Waste Management
5. Air Quality Management
6. Green Building
7. Biodiversity and Ecosystem Management

### Sustainability progress in 2022

- Achieved a 21.6% reduction in energy intensity, compared to 2015 baseline against our target of 20% energy intensity reductions by 2025
- Achieved a 8.65% reduction in grid electricity consumption, compared to 2019 levels, achieving 100% of our target
- Target to achieve a 4.5% renewable electricity share of the total energy consumption under Central Pattana operational control by 2023 in line with SDG 7, with the progress standing at 4.87% in 2022.
- Water reuse represented 6% of our total water consumption in 2022, progressing towards our target of 10%.
- Diverted 18,182 tons of waste from landfill or 28% of the total waste generated through processing and recycling, achieving 127% of our target.
- Implemented biodiversity Impact Assessments
- There were no substantiated compliance breaches concerning environmental management or leakage into the environment.

Central Pattana's Environmental and Resource Management, which is underpinned by our Climate and Environment Policy, encompasses energy and water efficiency, climate resilience, environmental management, biodiversity and effective and sustainable waste management. Refer to our website for publicly available policies and implementing guidelines.

These policies and implementing guidelines have been aligned 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, TREES or Thai's Rating of Energy and Environmental Sustainability, the Ministry of Energy's Thailand Energy Awards, 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 by 2050.

Click



[www.centralpattana.co.th/en/sustainability/corporate-governance/policies-implementing-guidelines](http://www.centralpattana.co.th/en/sustainability/corporate-governance/policies-implementing-guidelines)



## 1. Energy Management

To reduce our environmental footprint and combat climate change, our energy management policy focuses on accelerating the energy efficiency of our portfolios, with management approaches established to drive solutions for renewable electricity and energy optimization.

### 1.1 Energy Management

The 2022 energy consumption reported includes usage by joint ventures, subsidiaries and consortiums across 38 shopping centers, 10 office buildings and 15 community malls. Our energy supply comes from 2 sources - non-renewable and renewable sources:

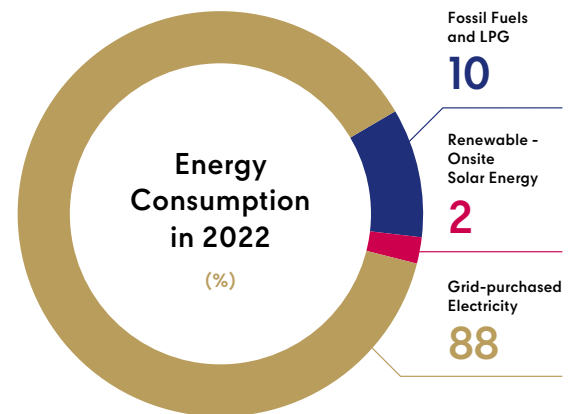
#### 1) Non-Renewable Sources

- Grid electricity 921,850 MWh of electricity were sourced from the Provincial Electricity Authority and the Metropolitan Electricity Authority<sup>1</sup> in 2022, which represented 88% of our total energy consumption. The grid-supplied electricity is used to power our HVAC systems, tenant electricity, lighting and day- to-day operations.
- Fossil fuels and liquefied petroleum gas represented 10% 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, cooking in food court and restaurant and during kitchen fire safety training.

<sup>1</sup> Grid supplied electricity accounted for 92% of our utility costs or Baht 4,136 mn.

#### 2) Renewable Sources

We are committed to increasing the use of renewable electricity across our operations with an ambition to source 20% of our electricity from renewables by 2030. To reach this target, we aim to install rooftop solar panels at all our shopping centers and parking facilities by 2024 - a standard established for all new Central Pattana projects. In addition to exploring the opportunities for offsite renewable sourcing, this year our onsite solar PV program has been expanded to our residential portfolio, starting with rooftop installations on the residence clubhouses. This has brought our total installed capacity to 18.69 MW across 19 projects or 50% of all projects in operation in the current year.



Grid-purchased electricity

**921,850**  
MWh



Fossil fuels and LPG

**108,225**  
MWh



Renewable - Onsite solar energy

**22,003**  
MWh

Total installed capacity

**18.69**  
MW

Across

**19** Projects

**50%**  
of all projects



Leveraging renewables is a key pillar of Central Pattana's approach to energy efficiency and emissions reductions, and in the past several years, we have been accelerating our investment in the installation and use of onsite solar generation across our shopping centers. Not only will this help us become more energy-resilient while reducing our impact on climate change, but also contribute to lowered electricity costs amid the global energy crisis and rising electricity prices. The Company targets to install rooftop solar panels at all our shopping centers and parking facilities by 2024. To maximize the solar potential of each property and choose the right system and configuration that best fit its needs, we have established guidelines for the design and installation of four types of solar PV systems below:



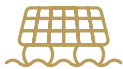
#### 1 Solar Rooftops:

- Metal Sheet Solar Rooftop is a type of solar energy system designed to be installed on top of the building's metal or tile roofs. The key advantage of this system is that it is easier and less expensive to install compared to other solar PV systems and does not require any special maintenance. This system is deployed at most of our properties.
- RC Slab Solar Rooftop is a type of solar energy system designed to be installed on top of the building's concrete slabs. This system requires additional mounting structures and posts that must be anchored into the concrete foundations, contributing to higher installation costs.



#### 2. Solar Carparks:

- Metal Sheet Car Shading is a type of solar carpark systems that has solar panels mounted onto an existing metal sheet or tile roof of a parking structure.
- Solar Carports, on the other hand, replaces metal sheets with solar panels, which act as a roof. While this helps reduce material and installation costs for roofing, the solar-specific requirements limit our site options and the type of rainwater drainage system that can be used. So far, we have installed solar carport systems at two projects - Central Ayutthaya with overhead canopies built to cover the entire rooftop of the parking facility, and Central Chanthaburi, which has solar panel roofs over car and motorcycle parking spaces.



3. **Floating Solar system** is an emerging technology in which a solar PV system is placed directly on top of a body of water. Currently, a study is being undertaken to explore possibilities of applying it for our developments.



4. **Building Integrated Photovoltaics (BIPV)** is a technology that integrates solar photovoltaic (PV) modules into building materials and structures such as roofs, shades, windows or façades. We are currently exploring possibilities of future applications at our shopping center and office developments.

Through conducting comprehensive research into site-specific opportunities and accelerating energy transition solutions, we were able to increase the installed capacity at Central Chanthaburi by 1,659 kWp in 2022, with renewable electricity now accounting for 18% of the building's total electricity consumption. The site suitability analysis carried out this year also contributed to a significantly higher installed capacity at Central Udon, from 491 to 1,667 kWp, raising the share of renewable electricity from 7% to 25% of its total electricity consumption.

## Plan / Project

## Performance

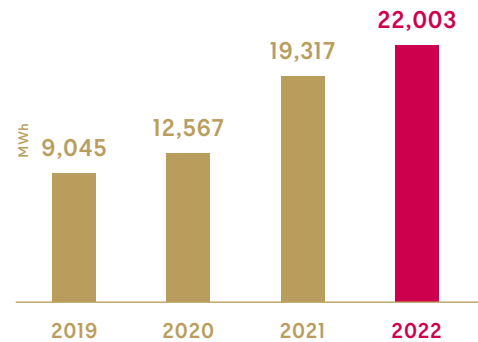
## Renewable Energy Program

## Targets

- Achieve a 4.5% renewable electricity share of the total electricity consumption under Central Pattana operational control (shopping centers only) by 2022
- Harness renewable energy solutions at all shopping centers by 2024
- Renewables account for at least 20% of our total energy needs by 2030
- On-site renewable energy generation is a standard requirement for new developments

**22,003** MWh  
of solar energy generated from  
onsite solar PV systems  
in 2022

**4.9%** of the total energy  
consumed by our  
shopping centers



In 2022, 22,003 MWh of solar energy were sourced from onsite solar PV systems installed on the rooftops of our shopping centers and at parking facilities, representing 4.9% of the total energy consumed by our shopping centers and 4.4% of the total energy under Central Pattana's operation control. This increase in renewable electricity generation can be attributed to full year operation of onsite solar energy installed in 2021 and new installations at Central Chanthaburi and Central Ubon in 2022. Plans are underway to install 7.2 MW of renewable energy capacity in 2023 including at Central Westville.

## Central Chanthaburi

Total installed capacity

**1,659**  
kWp

**18%**  
of its total energy  
consumption



Central Chanthaburi has been sourcing 18% of its energy consumption from onsite solar PV systems including metal sheet solar rooftops and solar carports, which have a total installed capacity of 1,659 kWp.



## Plan / Project

## Performance

## Central Ubon

Installed capacity  
increased from

**491** to **1,667**  
(kWp) ▲

The share of renewable  
electricity rose from

**7%** to **25%**



Through exploring rooftop solar solutions that could be installed on the shopping center's metal sheet roofs and concrete slabs to provide physical cover and reduce the heat energy absorbed by the roofs, the newly completed solar installation at Central Ubon has brought its total installed capacity from 491 to 1,667 kWp, with the share of renewable electricity now accounting for 25% of its total electricity consumption, up from 7%.

## 1.2 Electrical Energy Efficiency

1) **Company Usage** includes electricity consumption from common areas and HVAC systems under our direct control. We continue to develop and evolve our policy and measures to improve the electrical energy efficiency of our operations, and target to reduce our electricity intensity from 2015 levels by 20% by 2025 (company usage only) and cut absolute energy consumption from 2019 levels by 8% in 2022. Examples of our energy efficiency measures include:

- Install external wall insulation at two projects
- HVAC (Heating, Ventilation, and Air-Conditioning) systems
  - Installation of Variable Speed Drives (VSDs) on chilled water pumps and coolant pumps at seven projects
  - High efficiency chiller with low Global Warming Potential (GWP) refrigerants replacement at one project to reduce HVAC energy consumption and environmental footprint
  - Chilled Water Pumps (CHPs) and Condenser Pumps (CDPs) upgrades at one project
  - Deployment of the AC Control Systems in shopping centers to regulate indoor air temperature and humidity and installation of Temperature & Humidity Sensors at one more project to enable semi-automatic control of the HVAC systems

- Implementation of the Building Management System (BMS) and Chiller Plant Management System to track and analyze data on the performance of the chillers at seven projects
- Pilot HVAC Air Scrubbers on HVAC systems at one project. The HVAC Air Scrubbers work by removing impurities from the air as it circulates through the HVAC systems and reducing outdoor air intake, resulting in improved HVAC system efficiency and indoor air circulation. A cleaner HVAC system can operate more efficiently, reducing energy consumption and lowering utility bills compared to conventional HVAC systems.
- Drive continuous system improvements and control HVAC system operations in shopping centers to match heat load demands throughout the day
- Energy conservation training for employees, we continued to provide environmental education to all our employees through training and awareness activities to inspire green behavior change and instill in our workforce environmental and energy stewardship. In 2022, 20 trainings were conducted and attended by 1,030 employees (include those attending more than one training) or 21% of our total workforce. Additionally, we encouraged our employees to take part

in Energy Day and “Dream Team,” a company-wide challenge that invited employees to pitch ideas for innovations and energy efficiency solutions. The winning projects in 2022 that are being piloted by the Company were “Magical Air Curtain” and an IoT-Based energy monitoring system.

- 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

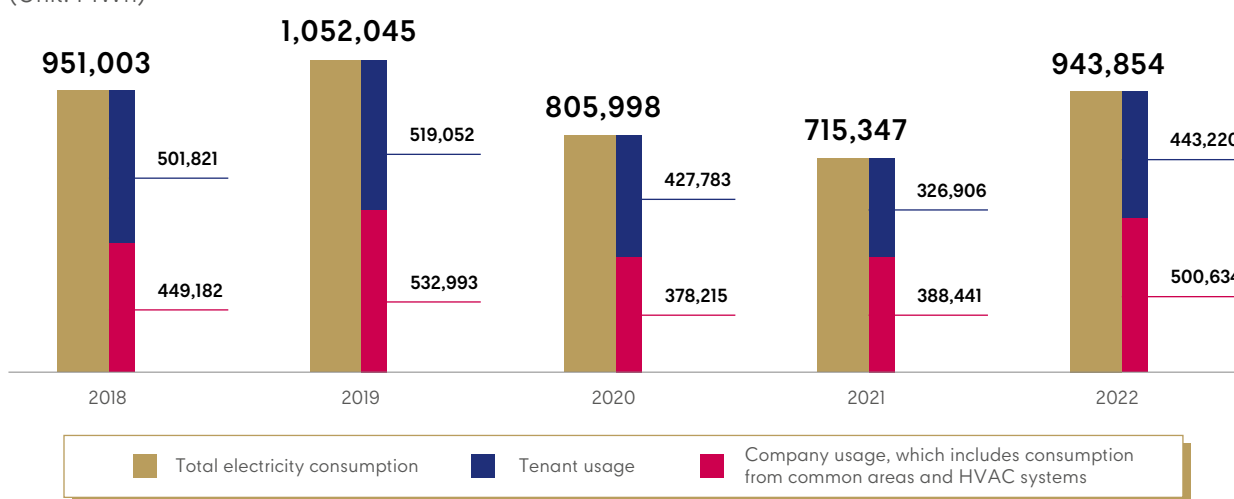
set up based on the Company's systems management procedures and practices, which encompass Preventive Maintenance, Machinery Efficiency Assessment, Re-commissioning and Deployment of Eco-Designs/ Solutions including installing Active Skylights, which are adjustable movable shading fins that cut out heat 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** As a local supplier of electricity and air conditioning to retail stores and businesses on our properties, Central Pattana charges our tenants for electricity usage on a per unit basis to enable them to monitor and manage their consumption efficiently. We also actively engage with our tenants to encourage participation in energy savings initiatives and programs that we are implementing. In 2022, our total electricity consumption amounted to 943,854 MWh (including from solar generation). Of this, 500,634 MWh were company usage and 443,220 MWh were tenant usage or 53% and 47%, respectively.

Building energy intensity across Central Pattana's shopping centers (excluding tenant usage) in 2022 was 134.9 kWh/m, which was 21% higher than 2021 levels, due to higher number of in-store customers and visitors following the continued easing of Covid-19 control measures.

### Electricity Consumption by Activity

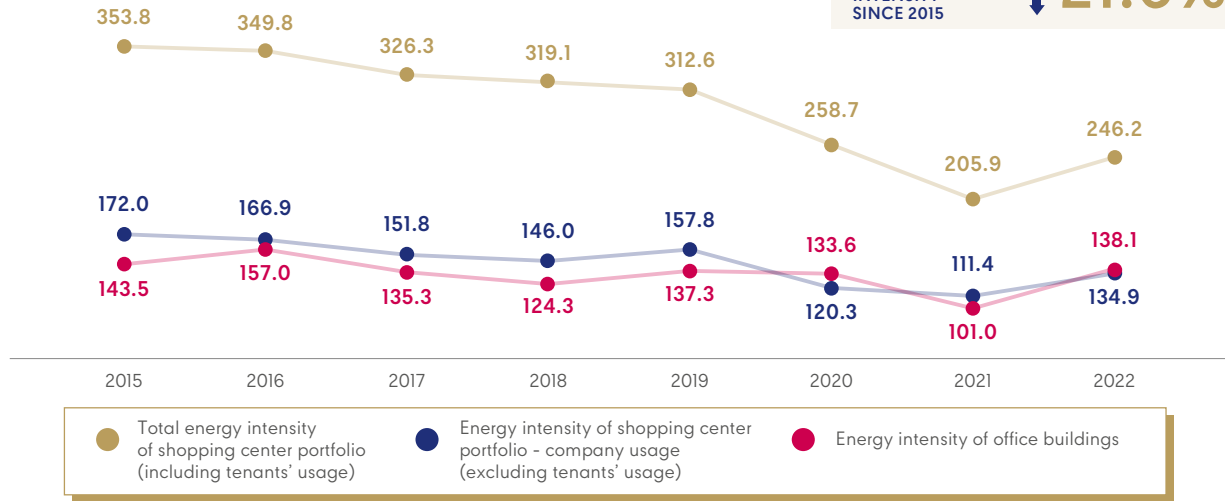
(Unit: MWh)



**Remark:** The number of projects used in calculating the reported annual electricity consumption during 2018-2022 is: 33, 34, 34, 34 and 41, respectively. Additional data in 2022 include electricity consumption from 15 projects of community mall.

## Energy Intensity Reduction

(kWh/m<sup>2</sup>)



- Remarks:**
- The figures reported above 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 2015-2022 is: 24, 28, 28, 30, 31, 31, 35 and 37 respectively.
  - The number of office buildings used in the energy intensity calculation for 2015-2020 was 6 buildings, and for 2021-2022 was 9 buildings.
  - The coverage is now calculated based on net leasable area and common areas, in keeping with international measurement practices.



## 2. Climate Resilience

We have identified climate change as a new risk for Central Pattana, as described in Section 2 "Risk Management and The Task Force on Climate-related Financial Disclosures (TCFD)" of our 2022 Annual Report. We use scenario analysis to help us better understand and prepare for potential future impacts of climate change. The most recent assessment undertaken was based on two of the International Energy Agency's (IEA) assumed scenarios - 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, taking into account policy and legal risks, physical risks and risks to business operations by 2030 and 2050, as reported here:

We are currently reviewing the Science-Based Target Setting approach in order to realign our emissions reduction targets and incorporate them into our sustainability strategy to achieve net zero. In addition to being one of the founding members of the RE100 Thailand Club, Central Pattana has joined the Thailand Carbon Neutral Network (TCNN), making a public commitment to transition to 100% renewable energy across our operations in the shortest possible timeline.

This year, we continue to accelerate the adoption of new technologies to reduce use of fossil fuels in transportation and lower our carbon emissions by setting up 331 EV Charging Stations for customers at 24 shopping centers. This is a five-fold increase from 2021, with a plan in place to install EV Charging Stations at all shopping centers by 2023.

Click



[www.centralpattana.co.th/storage/download/sustainability/reporting-library/en/20220615-cpn-tcfd-building-climate-resilience.pdf](http://www.centralpattana.co.th/storage/download/sustainability/reporting-library/en/20220615-cpn-tcfd-building-climate-resilience.pdf)



EV Charging Station

**24**  
Stations

**331**  
Slots

In 2022, our Scope 1, 2 and 3 emissions accounted for 0.4%, 39.4% and 60.2% of our carbon footprint, respectively. Recognizing that the largest portion of our carbon footprint comes from electricity, we continually pursue and accelerate carbon-reduction measures across our portfolios, with a clear focus on reducing electricity consumption and adoption of renewable energy. Further details can be found in the “Energy Management” and “Electrical Energy Efficiency” sections of our 2022 Annual Report. Our investment of Baht 130 mn in implementing 20 GHG reduction initiatives (including our solar PV program) this year has saved 4,591 tCO<sub>2</sub>-e from being released into the atmosphere.

Our 2022 data shows a 29% increase in absolute Scope 1 and 2 emissions from 2021. The key factor contributing to this rise is the higher number of in-store customers and visitors post-COVID-19.



### GHG Reduction Measures

**20**  
measures

**130**  
Baht  
mn investment

Total GHG  
Reduction

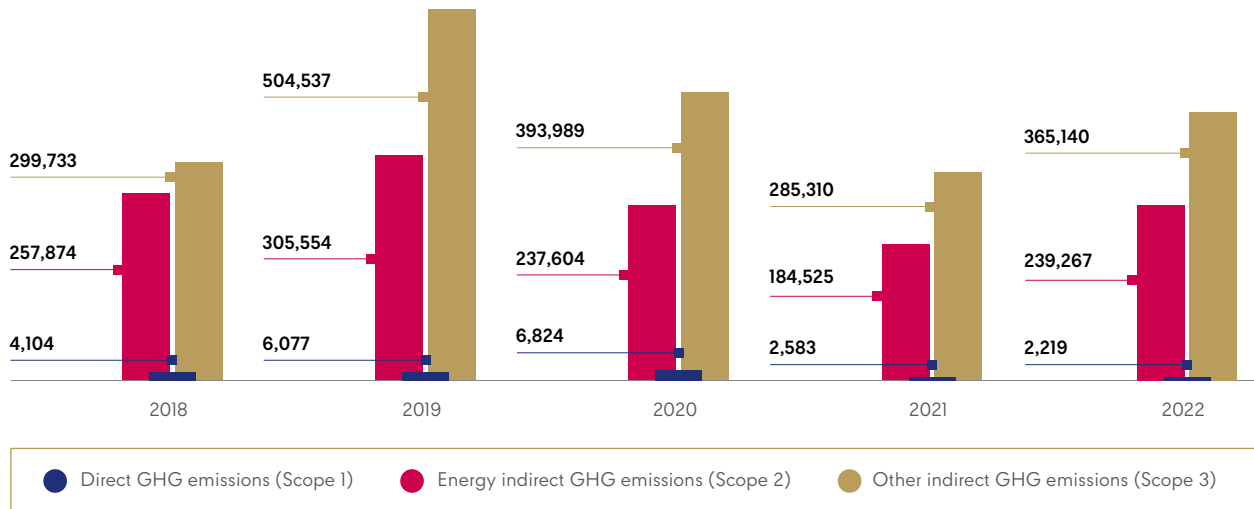
**4,591**  
tCO<sub>2</sub>-e

Greenhouse gas emissions	Measure	2022 Target	Progress in 2022
Scope 1	Transition to lower-Global Warming Potential (GWP) refrigerants and zero Ozone Depletion Potential (ODP)	8% Scope 1 and 2 emissions reductions compared to 2019 levels	<ul style="list-style-type: none"> <li>In 2022, our Scope 1 and 2 emissions amounted to 241,486 tCO<sub>2</sub>-e</li> <li>Achieved 22.5% reduction in Scope 1 and 2 emissions compared to 2019 levels</li> <li>Reduced Scope 1 and 2 emissions intensity by 36% compared to 2019 levels</li> </ul>
Scope 2	Electrical energy efficiency and renewable energy solutions		
Scope 3	Divert waste from landfill and initiate talks with large enterprises inviting them to join the Green Partnership project, which aims to reduce tenant electricity consumption and ensure proper waste segregation before disposing of it in the garbage rooms	<ul style="list-style-type: none"> <li>Reduced Scope 3 emissions from waste generated in our operations by reducing the amount of waste sent to landfill by 22%.</li> </ul>	<ul style="list-style-type: none"> <li>In 2022, Scope 3 emissions from waste generated in our operations amounted to 114,576 tCO<sub>2</sub>-e</li> <li>Achieved a 31.2 % reduction in Scope 3 emissions compared to 2019 levels</li> <li>Achieved an improvement in waste processing, with the total waste sent to landfill reduced by 28%</li> </ul>

**Remarks:** We are currently working with an external consultant to realign our emissions reduction targets based on the Science-Based Target Setting approach and have established 2019 as a new baseline year for reporting.

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

(tCO<sub>2</sub>-e)

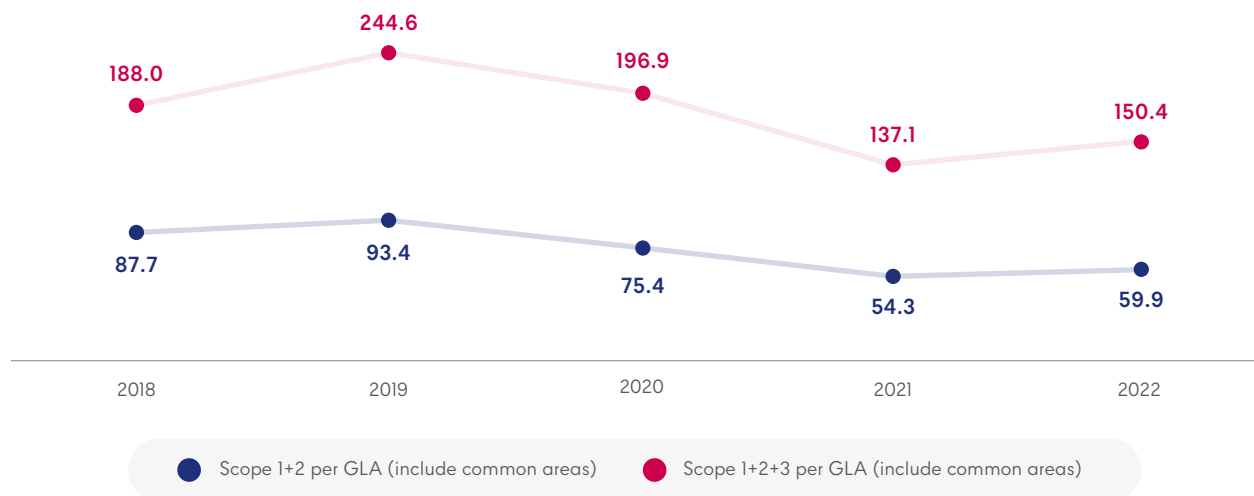


**Remarks:**

1. The reported figures above comprise emissions from shopping centers, office buildings and offices for rental, calculated using the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and the Thailand Greenhouse Gas Management Organization's (Public Organization) Guidance for Greenhouse Gas Disclosure (Operation Control). During 2019-2022, we expanded our reporting boundary to cover emissions from liquefied petroleum gas (LPG) used by tenants as well as emissions from third-party disposal and treatment of waste, which includes landfill waste disposal and transport of waste.
2. Emissions are calculated based on the number of shopping centers that are in operation each year. Include one office building and the Head Office. The number of shopping center projects used in the GHG emissions calculation between 2019-2021 is 38, while in 2022 is 41 and include 15 community malls.
3. The coverage is now calculated based on net leasable area and common areas, in keeping with international measurement practices.

## Greenhouse Gas Emissions Intensity

(kgCO<sub>2</sub>-e/m<sup>2</sup>)





### 3. Water and Wastewater Management

#### 3.1 Water Management

Central Pattana primarily operates in Thailand where the Mekong River and Chao Phraya River run through <sup>2</sup>. The country has a Medium-High Drought Risk and is ranked 45<sup>th</sup> on the global scale. Our physical climate 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, as described in our “Climate Risk and Impact” report. We have established our water management and preparedness measures based on the 3R approach - Reduce, Reuse and Recycle, and set our long-term target to scale up water reuse to 20% <sup>3</sup> by 2025. In 2022, we increased the share of water recycling accounted to 6% of total water consumption.



<sup>2</sup> GRI 303-1

<sup>3</sup> Applies to projects with water recycling systems installed only

Measure	Details
Reduce	Installation of high-efficiency toilets, optimization of washroom flushing systems and deployment of zero water floor cleaning technologies
Reuse	Currently, a study is being undertaken to explore onsite water reuse solutions for condensate recovery and ornamental fountains
Recycled water recovery	Water recycling systems have been deployed across 19 shopping centers, with a combined capacity of 0.585 mn liter or 6% of our total water consumption
Alternative water sources	Installation of rain harvesting systems and authorized use of groundwater
Water efficiency	<ul style="list-style-type: none"> <li>• Leverage efficient water system design, taking into consideration factors including indoor and outdoor water needs, site suitability for construction of water storage structures and cost-effectiveness of onsite water recycling systems</li> <li>• Commission and periodic re-commissioning within two years</li> <li>• Installation of water leak detection systems (select projects) and pumps, allowing for higher rates of water flow and removal</li> <li>• Install sub-metering water systems in tenant shops and stores and billing them based on their actual water usage to motivate water conservation behavior</li> <li>• Retrofit restrooms with water-saving faucets and motion sensor systems and set up drip irrigation and sprinkler systems for watering trees and shrubs around our projects</li> </ul>

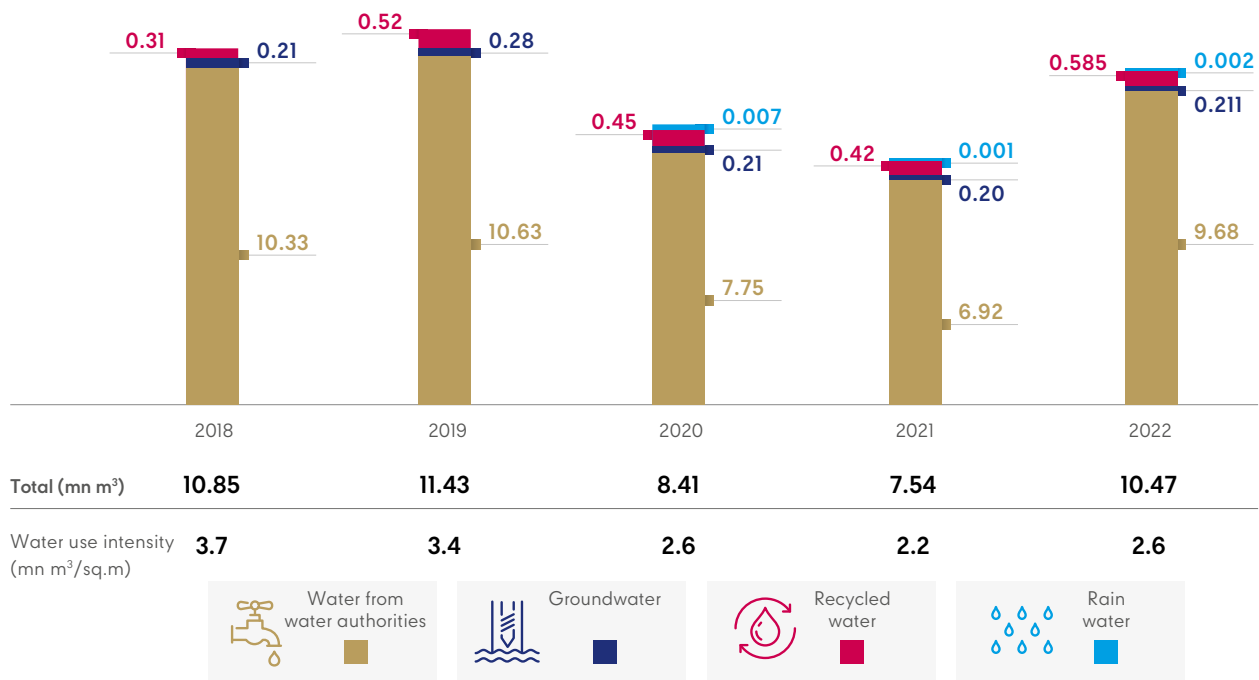


Due to higher numbers of in-store customers and visitors post-COVID-19, the water use from 38 developments (including shopping centers and offices) managed by Central Pattana saw an increase by 39% compared to 2021 levels. In 2022, our total water consumption was 10.47 mn m<sup>3</sup>. Of this, 9.68 mn m<sup>3</sup> were sourced from Metropolitan Waterworks Authority and Provincial Waterworks Authority; 0.211 mn m<sup>3</sup> were from groundwater in five projects;

0.585 mn m<sup>3</sup> were from water reuse or recycling systems; and 0.002 mn m<sup>3</sup> were sourced from rainwater tanks installed in two projects or 92.4%, 2.0%, 5.6% and 0.02% respectively. Due to reduced store hours and implementation of our water-saving initiatives during the year, there was a significant decline in volumes of used water and wastewater going into our recycling systems, resulting in lower production levels and efficiency.

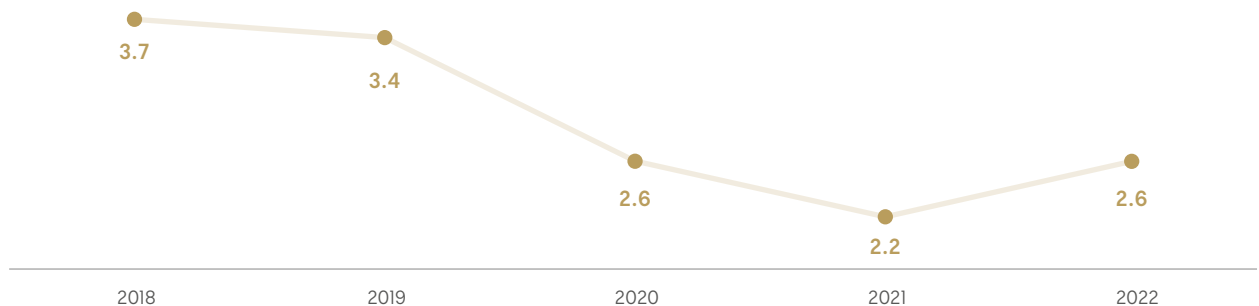
## Water Use

(mn m<sup>3</sup>)



## Water Use Intensity

(m<sup>3</sup>/m<sup>2</sup>)



### 3.2 Wastewater Management

We have set out guidelines for managing and operating sewage 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. Our pre-treatment system comprises:

- Installation of Sequencing Batch Reactors (SBRs)
- Installation of Deep Shaft reactors, which replace the primary clarifiers and aeration tanks
- The treated wastewater is discharged into the central public wastewater treatment system after the pre-treatment

In 2022, the net volume of treated wastewater discharged into public water resources was 4.85 mn m<sup>3</sup>, with 1.73 mn m<sup>3</sup> sent to external treatment plants. The procedure for wastewater discharge outlined in our preventive maintenance plan encompasses quality control <sup>4</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, with monitoring and testing of wastewater quality 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 the outcome to the ISO committee at branch level.

<sup>4</sup> Includes testing and monitoring of Biochemical Oxygen Demand (BOD), Suspended Solid (SS), Dissolved Solids (TDS), pH and Grease & Oil, on a monthly basis, conducted externally by an ISO/IEC 17025 accredited laboratory.



## 4. Waste Management

Central Pattana has incorporated circular economy principles into our waste management approach as we seek to reduce the impact we have on the environment and deliver on our zero waste-to-landfill commitment. We have evolved our “Journey to Zero” initiative, now called “Journey to Net Zero,” to better align with our long-term strategy to become a net zero organization with a long-term goal to reduce the amount of waste sent to landfill in half by 2025 and a short-term target to achieve a 22% reduction in waste to landfill by 2022. We remain focused on encouraging and enabling waste segregation at source and the processing and recycling of waste to maximize its potential benefits as well as engaging with key stakeholders including customers, tenants, employees and partners in the public and private sectors on our journey.

### 4.1 Standards and Certifications

- 1) 32 shopping centers or 75% of the total area achieved ISO 14001 Environmental management certification, which covers waste management process and methods for waste segregation and disposal, with one additional project, Central Phuket, progressing towards certification.

- 2) For the third year, we have participated in the Low Emission Support Scheme or LESS, to have our GHG emission reductions from three waste reduction initiatives including At-Source Segregation of Recyclables, Composting, and Animal Feed from Food Scraps, independently verified and certified. The 20,103 tCO<sub>2</sub>e sequestered this year were more than 90% higher than 2021 levels.



## 4.2 Journey to Zero – Customers

3) New initiatives implemented in 2022 include:

- “Shop Dee ThinkDee” under “The Greatest Grand Sale 2022 #LovePlanet” Rolled out nationwide across 36 Central shopping centers, the activity encouraged the public to “shop dee” or shop sustainably from our curated Sustainability Collection, which included products from partner brands that have adopted sustainable practices such as Anello, Cath Kidston, CC double O, Converse, H&M, Hoka, Innisfree, Karl Lagerfeld, Mango, NIKE, Sabina, Sephora, Teva, The Body Shop, The Face Shop, Uniqlo, Yves Rocher and Zara, with an opportunity to earn over 4 million The 1 points. Additionally, through “#ThinkDee,” customers were invited to donate their old clothing to help communities in need. The initiative was widely successful, gathering more than 1,000 kg of clothes. This, together with other recyclables donated under the “#ThinkDee” campaign during a 20-day period, brought the total amount of waste sent to recycling to more than 55,847 kg.



Shop Dee ThinkDee  
More than  
**1,000** kg  
of clothes donated

+



Combined with other recyclables donated, the total volume of waste sent to recycling amounted to more than

**55,847**  
kg

- The Urgent Project - Better Future is Now to build greater public awareness around the circular economy. To inspire people to take action for the planet, we launched the first Sustainability Experiential Space in the heart of Bangkok, “The Urgent Project – Better Future is Now,” at centralwOrld with engaging activities and exhibitions that break down the concept of circular economy, making them easier to digest under these three themes - Live Better, Eat Better, Style Better. The ten-day event, which also included a workshop and talks, attracted more than 20,000 attendees, in line with our target, and achieved a 4.8 (out of 5) satisfaction rating as well as 100% customer participation in the event missions and games.



The Urgent Project - Better Future is Now attracted more than

**20,000**  
participants




and achieved a  
**4.8** satisfaction rating



- Fostering a Culture of ‘Passing It On’ and ‘Thrifting’ for Clothes to Promote Global Citizenship through a range of activities including a collaboration with the second-hand clothes marketplace startup Loopers and sustainable fashion enterprises such as Fashion Revolution and Sang Does Weave as part of “The Urgent Project: Better Future is Now” event at centralwOrld. To encourage more sustainable shopping habits and help reduce waste generation and pressure on resources, our partners set up booths at the event offering clothing repair service, selling pre-owned clothing items and teaching people about sustainable fashion. In addition, our employees, through Loopers, helped resell some of the pre-owned clothes listed on the marketplace to bring environmental awareness into the everyday. These initiatives with our partners contribute to saving an equivalent of 11,157,750 liters of water needed to manufacture new clothes. To involve our customers in our efforts, we have been holding a rotation of secondhand markets across our shopping centers including “Clean Out Market” at Central Chanthaburi and “Second Hand and Craft Market” Central Si Racha, for example.





#### 4) Ongoing Programs

- Scaling up “Recycle Station” to enable people to easily drop off their clean and sorted waste at the drive-thru collection points. The initiative is a collaborative partnership between Central Pattana and Recycle Day to motivate proper waste sorting at home by rewarding those who take the time to separate their waste correctly with points that can be redeemed for gifts or exchanged for The 1 points to get special discounts or privileges from our partners and stores in Central shopping centers. To date, Recycle Stations, which accept sorted household and tenant waste, have been launched at four projects including Central Eastville, Central Si Racha, Central Ayutthaya and an area awaiting construction managed by Grand Canal Land Plc. (GLAND).
- “ThinkDee” stations are in-store drop-off points for bottles-glass-plastic containers and corrugated cartons available across 33 Central shopping centers nationwide. The revenue generated from selling segregated waste 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.
- Our Waste Management Solutions for PET bottles

Measure	Number of Participating Branches	Amount collected
Install PET bottles bin covers on bins across all projects	All branches	 <b>783 tons</b> (include PET bottles collected and sorted from all available channels)
“Empty Bottles, Full Possibilities#2: Warm Blankets for Kids,” a collaboration between Central Pattana and Wat Chak Daeng that invites the public to donate used plastic bottles, to be converted into blankets for vulnerable groups to keep warm during winter, with 5,000 blankets expected to be distributed at the end of the campaign	15	 <b>123,280 bottles</b> or 1.8 tons
ReFun Machines are installed to collect empty PET bottles with points awarded for every bottle returned, which can be redeemed for gifts or discount coupons for use in stores under Central Group	2 collection points at centralwOrld	 <b>90 KG</b> of plastic bottles or 5,139 bottles sent to recycling plants

#### 4.3 Journey to Zero – Tenants and Other Partners

- “Mai Tay Rum” (waste segregation) policy with the Bangkok Metropolitan Administration (BMA) through participating in the BMA’s waste segregation pilot project, which has been rolled out in three districts, Pathum Wan, Nong Khaem and Phaya Thai. We have also extended our food waste commitment to ten more shopping centers and offices in Bangkok by inviting shops and stores as well as restaurants to apply ISO 14001 standards to their process and join us on our journey, to optimize organic waste segregation for safe disposal and effective utilization.
- “Mai Tay Rum” (waste segregation) policy with Partners through launching the campaign “CENTRAL FOODPARK: ThinkDee with Hero Bags,” to encourage diners to take the time to segregate their food waste before throwing it away. Under the initiative, which aims to promote better understanding of the overall impact of food waste and expand our network of partners to drive waste away from landfill, customers who order out from six of our Food Parks in Bangkok will also be given green and black garbage bags - green for food waste and black for general waste - to sort their waste at home. The initiative is joined by restaurants under Central Restaurants Group.
- ThinkDee Roadshow with Recycle Day: Turning Waste into Value We have partnered with the startup Recycle Day to raise awareness and promote behavior change by encouraging people, particularly workers employed by our office tenants, to sort their waste at home and drop it off for reward points and prizes. The three-month trial during which we held the activity two days a month at centralwOrld, was met with great enthusiasm, with 69 people signing up for Recycle Day membership and 776 kg of recyclables collected. This helped contribute to more than 1,589 kgCO<sub>2</sub>e of avoided greenhouse gas emissions or an equivalent of planting 163 trees. 93% of the participants also said that they were satisfied with the activity.
- Promoting Waste Segregation through Space Allocation for Collection Points/Bins

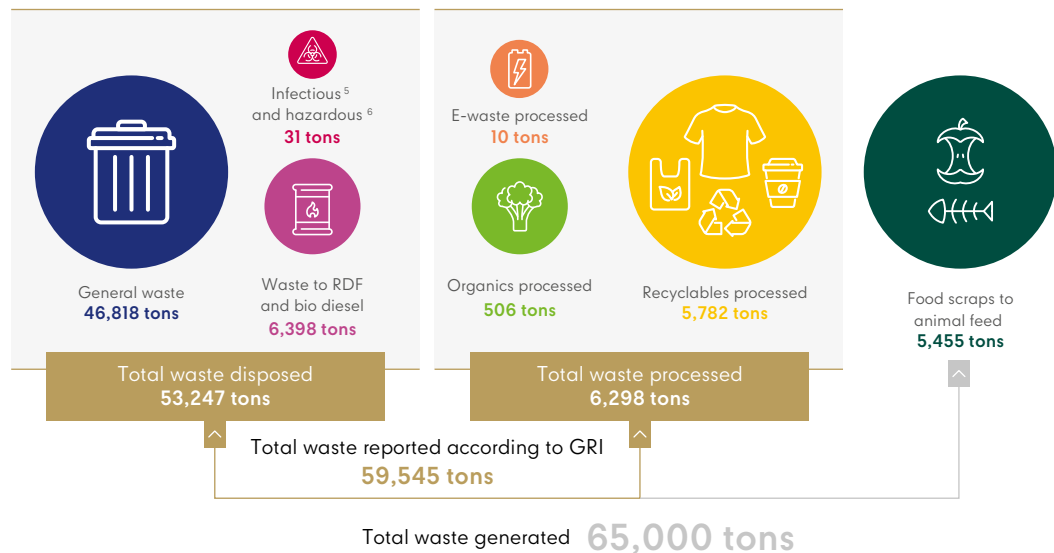
Type of Clean Waste	Collaboration/Partnership	Total Amount Collected
<b>Milk cartons</b> 	The Green Shelter Project In partnership Princess Pa Foundation, the Thai Red Cross Society and Tetra Pak (Thailand), we have introduced more sustainable channels for donating beverage cartons to be transformed into construction materials such as roofing sheets, eco boards, eco bricks and door frames that help build ‘homes’ for natural disaster victims and others who are in need of housing. The project is an extension of “The Green Shelter.”	252 kg from 18 collection points
<b>Lingerie</b> 	“New Life BRA CYCLE,” in partnership with Sabina Public Company Limited to set up collection points for old bras and underwear, turning them into ‘clean energy’	1,176 kg from 32 collection points
<b>Clear plastic bottles</b> 	“New Life for Plastic Bottles,” in partnership with Nestlé (Thai) Co., Ltd., to encourage customers to separate plastic water bottles, particularly PET bottles, from their waste to facilitate effective recycling. The initiative has been trialed in two Food Parks, Central Food Park and Hug Thai at centralwOrld.	More than 8.6 mn bottles sent for recycling since 2019
<b>Plastic films</b> 	“Plastic Film Recycling Bins by Magic Hands” (Facebook: Magic Hands) for collecting plastic films	4.7 tons of plastic films were collected, down 42% from 2021. This decrease was partly due to policy changes introduced by several businesses to stop sealing and securing goods transported from factories in plastic films.

Type of Clean Waste	Collaboration/Partnership	Total Amount Collected
<b>E-waste</b> 	"E-waste," in partnership with Advanced Info Service or AIS, to set up e-waste drop-off points across our projects nationwide. Together with the e-waste collected and sorted from our three-bin waste system and tenant waste, a total of 9.8 tons of e-waste was collected and properly disposed of, contributing to more than 103 tCO <sub>2</sub> e of avoided greenhouse gas emissions.	Over 10,000 pieces

In 2022, 65,000 tons of waste (including waste awaiting disposal at the end of December 2022) were generated by 38 shopping centers and offices owned and managed by Central Pattana and its subsidiaries - a 44% increase from 2021 levels. Of this, 18,182 tons were segregated and diverted from entering the waste stream - a 299% increase from last year, which contributed to a 28% reduction in the total waste sent to landfill sites.

### Waste Management

(Unit: Tons)

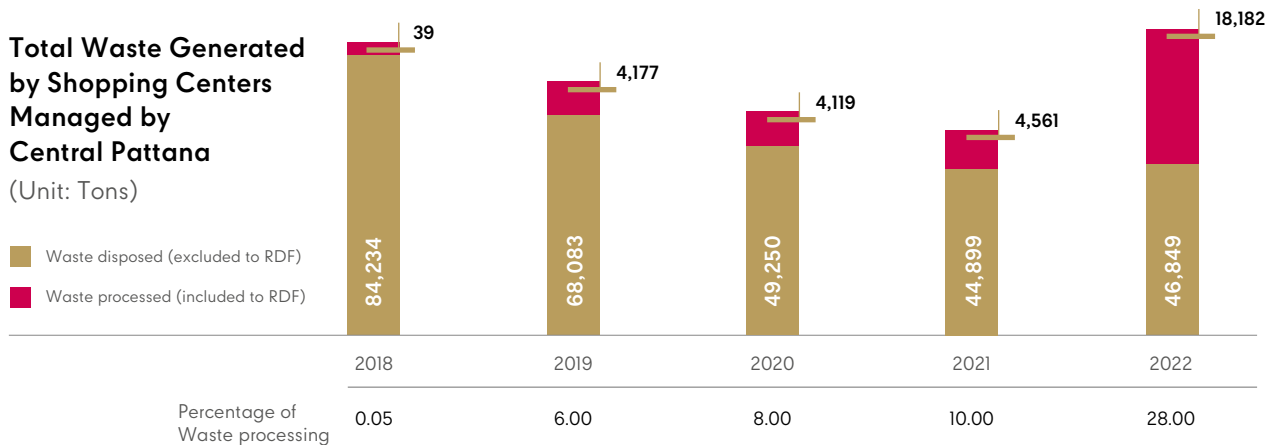


<sup>5</sup> Any infectious waste produced from beauty clinics is managed by tenants who are responsible for arranging for the removal and disposal of the waste via contractors according to ISO 14001.

<sup>6</sup> E.g. light bulbs, batteries, paint buckets

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

(Unit: Tons)







## 5. Air Quality

Central Pattana actively monitors and manages air quality in our shopping centers to ensure all applicable standards are met through implementing monitoring and control measures and conducting regular tests of indoor air quality and toxic gases that can cause acute health effects. These included deployment of fine dust filters for newly installed fresh air systems and installing CO2 sensors throughout our properties to ensure sufficient fresh air is brought into the buildings and in the event that ambient air quality falls below acceptable levels, the fresh air systems would automatically shut down.

In 2022, 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:

- Install air quality monitors across our shopping centers to ensure that the indoor air quality is maintained at an acceptable level
- Actively monitor and test indoor air quality including PM2.5 levels in all shopping centers to ensure they meet the required standards
- Established a plan to install air quality monitors for continuous 24-hour monitoring of air quality. The measure has been embedded in our standard requirements for new developments and renovated projects.
- Install MERV Filters in Outdoor Air Units (OAUs) in projects located in the areas in northern Thailand that are 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 that are undergoing renovations including Central Ayutthaya, Central Si Racha, centralwOrld, Central Rama 2 and Central Ramindra, respectively. The measure has been embedded in 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.
- Implement a range of dust control measures in construction sites including using dust protection mesh sheets and spraying vehicle wheels with water before leaving the sites.
- Pilot the use of HVAC Air Scrubbers on HVAC systems at Central Ayutthaya, which can provide ventilation and air scrubbing simultaneously by removing impurities including CO2 and volatile organic compounds (VOCs) from the air as it circulates through the HVAC systems.
- Accelerate the adoption of new technologies to reduce use of fossil fuels in transportation and lower our carbon emissions by setting up 331 EV Charging Stations for customers, with a plan to increase more than 400 EV Charging Stations at all shopping centers by 2023.
- Selection and use of non-toxic and low-VOC paints and coatings at Central Chanthaburi



## 6. Green Building

Central Pattana applies Green Building frameworks and practices in the design and development of our shopping centers. These include LEED: Leadership in Energy & Environmental Design, which is established by the U.S. Green Building Council (USGBC) and the evaluation criteria for green buildings established by TREES or Thai's Rating

of Energy and Environmental Sustainability, the ASEAN Energy Awards<sup>7</sup>, the Ministry of Energy's Thailand Energy Awards, the Metropolitan Electricity Authority's Management of Energy Achievement Index (MEA Index) and the MEA Energy Awards' Indoor Air Quality (IAQ).

<sup>7</sup> The evaluation criteria established by ASEAN Energy Awards and Thailand Energy Awards encompass the following dimensions of green building management: energy efficiency management, greenhouse gas emissions savings and pollution reduction, waste management, green features and innovations and usage of non-toxic, circular and sustainable materials.

In 2022, Central Pattana has been recognized by the following green building awards:

### Thailand Energy Awards 2022

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

- Central Khonkaen - Outstanding Achievement in Energy Conservation - Designated Building
- Central Nakhon Si - Outstanding Achievement in Energy Conservation Creative Building (Green Building)



To date,  
Central Pattana  
has received



**42**

**Thailand Energy  
Awards**  
from 27 projects

**17**

**MEA Energy  
Awards**

**10**

awards at  
**ASEAN level,**

**LEED  
Certification**

**2**

projects

We are currently working towards achieving a LEED certification for centralwOrld Offices and a TREES certification for Central Chanthaburi, and expect to receive the outcomes by 2023.

In addition, as part of our long-term environmental management strategy, we have put in place a plan to strengthen our standards for environmental sustainability based on Green Building standards and other standards for energy-saving building and environmental design. We annually give the SD Environmental Award, established in 2019, to a branch that has demonstrated an outstanding environmental performance in reducing electricity and water usage, greenhouse gas emissions-savings, waste management and employee engagement, to motivate our

shopping centers to go beyond relevant mandatory standards and requirements. This also encourages our employees to think creatively about resource management and efficiency. Each year, internal experts in relevant fields are invited to join the judging panel of SD Environmental Award, to help provide insights from the technical, business and practical application perspectives. Our aspiration for this activity is not only to increase environmental awareness within the Company, but also facilitate the exchange of information and innovations that will drive our green culture forward, promoting resource and environmental conservation while addressing the urgent issue of climate change. The 2022's award will be announced in 2023.

## Showcase: Central Khonkaen and Sustainable Environmental Management

### Design, Architecture and Building Materials

Central Khonkaen is our 15th shopping center. Opened in 2009, it is one of the largest shopping centers in Khonkaen province, with a distinct building design that harnesses the full spectrum of natural light.

### Electricity Management

At Central Khonkaen, an energy audit is conducted on an annual basis to evaluate the energy performance of significant energy uses (SEUs). The shopping center has deployed a wide range of energy savings solutions including the Ball Cleaning System, which removes residues and debris and helps to prevent accumulation of deposits in the condenser tubes; Air to Air Heat Exchangers, a heat recovery ventilation system that recovers and recycles the heat from the exhaust air in restrooms to preheat the incoming fresh air from outside, which reduces the overall energy consumption in the HVAC systems and is more energy efficient than conventional fresh air systems that introduce cold air from outside, which requires more energy to heat to the desired temperature; Temperature and Humidity Sensors, which send data directly into the Building Automation System



(BAS) to control the amount of the chilled water supply required from chillers; and integrating the Internet of Things (IoT) technology with the existing Building Automation System (BAS) to enable real-time data monitoring and analysis of the HVAC systems.

Featuring a 999.6 kWp rooftop solar PV system, Central Khonkaen has been sourcing its renewable electricity onsite since 2020, with 1,245,869 kWh of electricity generated in 2021 or 5% of the shopping center's total electricity consumption, contributing to 622,810 kgCO<sub>2</sub>-e avoided/year.

**Water Management**

Central Khonkaen has the Ultrafiltration (UF) system installed, which enables reuse of treated wastewater from toilets in cooling towers and for other purposes such as watering plants.

**Waste Management**

Through its participation in the “Journey to Zero” program, Central Khonkaen 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.



**999.58**

kWp Solar rooftop power system installed

**1,245,869**

kWh solar energy generated on-site in 2022



Accounting for GHG emission reduction of

**622,810**

kgCO2-e



## 7. Biodiversity and Ecosystem Management

The wellbeing of people, plants and wildlife in the ecosystems is important to us. At Central Pattana, we establish a clear policy on biodiversity and ecosystem management in accordance with our Biodiversity and No 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>

In addition to setting out clear guidelines expressly prohibiting development in restricted or protected areas, the policy requires that ecological surveys and assessments be conducted with specialist consultants and ecosystem services in and around our new developments and renovation projects are sustainably managed and protected. None of Central Pattana developments are located in restricted or protected areas. We address risks and impacts on biodiversity by applying the mitigation hierarchy to achieve no net loss and deliver nature-positive outcomes. In carrying out new developments and renovation projects in 2019-2022, 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 guidelines and practices established by responsible agencies, with implementation of measures to avoid, minimize and compensate for biodiversity loss through the mitigation hierarchy. For instance, we scouted and recorded perennial plants for transplanting as well as cats and stray dogs living around the projects to be rehomed.

We undertake Environmental Impact Assessments (EIAs) to predict the positive and negative consequences of major development activities or projects on the environment and identify appropriate mitigation measures to be incorporated into the planning and design of our residential projects to ensure compliance with all legal requirements. To date, we have completed Environmental Impact Assessment (EIA) studies for 21 residential projects, four of which included Biodiversity Impact Assessments (BIAs) as part of the process, which were conducted with technical support from external environmental specialists.