



LOGISTICS



**UTILITIES
AND POWER**



**INDUSTRIAL
DEVELOPMENT**



DIGITAL

**SET Awards 2023
Sustainability
Excellence**

WHA Corporation PCL.

12 September 2023

Introducing Speakers

Ms. Jareeporn Jarukornsakul

Chairman of the Executive Committee and
Group Chief Executive Officer



Position & Company

- **WHA Corporation PCL.**
 - Vice-Chairman of The Board of Directors
 - Chairman of the Executive Committee
 - Group Chief Executive Officer
- **WHA Industrial Development PCL.**
 - Chairman of The Board of Directors
 - Chairman of the Executive Committee
- **WHA Utilities and Power PCL.**
 - Chairman of The Board of Directors
 - Chairman of the Executive Committee
 - Chairman of the Risk Management Committee

Mr. Natthapatt Tanboon-ek

Group Chief Financial Officer



Position & Company

- **WHA Corporation PCL.**
 - Executive Committee
 - Group Chief Financial Officer
- **WHA Utilities and Power PCL.**
 - Executive Committee

Shape the New Future

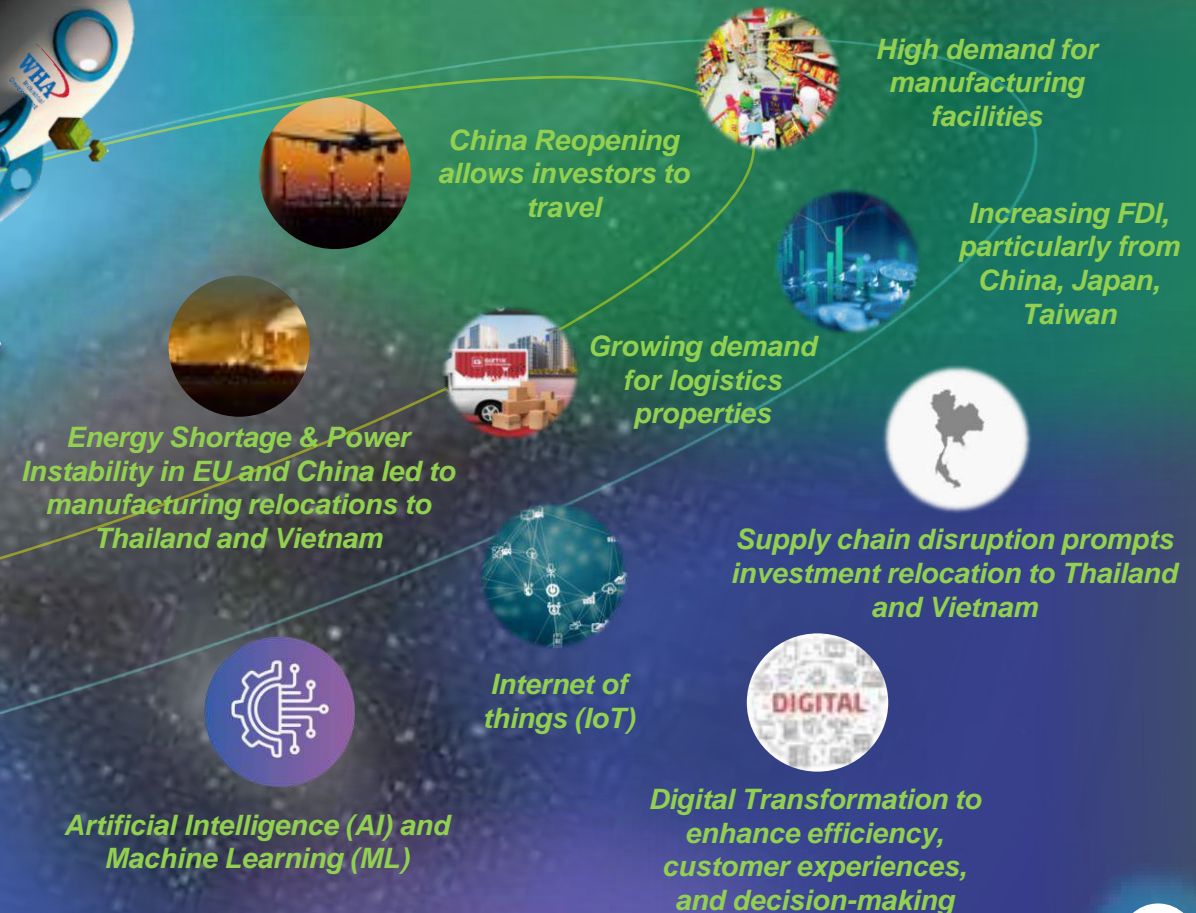


Global Trends and Challenges for WHA Group's Value Chain

Sustainability



Global Business Environment



Thailand's Key Competitiveness

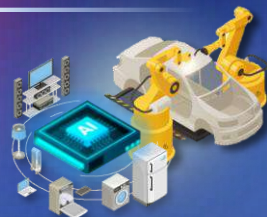
STRATEGIC LOCATION



WELL-DEVELOPED INFRASTRUCTURE



ESTABLISHED AND INTEGRATED SUPPLY CHAIN



COMPETITIVE SKILLED-WORKFORCE



SUPPORTIVE INVESTMENT ENVIRONMENTS



ATTRACTIVE INVESTMENT INCENTIVES



GLOBAL COMPETITIVENESS RANKING

by World Economic Forum (Out of 141)*



40th

50th

67th

INFRASTRUCTURE
SKILL

71th
73th

72th
65th

77th
93th

EASE OF DOING BUSINESS RANKING

by World Bank (Out of 190)*

EASE OF DOING
BUSINESS

21st

73th

70th

TRADE PARTNERSHIP EXPANSION

by Asia Regional Integration Center

NUMBER OF
FREE TRADE
AGREEMENTS

38
FTAs

41
FTAs

27
FTAs

Remark: *Latest figures were published in 2020.

Resilient Supply Chain

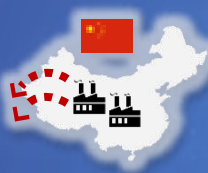
THE NEW SUPPLY CHAIN

Regionalization



Mitigate risk by regionalizing supply chains in response to a proliferation of regional trade agreements

Diversification



Alternative sourcing and production to diversify from over concentrating in China to minimize any disruption

Automation



Less humans on site and robots can be deployed for cleaning, shelf stocking and deliveries

Servicification



Digital technology has made borders between the industries become blurred

Transparent supply chain



Able to trace a product from raw materials, through manufacturing, distribution, until reaches end consumer

Sustainable supply chain



Integrate ethical and environmentally responsible practices into a end-to-end supply chain

Resilient Supply chain is a priority after COVID-19 pandemic. There is growing awareness that supply chains need to be more flexible and agile so they can react and adapt quickly to potential disruption

Strategies for Resilient Supply Chain

6 major strategies to build greater resilience into the networks



Inventory and Capacity Buffers



Manufacturing Network Diversification



Multisourcing



Nearshoring



Platform, Product or Plant Harmonization



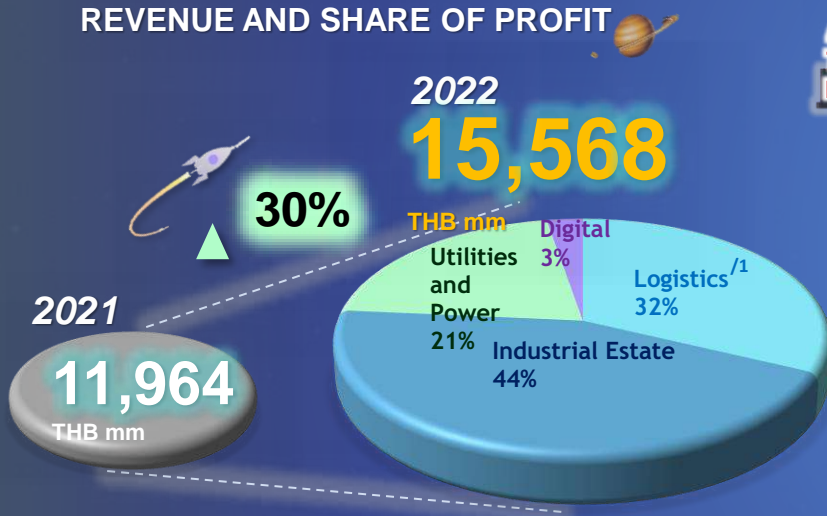
Ecosystem Partnerships

2022 Key Achievements and Recognitions

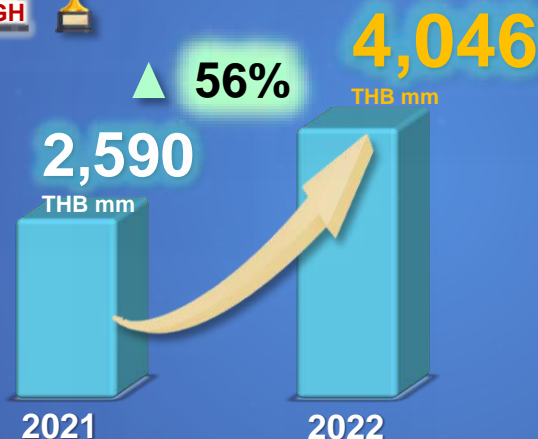
Delivered exceptional performance in 2022 despite uncertain economic environment

Financial Highlights

REVENUE AND SHARE OF PROFIT



NET PROFIT^{/2}



2022 Total Asset
(THB mm)

86,302

IBD/Equity
(Times)

1.13

Credit Rating

Maintained
A-

Remarks: ^{/1} Included Revenue from Sales Assets to WHART 11% and WHAIR 7%
^{/2} Net Profit = Net Profit Attribute to Parent

Sustainability Awards and Recognitions

WHA Group

“Commended Sustainability Award”



Sustainability Excellence category in SET Awards 2022 for market capitalization of >30,000-100,000 million baht

S&P Global Sustainability Yearbook 2023



WHA Group has been recognized a Sustainability Yearbook Member & Industry Mover for the Real Estate Industry

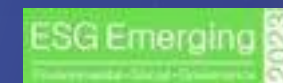
WHAUP

“Best Innovative Company Award”



For WHAUP's project “Peer to peer energy trading: the future of energy market”, a power trading platform in industrial estates

ESG Emerging & ESG 100



WHAIR

“Outstanding REIT Performance Award”



Outstanding business performance and sustainable growth, overcoming the economic and industrial situation during the Covid-19 crisis, along with good corporate governance

WHA Group & WHAIR are recognized as one of the top 15 securities in the “ESG Emerging” list



WHA Group, WHAIR & WHART^{/1} are listed in the “ESG 100” Securities

Remark: ^{/1} WHART has been recognized as an investment-worthy fund in the ESG100 for the fifth consecutive year

12 SEP 2023

WHA Group's Strategic Directions and 2023 Target



DOMESTIC CHAMPION

Consolidate our leadership position in our core markets

INTERNATIONAL EXPANSION

Accelerate our regional growth with focus on Vietnam

DIGITAL INNOVATION AND TECHNOLOGY

Embrace innovation and new technologies to enhance customer experience

SUSTAINABILITY

Develop new products and services with focus on sustainability

HIGH-PERFORMANCE ORGANIZATION AND TECH COMPANY

Digital transformation and build high-performance organization



2023 Target Deliverables

Asset under Owned and Managed

2,900,000 SQM

New Projects/ Net Rent

200,000^{/1} SQM

Asset Monetization

142,000 SQM



2,500 Rai
Land Sales



847
MW
Secured PPA
Equity MW

168^{/2}
Million M³
Utilities Sales &
Management
Volume



**Empower and Create New
Businesses**

Remark ^{/1} Including net rent of BTS, RBF and RBW

^{/2} Including 33 million m³ water sales and treatment volume from Vietnam

12 SEP 2023

Boosting Thailand's Economic Growth Forward

**Uplift
Thailand's GDP**
**> 1,400,000
million baht**

Attract **F**oreign **D**irect **I**nvestment



Enhance Investors
Confidence



Knowledge
Transfer

**> 1,000,000
million baht**

Encourage **G**overnment **S**pending



Infrastructure
Development



Incentivization

Enhance **E**xport



Industrial
Cluster



Country's
Competitiveness



Strategic
Location

Enhance Logistics **C**ompetitiveness



Develop
Strategic
Location



Pioneer
Modernized
warehouse

Boost **C**onsumption



Job Creation



High-Skilled
Labor

Prosperity
Distribution to
surrounding areas

**> 200,000
job positions**

Fostering New FDI Destination in Vietnam

Our Vietnam Industrial Estates has brought Foreign Direct Investment (FDI) of Over USD 2.2 Billion



OPPORTUNITY TO ATTRACT HIGH VALUE TECHNOLOGY PRODUCTS



Interconnected logistics



Technology Industrial and Supplier Base



Integrated supply chain & Vietnamese local content

SUITABLE LAND FOR TECHNOLOGY-BASED INDUSTRIES

Due to proximity to Ha Noi and Hai Phong, and upcoming completion of logistics infrastructure

Electronics

Hanoi



Thai Nguyen



Bac Ninh



Ha Nam



Bac Giang



Nghe An



Vinh Phuc



Hai Phong



Hung Yen



Automotives

Hanoi



Bac Giang



HIGH VALUE ELECTRONICS



ELECTRICAL



TELE-COMMUNICATION



AEROSPACE



ROBOTICS



HIGH-VALUE AGRICULTURE



PHOTONICS



LOGISTICS



PHARMACEUTICAL / MEDICAL

Broaden Scope and Scale of Vietnam Business



WHA Industrial Zones in Vietnam

20,950 Rai

(3,350 Hectares)
of Industrial Zones
in Vietnam

895 Rai

(143 Hectares)
Ready for Sale

Nghe An
Province

13,130 Rai

(2,100 Hectares Upon Completion of
Phases

1, 2, 3, 4 and Subsequent Expansion)



WHA Industrial Zone 1
– Nghe An

Goertek USD 500 million
Investment capital



1
Existing
Industrial
Zone

+ 2
Upcoming
Industrial
Zones

Hanoi
Thanh
Hoa
Nghe
An

5,320 Rai

(500 Hectares with
350 Hectares for future expansion)

Danang
Quang
Nam

2,500 Rai

Logistics Business



- Establish first footprint in Vietnam for logistics business in logistics strategic locations

Utilities Business

- Partnership with WHAID for future projects in new WHA Industrial Zones in Vietnam
- Focus on operation optimization of SDWTP and Cua Lo Water Plant
- Actively explore greenfield value-added utilities projects & M&A opportunities in Vietnam c

28
Million m³

Vietnam's Total Water
Supply and Wastewater
Management Volume

2022

Power Business

Expansion to Vietnam



Leverage WHA Group Existing Resources
and Footprints in Vietnam

- Leverage Existing Customers Network for Expansion
- Solar Rooftop both inside and outside Industrial Estate
- Explore M&A Opportunities
- Develop Green Field Project aligned with PDP8



12 SEP 2023

From Digital Transformation to Tech Company Transformation

2024



Turning to Technology Company

Build Digital-Ready Culture in Organization. Digital and innovation are now core value, and continue optimizing best practices with AI and Data Insights.

2023



Data Driven Organization

Turn data asset into a competitive advantage. The whole organization has driven all aspect with data insights through:

✦ Manage digital assets ✦ Innovate with data ✦ Think data monetization

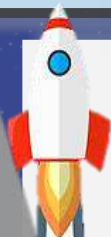
2022



Innovative Workplace

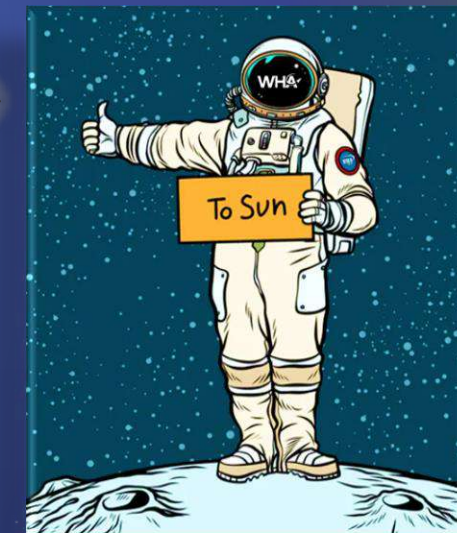
Build Innovation Culture, Workplace and Workforce to create new revenue streams, innovative products and services to serve customer's demand, making WHA superior to competitors.

2021



Digital Transformation

Utilize digital technology to leverage new levels of WHA business operations reliability and efficiency in order to empower core business and lead to superiority over industrial competitors.



Mission to The Sun Programs

Turn to Tech Company in 2024



Green Logistics – Decarbonizing Supply Chain

TOTAL SOLUTION FOR CUSTOMER

EV Fleet Leasing



Digital Control Tower Solutions



EV Battery 2nd Life Battery



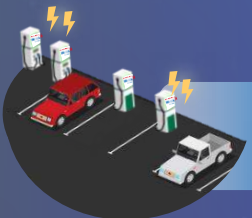
Platform & Aggregator Program



Power Supplier



EV Charging Service



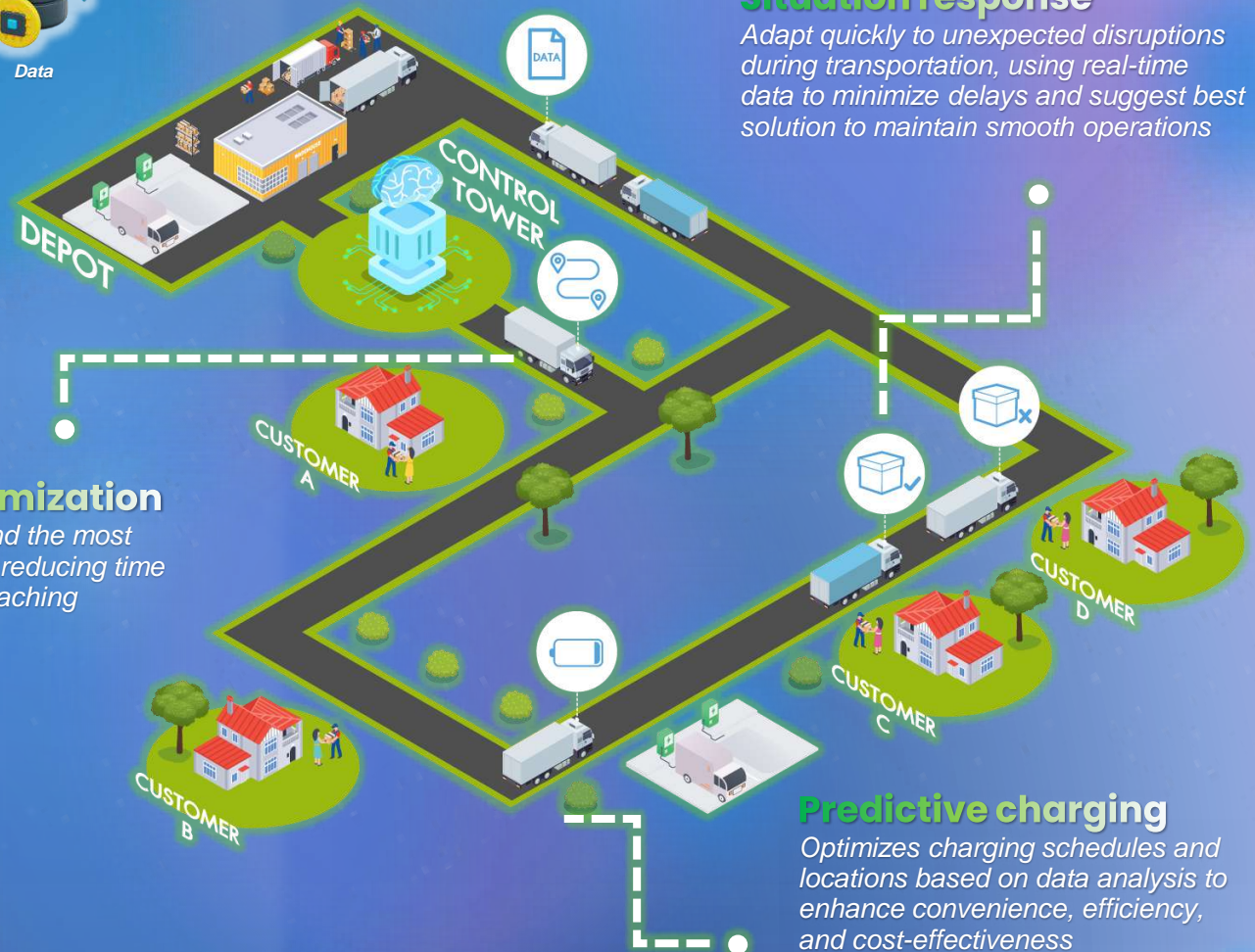
Artificial Intelligence



Data



Machine Learning



Situation response

Adapt quickly to unexpected disruptions during transportation, using real-time data to minimize delays and suggest best solution to maintain smooth operations

Route optimization

Algorithms to find the most efficient routes, reducing time and costs for reaching destinations

Predictive charging

Optimizes charging schedules and locations based on data analysis to enhance convenience, efficiency, and cost-effectiveness

Circular Economy

WHA Group moving toward Circular Economy and identify new Circular Innovation

WHA Circular is a platform promoting Circular Economy concept focusing on industrial waste recycling by facilitating the trading of all cycles of recycling activities in an open market through the use of technology

Following Circular Economy principles, **WHA Circular** will connect waste producers with waste buyers and enable them to trade their wastes. It can also match the right waste management service providers such as waste disposal plant or landfill. Our platform will bring customers the best solutions through our network of partners, suppliers and vendors.

Our mission is to give a second life to waste, by-products and residuals by turning them into resources.

ONLINE INDUSTRIAL WASTE MARKET PLATFORM



Customer Centric

GPT-powered IT support revolutionizes the user experience by providing instant and contextually relevant solutions. Leveraging advanced language understanding, GPT enhances issue resolution, streamlines troubleshooting, and empowers users to navigate technical challenges with greater efficiency

IT SUPPORT AS A PILOT USE CASE



Embarking on the integration of an AI chatbot, showcasing IT support as a key use case for driving forthcoming developmental endeavors



Frequently Asked Questions



Azure Open AI



AI assistant via Microsoft Teams



Informed Answer



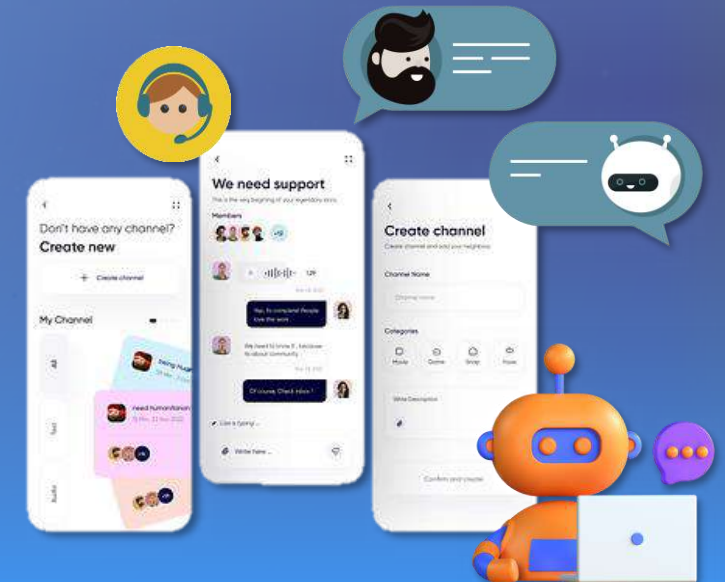
Knowledge Document



- ✓ Real-time Assistance
- ✓ Reduced Downtime
- ✓ Optimized IT Service
- ✓ Scalable Support
- ✓ Enhanced User Satisfaction

WHA SUPER APP

Incorporating a ChatGPT function in super app to enhance both service quality and the overall customer experience



People Development

WHA Innovation Bootcamp : Unlocking internal potential and building innovation



CORPORATE INNOVATION BOOTCAMP



Core Program

In order to validate pain points, create prototypes and test, we offer intensive innovation bootcamp driven by human-centric approach. The program aims to enhance internal team capability and equip innovative toolset and skillset for innovation creation

Expected Outcomes

Tested Prototype For New Business Idea



SEASON 1

Problem Statement

“How might we leverage technology/ digital platform to enhance WHA existing core businesses or initiate new business for WHA in order to Develop new business model for WHA”

MENTORING
SESSION ▶



PITCHING ACTIVITY ▲



WHA WMS



WHA Residence



Solar Powered
Charger “LOEV”



Meta W



WHA Investlignce



WHA Circular

SEASON 2

Problem Statement

“How might we leverage WHA's strengths & capabilities to deliver sustainability innovation which lead to WHA's sustainable growth?”



HACKATHON ▼



BOOTCAMP ▼



MediWHA MediWHA



Ammonion



The Bridge



Learniverse



CO2llective

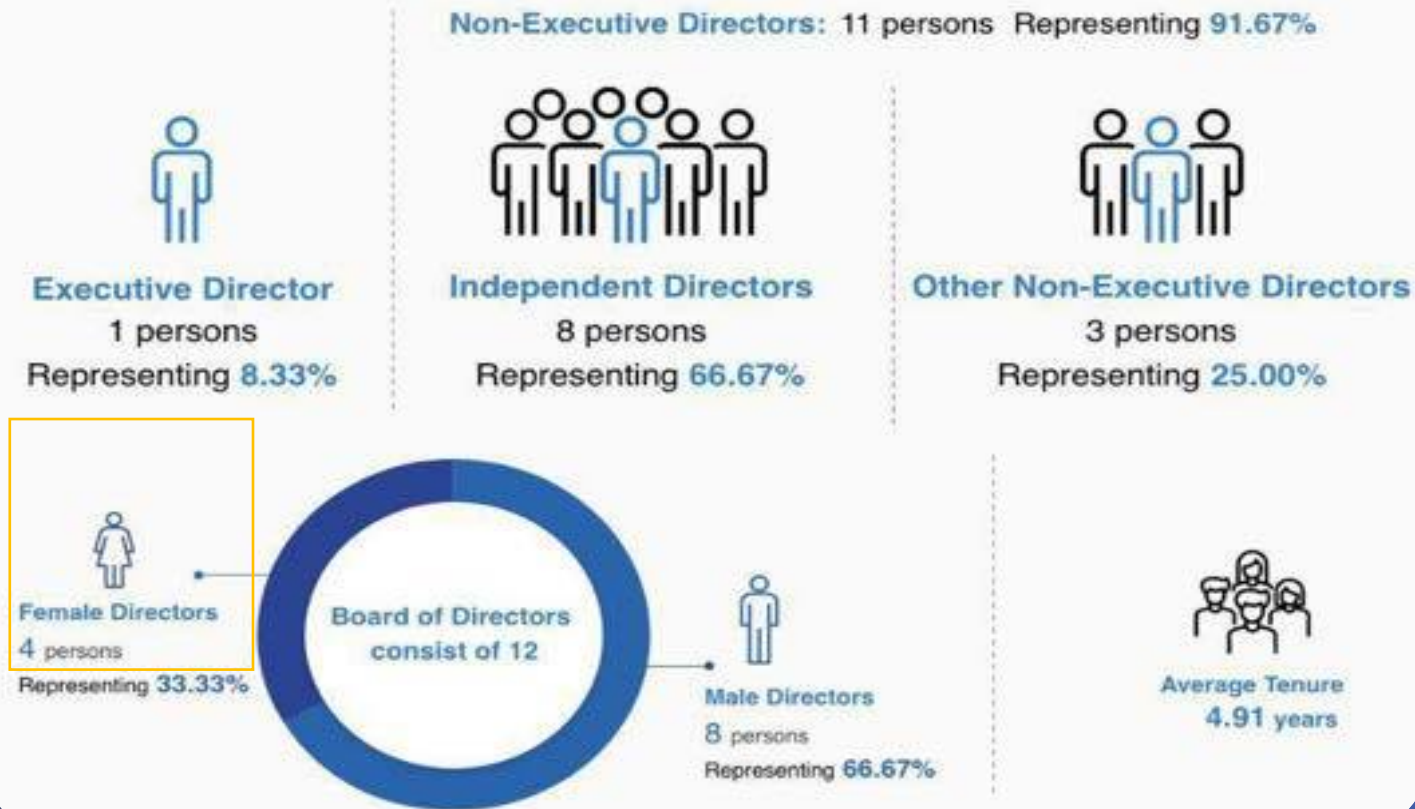


WHA Eco-friendly

WHA has a Robust Board of Directors Structure Consisting of Highly Qualified Individuals with Diverse Qualifications and Experiences

Board Composition

As of 28th April 2023, the Board of Directors consist of 12 directors hereto;



Strong Board Diversity and Composition

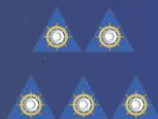
To create diversity culture in WHA Group, the Board of Directors consists of:

- A diverse group of individuals with outstanding skills, knowledge, and competencies
- Presently, 11 out of 12 directors are non-executive directors
- Chairman of the Board of Directors is an independent director
- Chairman of the Board of Directors and the Group CEO are not the same person
- Group CEO is a woman
- Chairman of Risk Management Committee and Nomination and Remuneration Committee are non-executive directors
- Risk management covers operation of the company, subsidiaries, and affiliates both in Thailand and Vietnam

WHA's Commitment to Compliance and the Fruitful Outcomes of Good Governance

“Effective corporate governance drives sustainable shareholder value and fosters stakeholder trust”

Excellent CGR Scoring



5 Stars

Corporate Governance Report (CGR) of Thai Listed Companies in 5-Stars “Excellent” criteria over five consecutive years (since 2018-2022)

AGM Scoring



100% scoring

for AGM Checklist Program in over three consecutive years (since 2021-2023)

CG Policy and the Code of Conduct



100% of Director, Executive and Employee have been communicated and training about CG policy, the Code of Conduct and Anti-Corruption Policy

0% employee breach of CG policy, the Code of Conduct and Anti-Corruption Policy

Supplier Code of Conduct



100% of suppliers are communicated and trained about Supplier Code of Conduct

100% have signed acknowledgement to the Supplier Code of Conduct

Business Transparency



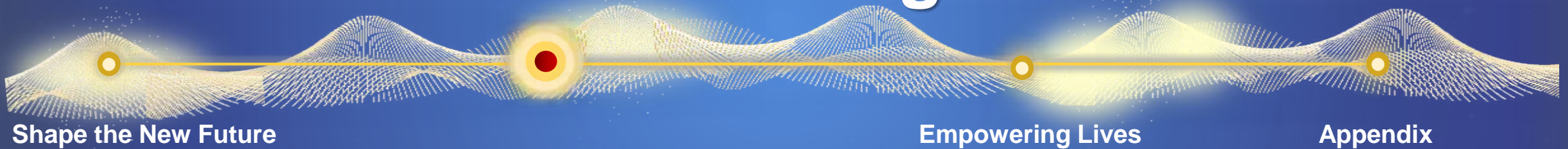
Certified as member of Thai Private Sector Collective Action Against Corruption (“CAC”) for three consecutive times. (since year 2014-2026)

Data Security



0 Number of identified leaks, thefts, or losses of customer data

WHA: Your Partner in Combating Climate Change Crisis



Climate-related Physical and Transition Risks

WHA Group has incorporated the TCFD Framework into its strategy and risk management process to identify climate-related risks and impacts

Physical Risks



Flooding and Extreme Weather

The increased in severity of extreme weather events and flooding



Droughts

The increased in severity of extreme weather events, relating to droughts

Transition Risks



Policy and Legal

Legal and regulation changes relating to GHG reduction, such as enforcing the use of construction materials with no GHG emission



Technology

Changes in direction and development of current renewable energy technology may leads to new demands and expectations from customers



Market

There may also be more demand for environmental friendly building (in both construction process and GHG emission)



Reputation

WHA Group's stakeholders may pay more attention and demand that the Group take actions to reduce GHG emissions

Managing Droughts and Flooding Risk



Strategic Location Selection; substantial above sea level, solid foundation and no obstruction against community water flow



Design properties to cope with severe weather; water drainage, retention pond and building structure (storm and earthquake resistance)



Installation of ultrasonic equipment and SCADA system to closely monitor water levels and manage raw water supply



Use **Water Reclamation** which reduce the Group's reliance on natural resources, by reducing water withdrawal and water discharge and save costs on raw water sourcing



Monitor and assess the usage of natural water sources and report to related parties at least once a month



Construction of **additional ponds and water reservoir** to ensure that capacity of water storage is sufficient for self-supply

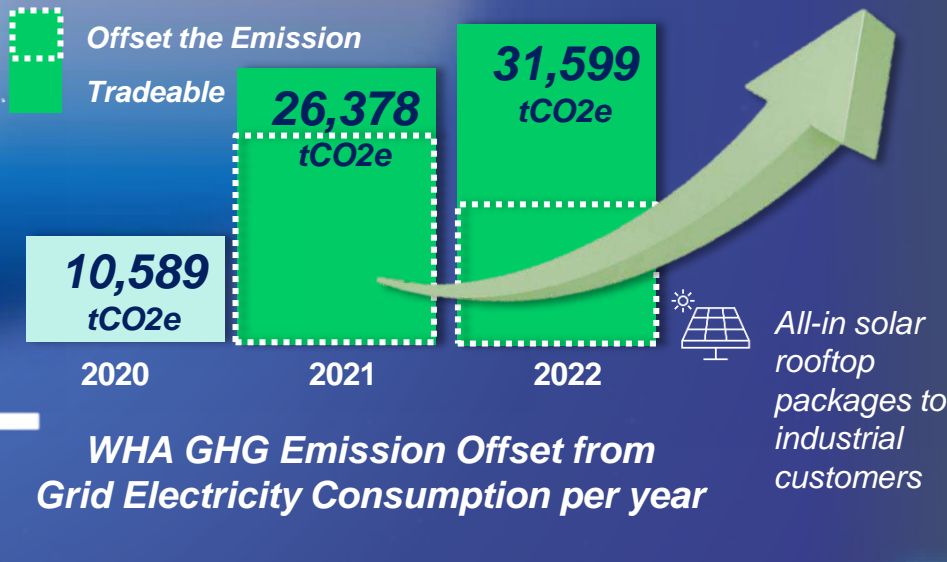
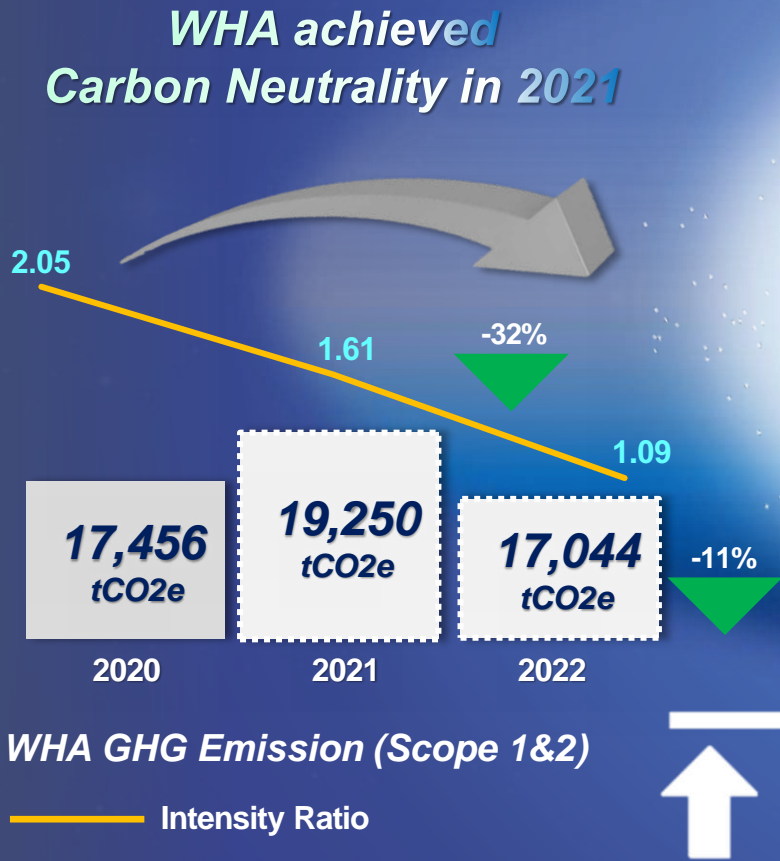
Our Net Zero Mission



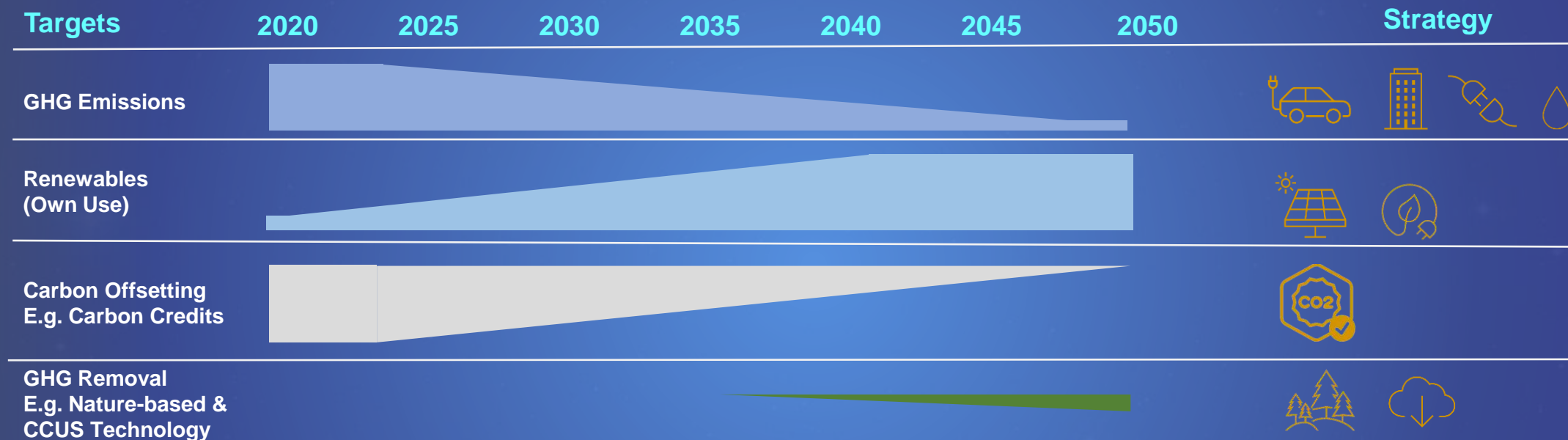
WHA has been offsetting CO2 emissions from our operations, which results in an extensive number of credits for carbon trading in the future

2050 NET ZERO

WHA Group Commits to Achieving Net Zero Greenhouse gas Emissions by 2050.



WHA Group Achieved Carbon Neutrality in 2021 and Commits to Achieving Net Zero Greenhouse Gas Emissions by 2050



WHA is decarbonizing own operation, while also capturing new business opportunity in climate market

- Promote the use of green fuels and Electric Vehicle (EV) for WHA own operation and supply chain
- Energy reduction program: upgrade to high-efficiency appliances e.g., air conditioner, lighting system, refrigerants
- Enhance the capacity in green building design and construction
- Promote behavioral changes to optimize electricity use in the operations
- Invest in New S-Curve business e.g., Green Logistic, P2P Energy Trading, Battery Storage, BECCS, Hydrogen, Digital Asset.
- Increase install capacity in solar rooftop packages for own operations
- Initiate sustainable wastewater treatment and recycle
- Invest in new business model in carbon credit or renewable energy certificate (REC) trading
- Invest in afforestation projects
- Purchase removal carbon credits

WHA Embarks on the Net-Zero Transition Journey: Paving the Way to Become the Ultimate Solution for Sustainable Growth

1. GHG Accounting

WHA has GHG emissions results verification:

- Total = 17,044 tCO₂e
- Scope 1 = 1,322 tCO₂e
- Scope 2 = 15,722 tCO₂e
- Hotspots are own electricity consumptions

2. Climate Ambition

WHA achieved carbon neutrality in 2021, and set a higher goal to achieve Net-Zero emissions by 2050, positioning ourselves as a leading mover in the real estate development industry, committed to environmental excellence.

3. Risk & Opportunity Assessment

WHA have conducted a climate scenario analysis. Our climate analysis reveals medium to high short-term risks at 4°C, with low impacts for medium and long-term scenarios at 1.5°C, aligning with our climate goals.

4. Targets and Metrics

WHA have aligned goals with science-based targets, allocated specific objectives to business units (BUs), and incorporated key performance indicators (KPIs) such as GHG reduction, energy saving, wastewater treatment to drive our commitment.

8. Disclosure & Recognitions

WHA have been transparently disclosing our climate actions aligning with the Task Force on Climate-Related Financial Disclosures (TCFD) and recognized for our actions through accolades such as the SET Awards, Thailand Sustainability Investment (THSI), inclusion in S&P Global Sustainability, and alignment.

7. Actions

- “Mission to the Sun”
 - Green Logistics
 - Digital Assets
 - Circular Economy
- Solar rooftop
- Recycled raw materials
- Water Reclamation
- P2P energy trading

6. Stakeholder Engagement

WHA have implemented comprehensive internal capacity building, launched awareness campaigns for employees and the community, introduced Internal Carbon Pricing (ICP), and actively engaged with customers and suppliers to reinforce our commitment to sustainability.

5. Decarbonization Strategy

Our decarbonization strategy encompasses a multifaceted approach, including investment in renewable energy, carbon credits, smart building technologies, energy-saving measures, green logistic, and digital management solutions, all aimed at driving a sustainable future.

Navigating Climate Change Crisis Through Effective Energy Management

Promoting Clean Energy to Our Customers



Offers an all-in solar rooftop service package for customers in Thailand including permitting, design and engineering, construction and installation, as well as operation and maintenance throughout the contract period

SELECTED SOLAR PROJECTS

“The Largest Solar Rooftop Project in Thailand”



Prinx Chengshan
Capacity 19.44 MW



Mega Bangna
Samut Prakan
Capacity 9.9 MW



SAIC Motor-CP
Capacity 6.17 MW



Ford Motor
WHA ESIE 1 , Rayong
Capacity 7.7 MW



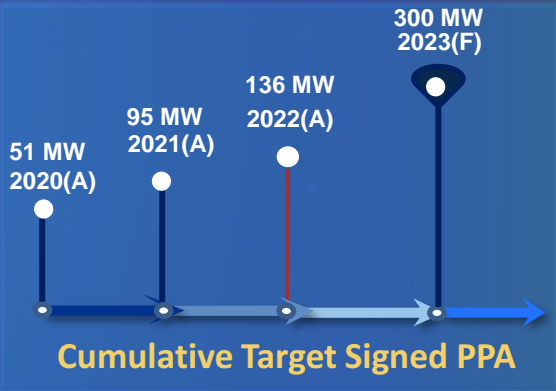
Plan to increase renewable capacity for own operations, especially, for utilities business



Commit to a long-term target to provide renewable energy and has a cumulative target signed power purchase agreement of 300 MW by 2023 that can help to reduce CO2e GHG Emission Reduction

Environmental Saving

Year	GHG Emission Offset from Grid Electricity Consumption Per year
2021	26,378 tCO2e
2022	31,599 tCO2e
2023 Target	171,000 tCO2e



With 300 MW PPAs of renewable energy fully operated there will be;



Revenue generation of
1,400 MB per year



Customer savings on electricity costs of
465 MB per year

Embracing Smart Energy Solutions



P2P Energy & Carbon Credit Trading Platform

Co-development by :



Project
Credential :

“Best Innovative Company Awards at SET Awards 2022”

Progress :



ERC Sandbox 1 (Market 1)
P2P Energy Trading



Successful Trading Simulation
(Aug 2021 – May 2022)



In Progress for Commercial
Trading Start



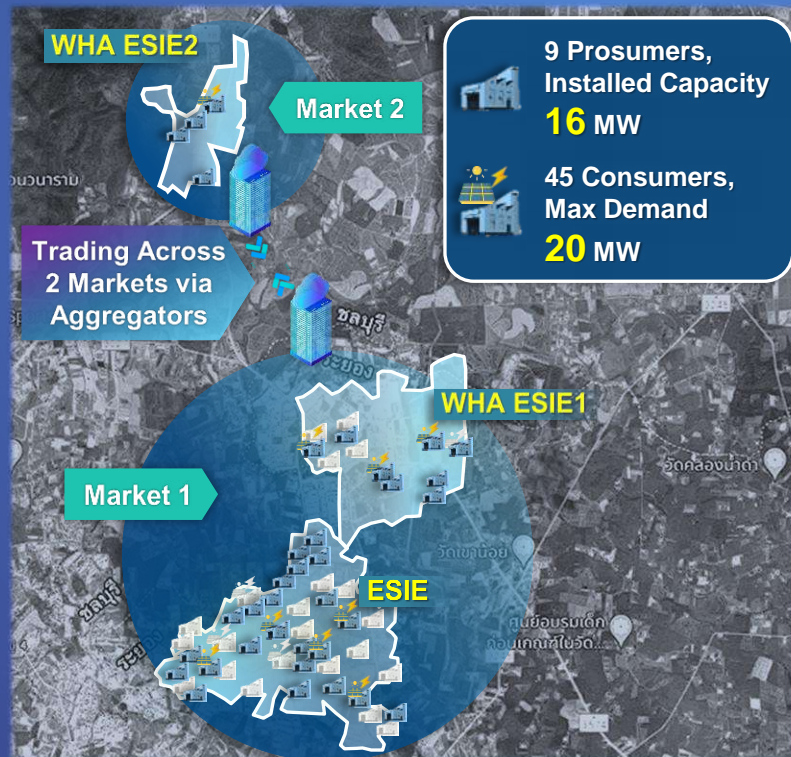
ERC Sandbox 2 (Market 1 + 2)
P2P Energy Trading & Carbon
Credit Trading



Received Project Award
from ERC



Preparing for Trading
Simulation



Thailand Voluntary Emission Reduction
Program (T-VER)



Issued by



In 2022
31 Projects,
Installed Capacity
68.17 MW
Registered ✓

With in 2H2023
+ 19 Projects,
Installed Capacity
+ 22.45 MW
*Prepare Document
for Verification* ⌚



Produce

101,837 MWh/Year

+29,000 MWh/Year

Reduction

48,576 tCO2/year

+14,000 tCO2/year

Value Added

1,408,704 THB/year

+406,000 THB/year



THE INTERNATIONAL
REC STANDARD

International Renewable Energy
Certificate (I-REC)



Issued by



In Progress for Project Registration

With in 1H2023 + 28 Projects

Installed Capacity + 62.07 MW



Produce

+70,000 REC/year

Value Added

+3,900,000 THB/year

Social Activities Driving GHG Emissions Reduction

WHA Collaborates with Various Partners in Social Initiatives to Help Reduce Global GHG Emissions

“ Let’s Zero Together ”

WHA Group Tree Planting Activities

- WHA Eastern Seaboard Industrial Estate 2 Area 99 Rai, 28,830 trees
- WHA Eastern Industrial Estate (Map Ta Phut) Area 2 Rai, 200 trees



WHA has
GREEN AREA
of 5,000 rai

Total amount of trees : **29,030 trees**

Total GHG Reduction : **261 tons CO2e**

“กระดาษเก่า เราขอ”

WHA x SCGP

This project collects used paper from WeCYCLE members and distribute to SCGP paper station for recycle process and recycle product is designed by WHA and Thai Container Group



WeCYCLE



Recycle
Edutainment bookshelf

Total amount of paper : **9 tons**

Total GHG Reduction : **26 tons CO2e**

“ WeCYCLE Project”

WHA x PTTGC



WeCYCLE

This project promotes the upcycling of used PET bottles combined with water hyacinth collected from WHA Group's wastewater treatment pond to produce upcycle products to supply to stakeholders in our communities



QVIRA Pillowcases



Laptop Case



Hamper



School Backpacks

Total amount of used PET bottle : **14 tons**

Total GHG Reduction : **32 tons CO2e**

“Care The Bear Project” (Low Carbon Meetings / Events)

WHA x SET

The corporate activities both onsite or online activities that reduce greenhouse gas emission will be calculate by SET platform. WHA participated 3 activities in this campaign in 2023

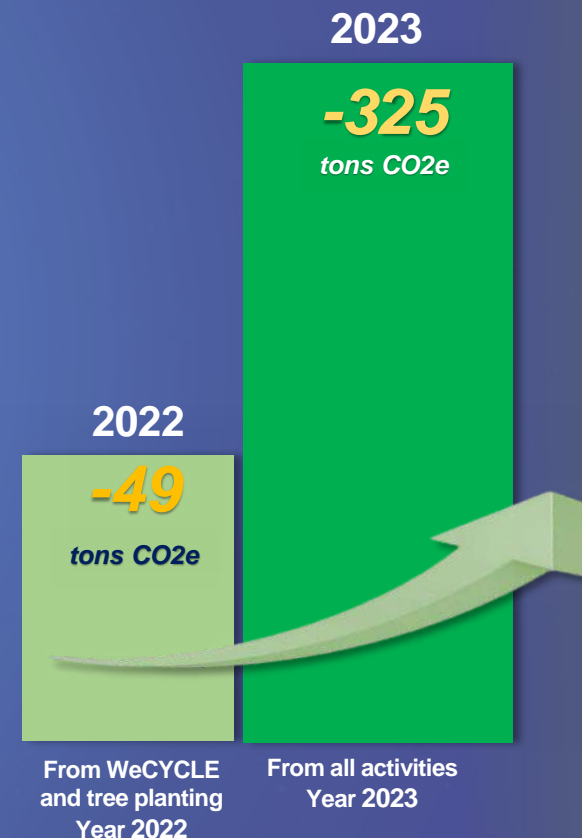


ลด-โลกร-ร้อน



Total GHG Reduction : **6 tons CO2e**

Outcome



**GHG Emission Offset
from Social Activities**

Empowering Lives



WHA's Sustainability Strategy and Targets Related to Community and Stakeholders



WELL-BEING

Striving towards a better quality of life for all living beings and environment for sustainability

WHA determines in combating climate change challenges

WHA commits to achieving carbon neutrality by 2023 and **Net Zero by 2050**

- Carbon Neutrality achieved since 2021

Ensure an access to safe and clean water for community

Reclamation Water Project
Target to reduce usage of raw water by approx. 21 million mm² / year, equivalent to water usage of 575,340 people in 2027

- Reduce usage of raw water by approx. 7 million mm² / year, equivalent to water usage of 190,410 people in 2022



HUMAN PROGRESS

Enhancing human development across all sectors to evolve progressively

Uplift Thailand's GDP of more than 1.4 billion baht

WHA E-Job Pool
Elevate community through job creation and opportunities

- Create 600 job opportunities with employment value at 108 million baht in 2023
- Satisfaction score related to community economy increased to 75% in 2023

Community safety, our first priority

Smart Traffic and Visual Inspection
at WHA Industrial Estates

- 0 Fatality case from accident in 2022



ACCESSIBILITY

Creating opportunities for everyone to access the essential elements which helps to improve the quality of life

Enhance opportunities for medical access

WHAbit
Digital Healthcare

- Sustainable and responsive healthcare
- Remodeling of Patient-Doctor Relationship
- Increase healthcare reach access
- Reduce administrative burden

Strengthen community engagement

Community Participation
in WHA Activities

- Community engagement satisfaction score increased to 98% in 2023
- Total participation of 179 villages in Rayong, Chonburi, and Saraburi

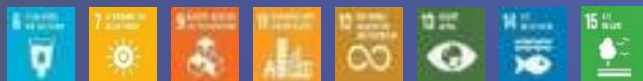
WHA Sustainability

WHA has been Attentive to Sustainability Development since the Beginning and has Incorporated it into our Business Strategy

ENVIRONMENTAL

CHANGING FOR A MORE SUSTAINABLE WORLD

- Solar Power Projects
- Battery Energy Storage System
- Green Logistics
- P2P Energy Trading
- Energy Reduction Program
- Unified Operation Center (UOC)
- Vehicle Management System (VMS)
- Smart Utilities & Power
- Water Reclamation
- Demineralized Reclaimed Water Project
- Smart Metering
- SCADA
- Biodiversity Policy and Commitment
- Wastewater Treatment
- Waste to Energy
- Plastic Reduction Program
- WeCycle
- Smart Traffic Management And Real Time CCTV
- Sludge to Soil Nutrient
- **WHA Circular**
- Turquoise Project



SOCIAL

WELL-BEING & BETTER LIFE

- WHAbit
- Human Rights Awareness
- Enhance Employees Engagement And Satisfactions
- Whappy Program
- Art Camp For Students
- Scholarships
- Teacher Fellowship Program
- University Contribution Program
- Clean Water For Planet
- Wetland Water Systems
- Clean Water For Planet Wet Land & Learning Center
- Pan Gan Project
- Mobile Medical
- Wha E-job Market
- Water Hyacinth Project
- Tree Planting Project
- Low Rental Fee For Community
- Zero Incident Goal
- MTTs Culture Development
- Hybrid Working Model Development
- Space Explorer Skills Uplift



GOVERNANCE

INTEGRITY & ETHICAL RESPONSIBILITIES

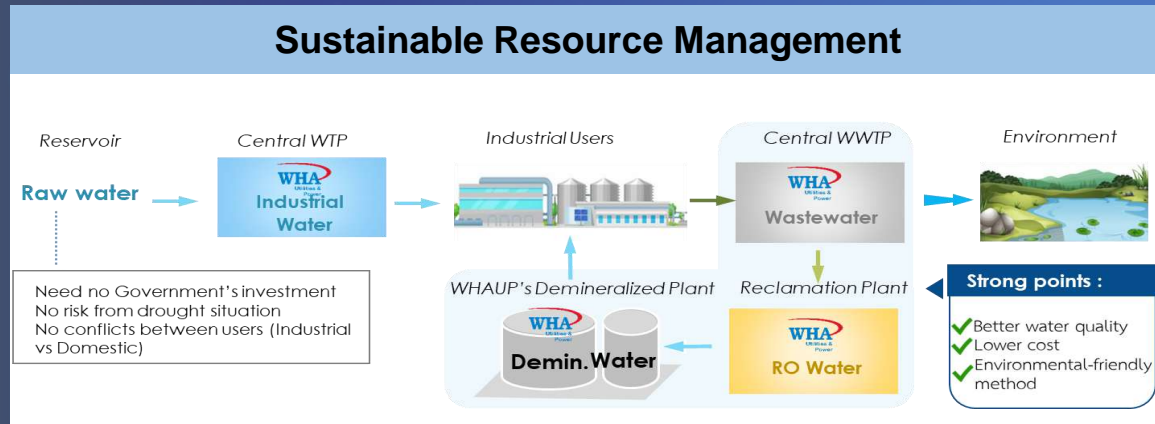
- E-logistics Startup
- TusPark WHA
- Corporate Document Management System (Cdms)
- Paperless Transformation
- Digital Transformation Program
- WHA Innovation Bootcamp
- 5-star CGR Rating
- Outstanding AGM Scoring
- Gender Diversity
- Woman Empowerment
- Stakeholder Engagement
- Code of Conducts
- Supply Chain Management
- Risk And Crisis Management
- Data Security Management
- Customer Journey-value-experience
- Customer Insight With AI And Data Analytic



Effective Management of Water Resources for Sustainability

Establishing a Sustainable Reclamation Water Approach through Circular Economy Principles

“Turning Industrial Wastewater into Reclaimed Water”



In the Eastern Economic Corridor (EEC) and the industrial sector, water consumption is substantial. Effective water management strategies are essential to prevent water conflicts and ensure equitable water allocation, while also mitigating the risk of water scarcity.



Key Benefits

- **Significantly reduce** the amount of wastewater entering the environment
- **Reduce government investment budget** in the development of water storage and delivery
- **Reduce conflicts** between the community and industry on the allocation of water resources
- **Offer high quality** water at a competitive cost. Industrial operator in WHA's industrial estates receive comprehensive utility services with a wide range of products

**2022
Outcome**

Reduce the usage of water from nature

6,950,940
mm² / Year

Save cost on raw water by
THB 80 Million / Year

Equivalent to water usage of

190,410
People

**2027
Target**

Reduce the usage of water from nature

21,000,000
mm² / Year

Save cost on raw water by
THB 242 Million / Year

Equivalent to water usage of

575,340
People

Utilizing Sustainable Wastewater Technology to Help Mitigate Risks and Serve as a Reserved Water Source

Preserving Water Today, Ensuring Life Tomorrow

Sustainable Wastewater Technology to Help Create a Greener Community for Generations to Come

Constructed Wetland Water Treatment Facility



WHA Constructed Wetland Systems, considered a natural technology that is eco-friendly, cost effective and easy to maintain

WHA Clean Water for Planet Learning Center



To reinforce the concept of "Circular Economy" in a concrete way and provide knowledge-sharing and training courses to students and communities



WHA Group delivered the Nong Kla Constructed Wet Land (Wang Ta Note Project) to the community since 2022

- ✓ It gives Nong Kla communities access to clean water, recreation area, and learning area
- ✓ It allows WHA Group to reserve such water supply as a backup in the event of drought
- ✓ The project is the Learning Center for the local government organization

Outcome

In 2023, the system can treat wastewater

up to

292,000
mm² / Year

Empowering Communities Through Job Creation and Opportunities

WHA Group continues to support the communities with various activities



WHA Pan Gan Project

Online marketplace to help promote locally made products from communities' artisans and entrepreneurs around WHA Industrial Estates



WHA Group promoted and sold local products as new year gifts via PAN GAN online marketplace to people who associated with WHA Group and supported to purchase products for New Year Basket almost **1,000,000 Baht**



WHA E-Job Pool

Assisted WHA customers to find candidates and community in EEC area to find a job.

WHA Group support the companies in WHA Industrial Estates to announce job vacancies through the "WHA E-Job Pool". It is an online platform that will match its customers' recruitment needs with job seekers' qualifications.

Graduates and job seekers from all over the country can go to look for job openings on the website www.wha-industrialestate.com Or by using a QR code.



Outcome

2022

Generating over
583 Jobs
Opportunities / Year

Contributing to
Employment Valued
at Over
104,940,000
Baht / Year

Satisfaction score related to community
economy increased to **75%** in 2023

2023

Generating over
600 Jobs
Opportunities / Year

Contributing to
Employment Valued
at Over
108,000,000
Baht / Year

Smart Traffic & Visual Inspection

To enhance safety and security of vehicles that enter WHA Group's industrial complex as we have commuters visiting and leaving WHA Group area of around 200,000 people daily

Adaptive Traffic Control

A traffic management system in which traffic signal timing changes, or adapts, based on actual real-time traffic demand. The adaptive traffic control will include algorithms to help minimize delays, reduce the number of stops and decrease the travelling time, transportation/logistics time

Vehicle Management System (VMS)



Video Analytics Vehicle Counting



License Plate Recognition (LPR)



Video Analytics

Advanced computer vision and artificial intelligence techniques to process and analyze video data from traffic cameras helps in monitoring, understanding, and managing traffic flow and patterns in real-time to optimize traffic management strategies, enhance road safety, and improve overall transportation efficiency

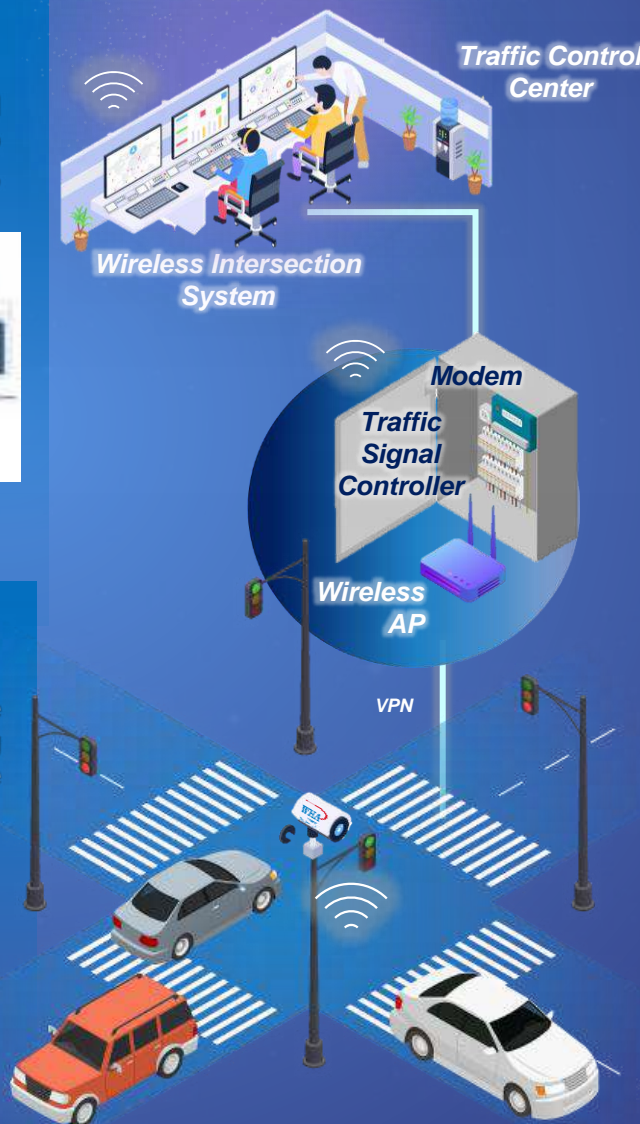
Road accident



Reverse driving



Emergency lane



Outcome

0 Fatality Case
from Accident
in 2022

Fuel Savings
40,969
Liters / Year

Reduce GHG
Emissions of
112
Tons Co2e / Year

WHAbit to Support Stakeholders Access to Digital Healthcare

WHA Digital pushes for digital transformation by implementing digital innovation and technologies

1. OCCUPATIONAL MEDICINE

- Annual Health Checkup
- Health Analytic + Dashboard
- Knowledge Sharing

3. WHA WELLNESS PLATFORM

- Teleconsultant with online doctor
- Omni Channel Support
- Corporate Wellness Dashboard
- Electric Health Record

2. SMART CLINIC

- Onsite Tech Nurse
- Platform Facilitator
- Preliminary Health Check
- IoMT Connection

4. PHARMACY

- Door-to-Door Pharmacy
- Self Pickup



New Version & New Features to Launch in 2023



- 2nd version of the mobile application to be released in Q2 2023
- Visualize health data
- Personalized suggestions



- Data Visualization
- Health management analytics
- Corporate Wellness program



- Enhance employee's physical health and well-being
- Measure walking/running distance (data from Google Fit and Apple Health)
- Virtual competitions & challenges among WHA employees

Outcome

Sustainable and Responsive Healthcare

Remodeling of the Patient-doctor Relationship

Preventive Medical Care

Increase Healthcare Reach

Reduce Administrative Burden

WeCycle : Upcycling, Uplifting the Well-being

WHA Group develops circular economy strategy to focus on using resources and managing waste effectively



UPCYCLING

Waste management - turning waste into valuable products

Opens up opportunities for everyone to create value from waste together

Water Hyacinth Project



Community can take unwanted water hyacinths from WHA ESIE's wastewater polishing pond for free and use them to make and sell laptop bags and hampers

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Collaborated with PTTGC to have YouTurn, donation drop points of used plastic PET bottles in area of WHA Industrial Estates



Fiber of water hyacinth made by Chak Mahat Community in Rayong from unwanted water hyacinth from WHA wastewater treatment facility



Upcycled School Backpacks

Turning waste to support school supplies for children in the communities



WeCYCLE Project delivered the Upcycled School Backpacks to the students in 4 schools that joined the WeCYCLE project



Upcycled QVIRA Pillowcase

WeCYCLE Project delivered the Upcycle QVIRA Pillowcase 500 pieces to 2 hospitals and the bedridden patients in the communities around WHA Industrial Estates



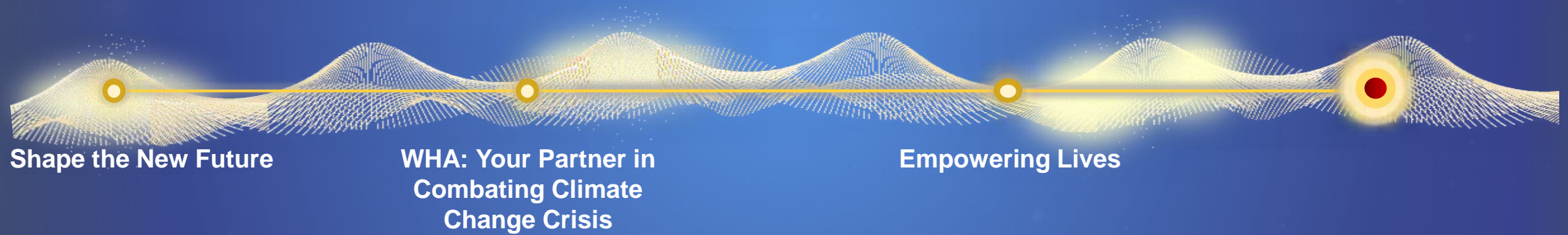
Pluakdaeng Hospital



Nikom Pattana Hospital

Q & A

Appendix



WHA Group Business



WHA
Logistics

**#1 Logistics
Properties Developer**

2,784,234 sqm
Owned & Managed

52 Strategic Locations ^{/1}

WHA
Industrial
Development

**#1 Industrial Estate
Developer**

71,300 Rai^{/2}
Land for Industrial Development

13 Industrial Estates^{/3}

925 Customers ^{/4}

WHA
Utilities &
Power

**Leading Industrial
Utilities and Power
Provider**

145 mm m³
Water Utilities Sales & Management

717 Total Secured PPA
Equity MW Power

654 Installed Equity
MW Power

WHA
Digital

**WHA Digitalization
Enabler**

>32 Digital Transformation Projects

Remark: The data is as of June 2023

^{/1} Strategic locations for Built-to-Suit (BTS) warehouses and factories, ^{/2} Including 51,500 rai operating and under development in Thailand and Vietnam,

^{/3} 12 industrial Estates in Thailand and 1 Industrial estate in Vietnam, ^{/4} Accumulated customers based on land sales, land rent in Thailand and Vietnam

WHA Logistics



Expand Domestically and Internationally

In strategic logistics locations



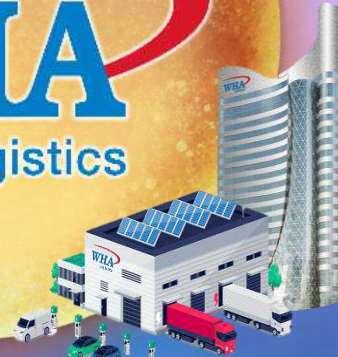
Focus on High-Growth Industry

e.g., EV sector, E-Commerce, Healthcare etc. as well as the Government Promoting Sectors i.e., the S-Curve industries



WHA

Logistics



Establish Long-Term Partnership

with "Global and Regional Players" and "Strategic Construction Contractors"

Embrace Innovative and Sustainable Practices

e.g., Green Logistics, Green Certified Building, Quantum, and Automation



Organization Development

e.g., Digital Transformation and High-Performance Organization

WHA Industrial Development

Extend Leadership as Thailand's No.1 Industrial Estate Development

- Increase Land Bank
- Accelerate Land Development

High-Value Industrial Projects: Increase Technology and Environment Care

e.g. Specialized Estate, Science Park, etc.

Broaden Vietnam on National Basis

Additional Projects in 1 or 2 Provinces

Organization Development Transition

e.g., Digital Transformation and Maximize Group Synergy

Enlarge our Product Offering: Advance and Showcase Smart Eco Industrial Estates

e.g. Data/ Dashboard Monetization, Carbon Neutrality, Net Zero, Waste Management, FTTx, 5G, etc.



WHA Utilities and Power



Grow with Industrial Estate Development

(Both Central utilities and Value-added Products)



Expand Expertise to outside WHAIE with Value-added Water

e.g. Reused Water, Reclamation Water, Desalination Water, Solution to reduce water footprint, Improve water quality & Efficiency



Smart Water Platform

e.g., Water Optimization, UOC



Expand to Vietnam

(both WHA IE and non-WHA IE)



Beyond Water

Value-added Service (VAS),



Enlarge Portfolio with Focusing on Clean Energy

- Solar Rooftop
- Wind Farm
- Biomass



Embrace Smart Energy

- RENEX (Peer-to-Peer Energy/Carbon Credit Trading)
- Battery Energy Storage System (BESS)
- Ancillary Service



New S-Curve Business

- Hydrogen
- EV



Expand to New Country

- Country with Demand for Renewable Energy Adoption
- Country with Advance S-curve Technology



WHA Digital



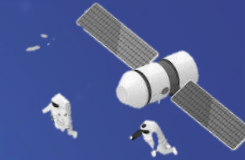
Empower WHA Group with Digital Technologies

to driving operational reliability and efficiency



Organization Development

*Enhance team capabilities and
support organizational development*



Develop win-win Partnerships

*Partnership with startups and
industry experts*



Explore New Businesses Focusing on Innovation and Sustainability

*e.g., Green Logistic, WHAbit Application, Meta W
(virtual business world), WHA Circular, WHA
Carbon Credit Trading*



Collaborate with WHA Group for Product Innovation

*to serve customers and stakeholders
in WHA ecosystem*





*The Ultimate Solution for
Sustainable Growth*