



# 2019

## SUSTAINABILITY DEVELOPMENT REPORT

• CREATING POSITIVE IMPACT •

Creadit: Ren Ran

# MESSAGE FROM CEO



For 40 years, Cobra has been working to supply the water-sports industry with high quality products that encourage their customers to get out on to the water and windsurf or surf. Today, Cobra helps a diverse range of customers build everything from luxury furniture to car components and composite structures. COBRA has grown far beyond what we could have imagined when my father and his partners started building their first factory all those years ago! Whilst Cobra might now be a global company our roots are still very much connected to our community and that original passion for the outdoors. This passion still guides our work today as we continue to grow as sustainably as possible.

While we recognize that there is still a substantial amount of effort that needs to go into sustainable practices, especially within the composites industry, Cobra is working hard to do its part. In 2019, Cobra has continued to develop factory-based programs including a new vegetable garden helping to supply fresh vegetables to the staff kitchen. From Jan 1, 2020, we also banned the use of all single-use disposable plastics within all three of our working canteens, which means no more plastic bags, drinking straws, polystyrene cups / plates or food packaging. For our worldwide supply chain, we continue to work hard to reduce our resource and waste production every year and after a lot of development we will begin to move all our watersports customers to plastic free packaging in 2020-further reducing the amount of waste filling up landfills around the globe.

We look forward to the continued development of our business towards a more sustainable future and to creating strong, light and beautiful products in the process.

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**Danu Chotikapanich**  
CEO, Cobra International





# TABLE OF **CONTENTS**

- 01 ABOUT THIS REPORT
- 02 COBRA BUSINESS
- 03 PRODUCT
- 04 PROCESS & FACILITY
- 05 PEOPLE & COMMUNITIES
- 06 GREEN INITIATIVES

# ABOUT THIS REPORT

Throughout the last few years, our vision and attitudes have been evolving alongside our actions and dialogues. We have now decided that our 6th annual report will be named “Positive Impact”. This is an evolution from our “Corporate Social Responsibility” and “Sustainability” reports of the past years. This signifies that we are looking forward to creating a change – a positive impact – to the world, to the society, the environment, all living creatures and last-but-not-least, our future generations.

We have issued this 6th annual report as part of our commitment to all stakeholders in disclosing the company’s key activities throughout the past year.

Since 2007, COBRA’s Code of Conduct commits to conducting “business in a socially and globally responsible way. To strive for a standardized, clean and safe working environment, provide secure jobs for employees, and build products that promote happiness and enhance quality of life. To develop products to be environmentally friendly using natural resources in a sustainable manner. Apart from this, COBRA will organize further social activities that will create a happy society around us.”

This report covers information on various activities both internal and external during the period January 1, 2019 – December 31, 2019. All information refers to the COBRA group of companies.

## REPORTING SCOPE

The scope of this report covers COBRA’s main business as follows:

- Watersport Board manufacturing business
- Watersport Accessory manufacturing business
- Automotive Part manufacturing business
- Composite Structure manufacturing business
- Service and Supporting units



For an electronic version of 2019 Sustainability Development Report, please visit [http://www.cobrainter.com/The\\_2019\\_Sustainability\\_Development\\_Report.pdf](http://www.cobrainter.com/The_2019_Sustainability_Development_Report.pdf)





# COBRA

## BUSINESS BACKGROUND

Established In 1978, Mr. Vorapant Chotikapanich (the company's current chairman and majority shareholder) opened the doors to 'Windglider Thailand'. Having developed early on its own-brand Cobra, the company started its production with light-weight windsurf boards and changed its name to Cobra International in 1985.

In 1987, COBRA also started to supply to OEMs, serving the worldwide market with composite watersports equipment, and by 1999 had become the leading manufacturer of windsurf boards with over a 50% world market share. During this time, COBRA also expanded its product range to incorporate the significant surfboard- and rapidly growing- kiteboard markets with the aim of expanding its product line.

In 2005, COBRA entered into the Marine manufacturing business via a joint venture.

In 2006, on receiving an initial order from a top-class German Automotive brand, COBRA entered a completely new market as a manufacturer of carbon parts for premium cars. Whilst diversifying its product range into both Automotive and Marine markets, and further into Luxury Accessories and Composite Structures, COBRA has never lost focus on its core business of Watersports. In 2009, stand-up-paddle boards (SUP) were introduced to the market, and COBRA immediately took the opportunity to become the world's leading player in SUP manufacturing.

Today, with its state-of-the-art production facilities of approximately 100,000 m<sup>2</sup>, experience in product design, and consistent manufacturing quality, COBRA is recognized as a key composites partner to the marine, automotive, composite structures and luxury accessories, whilst retaining its reputation as the world's leading manufacturer of watersports.



# SUSTAINABILITY AT COBRA

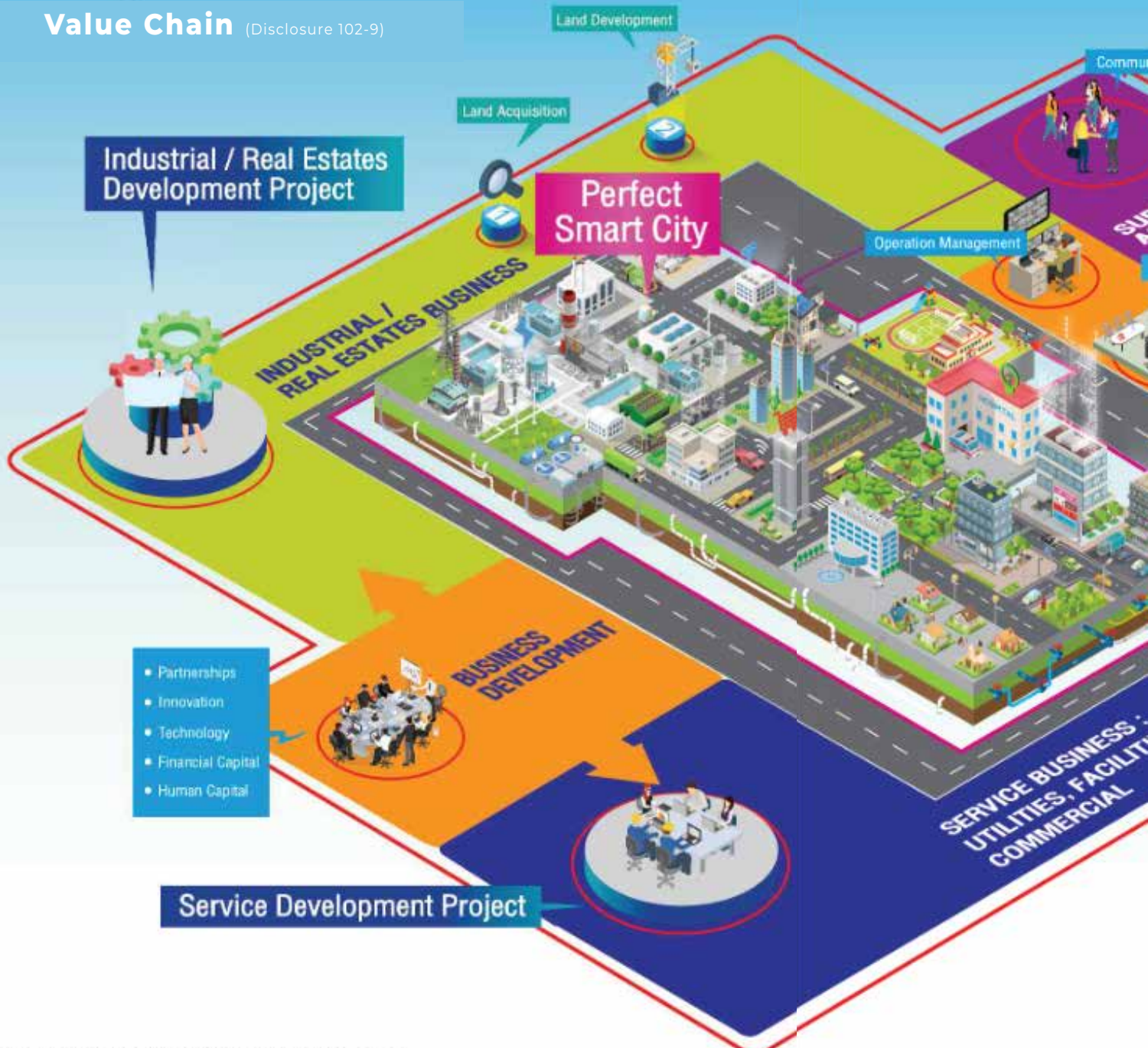
Throughout its 40 years, COBRA's long term direction has been to move its sustainable development forward through Product, Process, and People and Communities perspectives. A significant move was made in the year 2000 when COBRA moved its operation to Amata Nakorn Industrial Estate ("Amata"), one of the leading industrial estate developments with a core focus on sustainable management.

As part of its long term sustainable strategy, COBRA invests in R&D for environmentally friendly products, production efficiency and waste minimization. COBRA also invests in the development of its human capital, focusing not only on work-related competencies, but also on physical and spiritual health through the People and Communities program- a campaign launched in 2006 by the Thai Health Promotion Foundation to create a delightful atmosphere in workplaces- which is one of our fundamental business principles.





## Value Chain (Disclosure 102-9)



source: [www.amata.com](http://www.amata.com)





## MAINTAINING THE ENVIRONMENT

With limited capacity, the company moved all of its operations to Amata Nakorn Industrial Estate (AMATA) in 2000.

“AMATA is committed to developing the Perfect Smart City in order to develop the Thai economy to grow along with maintaining the balance between the industry and the surrounding communities to live together with quality, creating the opportunities and access to all groups of stakeholders by integrating the sustainable development approaches into the Company’s business development plan in conjunction with an adoption of innovation and technology to enhance the efficiency of operations and reduce the environmental impacts striving to become a Low Carbon City in 2040 according to SAVE EARTH, SAFE US concept in order to respond to the global changes, especially the intensifying climate change; additionally, to support the UN Sustainable Development Goals (SDGs) in another way. Moreover, AMATA is still committed to strictly operate the business in accordance with the ALL WIN philosophy in order to create the sustainable value for economy, society and environment at the community, national and global levels which is our main mission that has always given AMATA great pride.”

AMATA Corporation Public Company Limited, one of Thailand’s leading industrial estate developers, was founded on 6 March 1989 and was listed in The Stock Exchange of Thailand in 1997. AMATA specializes in the industrial estate development and entire businesses related to the industrial estate. The Company not only develops international standard industrial estates that adhere to strict environmental protection, but also strives to create “A Perfect City” in order to improve quality of life of the people working in the industrial estates and people in surrounding communities, so that they can work and live happily.

## UNITED NATION SUSTAINABLE DEVELOPMENT GOALS (SDG'S) AND UNITED NATION GLOBAL COMPACT

In 2016, the UN brought into force their Sustainable Development Goals. These SDG's were developed and adopted by UN Member States to help guide the global sustainability. Each of the 17 goals tackle a specific area of our global community from poverty to equality and the environment. Together they make up a thorough framework for any organization looking to become more responsible.

As with many other businesses around the globe COBRA also took the time to reflect on the SDG's and how they integrate with our existing sustainability strategy. By looking at how the goals align with our current Happy Workplace and environmental programs we were able to identify where our projects are aligned and where there are opportunities available to further align our work at Cobra with the 2030 UN agenda.

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries developed and developing in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.(SDG1) aims to eradicate extreme poverty by 2030. The visualizations and data below present the latest data on our progress there



# SUSTAINABLE DEVELOPMENT GOAL



This year we try to adopt the concept of SDG's and apply it to our sustainability development program by following the guideline SDG's and improve our program to better reflect the sustainability part of our operation

## SDG'S INDEX



**3 GOOD HEALTH AND WELL-BEING**  
Ensure healthy lives and promote well-being for all at all ages

Safety page 27  
Happy Body page 31



**4 QUALITY EDUCATION**  
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Happy Brain page 38  
Happy Family page 40  
Happy society page 41



**13 CLIMATE ACTION**  
Take urgent action to combat climate change and its impacts

Sustainable Product page 13  
Energy Reduction Program page 21  
Efficient waste management page 23  
Green Area page 25  
Green Initiatives page 43

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# OUR PROGRAMS

At COBRA, we categorize our responsibility in to three areas.

## Product

Believing in the concept of “Cradle-to-Cradle”, COBRA is working with key partners on developing materials that will ensure our products are more environmentally friendly. Although we have identified and utilized a variety of sustainable materials and designs that have helped our customers products align with their sustainable values, we are still many steps away from being able to present a full C2C product.

## Process & Facility

Throughout its various production lines, COBRA is constantly working on improvements that help us to improve and quantify our footprint. These range from implementing electricity savings, switching to alternative energy, providing opportunities for challenged employees, efficiently managing waste and expanding our green areas.





## People and Communities

COBRA has adopted early on the Happy Workplace program promoted by the Thai Health Promotion Foundation. The program covers eight areas, as follows:

- Happy Body: Enjoy good health in one's body and in one's mind
- Happy Heart: Show kindness and sympathy for oneself and for others, be generous
- Happy Relax: Know how to relieve stress from work and life
- Happy Brain: Improve one's knowledge through learning
- Happy Soul: Have good sense of moral and faith
- Happy Money: Manage personal finances well
- Happy Family: Create understanding and stable environment in one's family
- Happy Society: Support one's community at work and at home
- Promote social harmony and sustainable environment

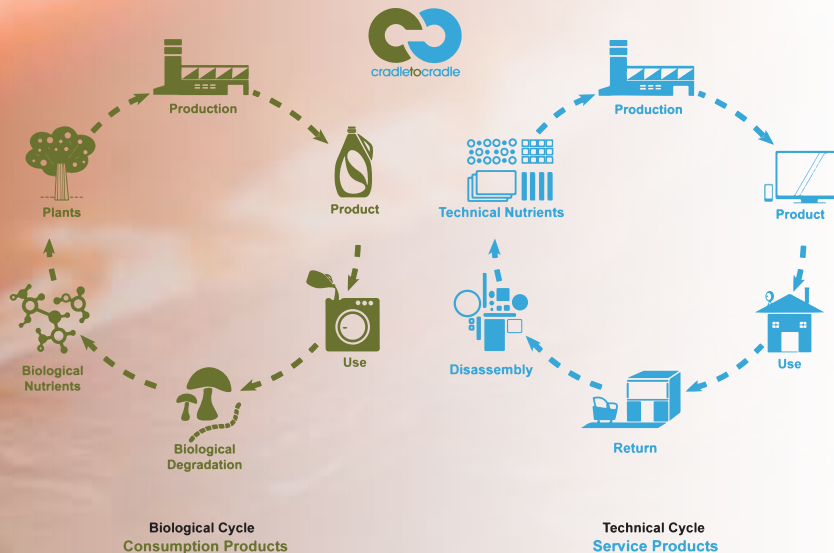
# 01 PRODUCT

Composite manufacturing has become increasingly popular with product designers around the globe due to its design flexibility and advanced material properties. However, the industry still has a way to go until it's products and production can be considered sustainable.

COBRA's journey to sustainable products has started when its current CEO, Danu Chotakapanich, first visited Prof. Michael Braungart's office in Hamburg in 2004 to learn about C-2-C Manufacturing principles. As the world leader in sustainable product and the Cradle to Cradle design process Prof. Braungart has since visited Cobra several times. Building on this strong foundation in C-2-C principles we continue to grow our sustainable product and material portfolio in the hope that one day we can achieve true C-2-C production.



# Cradle to Cradle



Believing in the concepts of “Cradle-to-Cradle”, COBRA works continuously with suppliers, customer and educational institutions to develop innovative materials and product solutions. While these steps have allowed us to progress towards a more sustainable product there are still hurdles Cobra and the composites industry must overcome if we would like to produce truly sustainable products with sustainable production processes. The separation of technical and biological nutrients within a composite product pose the greatest challenge in achieving our vision of creating truly C-2-C composite products.

The C-2-C criteria outlines the design and production expectations to achieve Cradle to Cradle product certification. These guidelines include content of toxic or banned chemicals,

breakdown of chemicals during the product life cycle and overall resource use and efficiency. The product should where possible use sustainable, non-harmful, biological nutrients and where this is not possible it should strive to minimize the harm caused during production and use of technical nutrients. At the end of the products life cycle technical nutrients must be recycled back into the system and biological nutrients recycled or decomposed safely. Five levels of C-2-C certification are awarded based on a products level of compliance with the C-2-C criteria. The highest levels of C-2-C certification also require a substantial commitment to renewable energy and social responsibility throughout the production facility.

# SUSTAINABLE PRODUCT TIMELINE

## 2009

Innovation Awards  
Environment & Recycling

In 2009, COBRA joined forces with the French technical textile specialist Porcher Industries to develop a surfboard using high-performance renewable cellulose reinforcement Greenlite™ as an alternative to glass fiber. These pure-cellulose based fibers are bio-based and bio-degradable.

With this development, COBRA and Porcher Industries received the 2009 JEC Innovations Award.



## 2010

Coco Mat

In 2010, COBRA launched the Coco Mat technology for NSP surfboards which immediately become a market favorite. The natural Coco-fiber sandwich shell wraps the closed cell EPS core. It is then vacuum molded with clear epoxy resin and finished with a clear, fluid matt performance skin.

The Coco-fiber is very light compared to fiberglass and with its thickness, created a micro-sandwich skin each side of the board. This resulted in a surfboard that is lighter than any other technology used. Every Coco Mat board is unique, with a natural look and will perform like no other. To date, COBRA has made 10s of 1,000s of these Coco Mat boards.





# 2015

## Bio-Based Surfboard

The journey continued and in 2015 COBRA excited the world with a selection of different surfboard concepts achieving 40% bio-based content by weight by using bio-based reinforcements and sandwich materials (i.e. cork, flax fabric, or banana fiber) together with 56% bio-based epoxy, water-based paint and bio-based PLA/Wood Composite inserts.



Banana Fiber board  
"Biodegradable material"

Banana fiber is a natural bast fiber. It has individual physical and chemical characteristics that make it a fine quality fiber. Appearance of banana fiber is like bamboo or ramie fiber, but its fineness and spinnability are significantly better. A highly strong fiber with low elongation and low weight make this material suitable for composite application. It's sustainable production, plentiful supply and biodegradability give Banana huge potential as an eco-friendly fiber of the future.



Cork core sandwich board  
100% Environmentally Friendly

100% natural, sustainable and recyclable, the harvesting of cork bark even increases the amount of CO<sub>2</sub> the Cork tree can absorb from the atmosphere- up to 14 million tons of CO<sub>2</sub> per year. Corks buoyancy, elasticity, light weight and durability make it a unique performance choice in composite applications and a great choice for watersports.



Flax fabrics board  
"Ideal composites reinforcement material, not only green but also high-tech"

Flax fiber is significantly lighter than glass fiber, has better fatigue properties and is safer and healthier to work with. The drapability and mechanical performance of these fabrics can also be tailored to fit modern composites manufacturing. Flax cultivation has a positive environmental impact and flax fiber production also consumes just 1/10 of the energy that glass fiber production does.



The Greenpoxy resin system is made from a high content of bio-origin carbon independently tested using carbon 14 measurements. The system can achieve 52% of the molecular structure from plant origin. Additionally, Greenpoxy can maintain superb colour, clarity and consistency, making it the perfect choice for high performance composite finishes.

# 2017

## Innovation Awards Sports & Leisure

At JEC Asia 2017, the international textile group CHOMARAT received a JEC Innovation Award in the Sports & Leisure category for its C-PLYTM Hexagonal with visual & structural stitching.

“CHOMARAT provided NEILPRYDE and COBRA with its C-PLYTM Non-Crimp Fabric (NCF) technology to help them manufacture an innovative windfoil board, and we are very proud to be rewarded, along with our partners”, says Pascal JOUBERT DES OUCHES, Sports Equipment Market Director at CHOMARAT.



### Some key observations from the latest Sustainable Surf Audit:

- Cobra's comprehensive specification process follows each board through the production line ensuring only qualifying materials and processes are used on Ecoboard labelled products.
- Cobra's size and support for the Ecoboard concept has seen a dramatic increase in the number of brands choosing to work towards Ecoboard certification for their products.
- The Amata Industrial Facility holds ISO14001 certification to ensure environmental management systems are in place to support all industry within the complex including Cobra International.
- Cobra maintains a high standard of worker wellness and safety across all facilities. Numerous programs are in place to support both workers and the wider community including activities that utilize the water-sport products they produce.
- COBRA is actively pursuing an extensive range of environmental initiative outlines in the company's yearly Sustainability Report.



Sustainable Surf is an organization founded to meet the desires of a growing market for sustainable product and care for our environment within the watersports industry. Sustainable surf aims to drive surf culture to be a catalyst for global ocean protection and sustainability awareness. To engage, educate and entertain participants while producing multiple benefits (environmental, social, and economic) at both the local level as well as at the global level.

Sustainable Surf works in partnership with both individuals and businesses to create innovative programs and campaigns to tackle issues like pollution, climate change and water quality issues that effect our oceans today. Cobra is a company rooted in watersports, our founders, workers and customers all share a connection to the ocean and we are proud to be part of the Ecoboard Project.

# SUSTAINABLE FUTURE

Each of Cobra's key product segments face its own unique challenges in achieving a Cradle to Cradle Production. Cobra continues to work closely with all stakeholders to achieve light, strong, beautiful and sustainable options for the future.

## Sustainable projects in 2019:

- The new NSP CocoFlax is a prime example of the current application of these technologies combining performance Flax and Cocomat fibers with bio-based resin to achieve a strong, beautiful, high performance surfboard.
- On the cutting edge of modern design, FLITE's Electric Foilboard features a high-quality, sustainable Balsa laminate.
- Board bags from recycled PET Fabric and tail pads grown from nature will be part of our 2019 accessories production.
- In the Automotive sector our R&D team is working on design re-enforcement using Flax fiber offering a lighter alternative to traditional glass fiber reinforcement used in automotive applications.
- In other industry segments including high end furniture there is an emerging demand for advanced composite design with a sustainable approach. Furniture design offers significant opportunities to apply sustainable natural materials like Balsa or Flax in combination with advanced composite technologies to achieve unique results for our customers.

In the last few years, Cobra put comprehensive systems in place to meet the requirements of the Ecoboard Project. Our sector leading processes and procedures ensure boards are made to the ECOBOARD specification, appropriate protections are in place for staff regarding occupational health and safety risks, and broader environmental impacts are considered and managed.



*“We harness the power of water-sports to tell a new, powerful story, connecting our passion for play – into the urge to protect the oceans... AND live a ‘DEEP BLUE LIFE’ ”*



## NSP's CocoFlax Technology wins **Product of the Year** at 2019 Paddle Expo

**NSP Press Release:** The Paddle Expo in Nürnberg, Germany. Lauded as one of the biggest conventions in the industry, manufacturers and retailers come together to discuss trends, product development and of course to present their current line-up.

In that vein, the Product of the Year award is a tradition of the expo where manufacturers have a chance to present their very best products or developments that they are particularly proud of.

Being committed to greener board-tech, we were excited to put our CocoFlax construction in the limelight, as it combines the very best green construction technologies available to us, accumulating in a board that's both light and strong and has a unique look to it that reflects its sustainable building methods.

### Reduced waste

Conventional board shaping requires a "blank" from which the final shape is created, whereas Secure Cell EPS goes about creating the required shape inside a mould, thereby reducing the amount of waste produced by 95%.

### Renewable resources

Both the CocoMat layups and the newer Flax rail fibers are made from renewable resources. The coconut husks we use for our layups are sourced from an organic farm outside our production facilities in cooperation with Harmless Harvest, a very cool company making the world a better place with delicious Coconut water.



But the construction of the CocoFlax boards also benefits from flax. Reinforcing the rails with this renewable resource drastically improves strength and rigidity, plus it contributes to a much greener footprint for your board.

### Greenpoxy®

Bonding the different green materials used still requires a certain amount of epoxy resin, but by using Greenpoxy® 33 from Sicomin, the resin contains 35% plant and vegetable matter, drastically reducing the amount of harmful products in the production process.

### Water-based dye coloring

Alcohol or a solvent-based dye are harmful to the environment, which is why we use a water-based dye for our boards, for a similar result.



Water-based colors instead of solvent-based dye contributes to a cleaner product as well, plus the designs are just as radiant.



The unique farm in Thailand, where Harmless Harvest sources the coconut husks for our CocoMat layups.

Innovation and the various green technologies described earlier are the only way forward for NSP and we are proud to announce that today, 90% of our boards meet the strict standards of Sustainable Surf, a non-profit organization tracking greener manufacturing methods in the surfboard industry.



### 2019 Product of the Year

It is therefore no surprise that CocoFlax is recognized as “Product of the year”, as it looks good on the water, but even better on paper. At NSP, we’re excited about sustainable production processes and believe this is the way forward.

Alongside Cobra (largest surf and paddle board manufacturing facility in the world), we have been using coconuts in the development and production process of our CocoMat boards. More recently we pursue green technologies together with Harmless Harvest, Sustainable Surf and Sicomin. So to be awarded for these efforts at one of the bigger conventions in the surf industry is the icing on the cake for us, rewarding the R&D team and the work that went into these technologies.

By NSP









# 02

## PROCESS AND FACILITY

COBRA has a business operation policy relating to responsibilities for community, society, and environment regarding safety, quality of life, and environmental concern. COBRA runs its operation in compliance with government rules and regulations focusing especially on the environment standard. Throughout its production facilities, COBRA, with the commitment to build awareness of social responsibility amongst its staff, has been working on various types of “Process” built-into the production line. The key ones are shown below.

# ENERGY

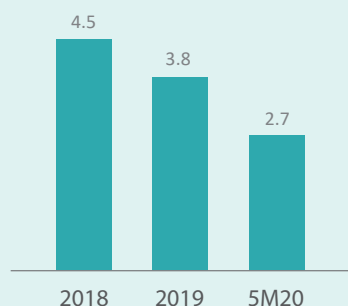
## REDUCTION PROGRAM

### ELECTRICITY

COBRA encourages its employees to use energy efficiently. The company set up a cost control committee, consisting of maintenance and other key functions, to oversee all cost-related activities throughout the Cobra group of companies. The monthly electricity cost during 2015 – 2019 is shown below:



**Electricity Consumption**  
(KWh per production hour)



From above, through various electricity cost savings programs, we saw some good results in 2019. The activities include changing from more efficient industrial fan, install Motor Energy Saving System (MESS), install vacuum motor, install digital meter and so on.

### Electricity Savings Program

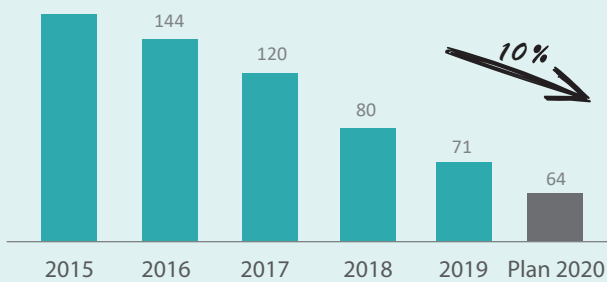
	2019	2020	Unit
More efficient industrial fan	41	35	Point
Install Passive filter reduce hanmonic	3	5	Set
Install Vacuum Motor	6	19	Set
Install Digital Meter	7	11	Set
Install Online Monitoring System		11	Point
Install Timer. Break time		12	Point
Install Timer. Production Zone		1	Point
Change Air Compressor Efficiency		3	Point
Install Air Condition		3	Set
Install Heat pump	1	-	Machine
Install Motor Energy Saving System (MESS)	15	-	Set



## WATER



**Water Consumption**  
(Thousands M<sup>3</sup>)



Water plays an important role in our manufacturing process specifically as the dust control mechanism. Additionally, we use water for a variety of purposes such as the heating system and for cleaning our facilities to ensure the highest level of product quality.

Currently, reducing the water usage is one of our top priorities and we also aim to improve the quality of waste water before it is released back to the Amata Nakorn Industrial Estate's system.

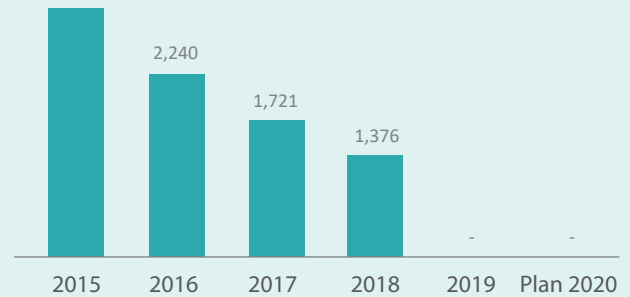
### Water Savings Program

	2019	2020	Unit
Install water saving faucet	-	11	Point
Install toilet float ball	-	12	Point
Move up the water pipe	4	1	Point
Install Automatic flush valve	10	-	Point

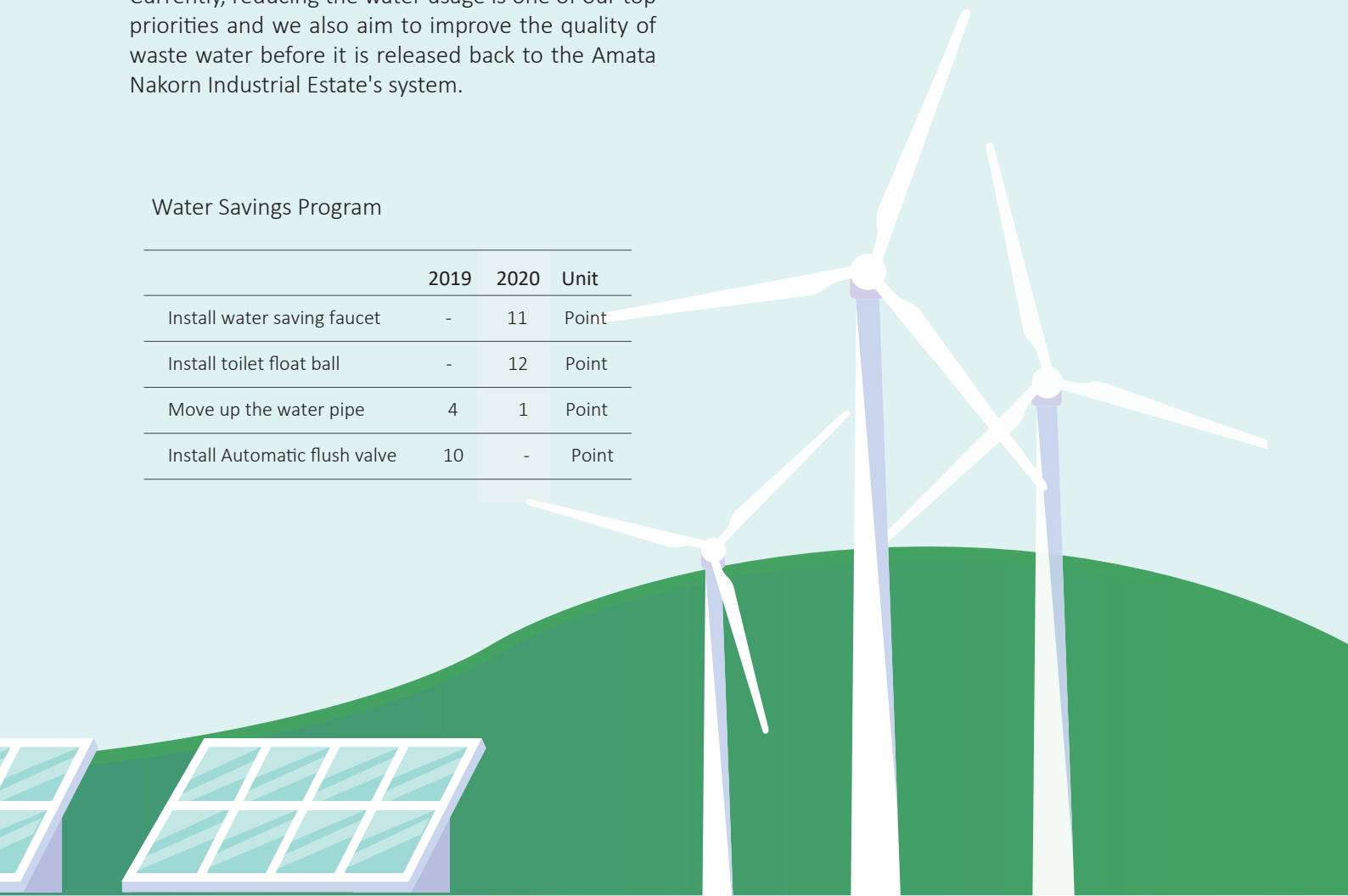
## GASOLINE



**Gasoline Consumption**  
(Liter)



Gasoline, as a part of our Energy Reduction Program, is used for transportation between operational facilities. The usage is reduced by the size of transportation vehicles because the smaller ones serve the same purpose with much less gasoline.





# EFFICIENT WASTE MANAGEMENT

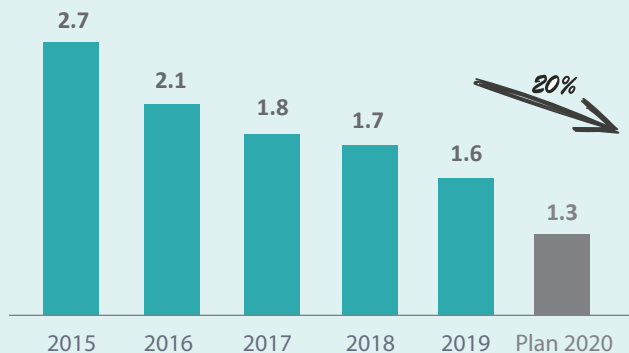
Waste management is one of the topics COBRA has been focusing heavily on over the past few years. In the first quarter of 2015 we improved the waste area by building a completely new 2,400 m<sup>2</sup> waste station. The objective was to be able to manage the waste and pollution from it in an organized area in order to lessen existing pollution, create an organized waste management system, create a better atmosphere inside the company, as well as to have an environmentally-friendly workplace for our staff.



## NON-TOXIC WASTE



(Thousands of Ton)



From above, through various program in 2019, we have reduced waste by 5.9%.

## RECYCLE WASTE



### Recyclable Waste

	2018	2019	
Paper	19,170	14,330	kg.
Paper Core	4,720	-	kg.
Iron Scrap	72	29	ton
Foam Scrap	107	79	ton
Plastic	2,292	3,518	kg.
Tank	4,687	2,897	unit

To effectively manage waste separation, we built a 2,400 m<sup>2</sup>. waste station. The new waste station consists of 7 separate sections with each section storing specific types of waste ranging from EPS foam, paper cartons, different kinds of plastic material to aluminum foil. The floor of the new waste station was lined up to avoid flooding which could cause more pollution.

In summary to effectively manage waste, we clearly separate them into 3 groups as follows:

1. Toxic waste to be managed by 3rd party waste specialists
2. Recyclable waste to be recycled
3. Non-toxic waste to be sent to 3rd party for proper disposal



In replacing fuel oil, we are using Biomass which is more environmentally friendly.

Wood-fuelled heating systems, also called biomass systems, burn wood pellets, chips or logs to provide warmth in a single room or to power central heating and hot water boilers.

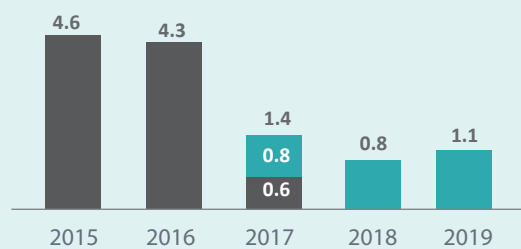
A stove burns logs or pellets to heat a single room and may be filled with a back boiler to provide water heating as well. A boiler burns logs, pellets or chips, and is connected to a central heating and hot water system. A wood-fuelled biomass boiler could save you up to THB 4 million a year compared to fuel oil.

## BIOMASS



### Fuel Oil and Biomass Consumption (Millions of THB)

● Fuel oil ● Biomass



### Biomass Savings Program

Plan for 2020

Sourcing Material (Price & Heat)	✓
Upgrade Boiler Parts	✓
Heat Recovery System	
• Form Foam Injection	✓
• From EPS	✓

## Advantages of Biomass Energy

### 1. It's a renewable form of energy

Biomass energy is considered a renewable form of energy because the organic materials used to produce it is never-ending. The organic materials including wood, crop waste, garbage, sewage sludge, and manure are continually produced by society. In a nutshell, regrowth of these organic materials supports the fact that biomass is renewable.

### 2. It's carbon neutral

Biomass energy takes care of this since it is a natural part of the carbon cycle as opposed to fossil-based sources of fuel such as oil, natural gas, and coal.

### 3. Widely available

Just like sun and wind energy, biomass energy sources are bountiful in supply. You can find them virtually in every nook and cranny of the world. The fact that it's bountiful in supply means that we may never encounter problems that we are presently experiencing with fossil-based sources of fuel. Nonetheless, it's vital that we maintain the abundance of this natural resource by being responsible in its use.

### 4. It's cheaper compared to fossil fuels

Producing biomass energy does not involve heavy capital outlay. Fossil fuels production, on the other hand, involves high upfront capital costs such as drilling to reach oil wells, constructing gas pipelines and collection of biomass fuel.

Source: Conserve Energy Future.com

# GREEN AREA

Since 2015, COBRA has encouraged its employees to build and maintain green spaces in the designated areas throughout the company. The participation of the employees was very well received.






## Objective

- Create a better atmosphere for employees in the factory
- Reduce the factories carbon footprint
- Reduce overall heat in the factory
- Reduce electricity cost related to air conditioning and fan-usage.
- Utilize natural light.
- Utilize rain water and manage waste water
- Utilize waste to generate fertilizer
- Manage solid waste
- Create a biosphere including animals


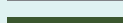



Our commitment to more green space at COBRA continues with the planting of the 1,500th tree! One for each member of the COBRA family

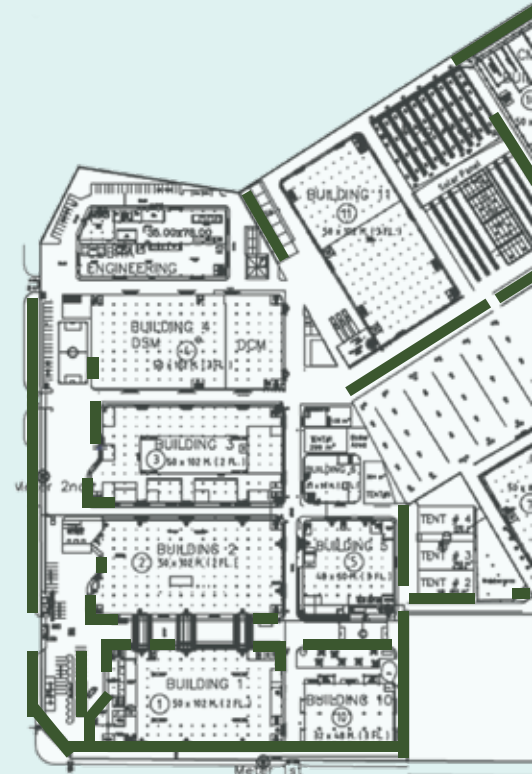


## Green area

2020		4,582 m <sup>2</sup>
2019		4,582 m <sup>2</sup>
2018		4,582 m <sup>2</sup>
2017		4,502 m <sup>2</sup>
2016		1,380 m <sup>2</sup>

## Perennial plants

2020		2,000 trees
2019		1,527 trees
2018		1,000 trees
2017		650 trees
2016		182 trees







Khun Danai Chotikapanich, CFA,  
our group CFO planted the 1,500<sup>th</sup> tree



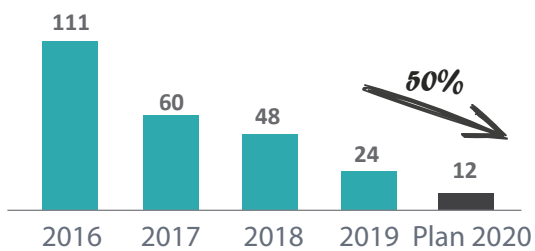
# SAFETY

## NUMBER OF ACCIDENTS

With the efforts to make Cobra a safe place to work, we have heavily implemented many safety activities.



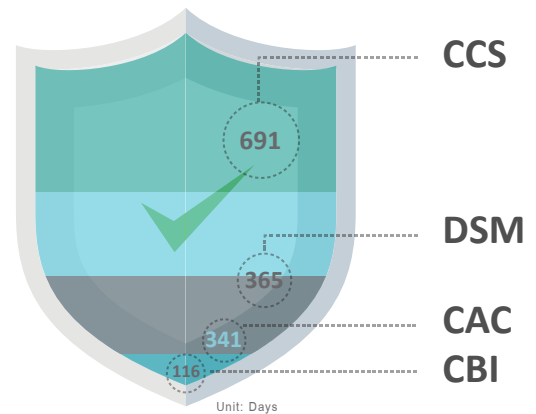
**Number of Total Accident**  
(Times)



From above, as a result, the number of total accident reduced by 27% in 2019.

## ZERO-ACCIDENT COMPETITION

COBRA organizes a zero-accident competition for its factory-based subsidiaries of Watersports, Automotive, Marine, and Accessories business units. In 2019, the reward went to CCS, the Composite structure business unit, for a straight 691 days without any single accident with lost time. This high-level of commitment regarding safety has been one on the key focuses among the companies of COBRA.





## SAFETY ACTIVITIES

### Safety Week

COBRA has organized an annual Safety week for 14 consecutive years to promote safety awareness through various safety-related activities and contests among departments. This is in line with the Safety policy to promote safety in our work place.

In 2019, there are 8 booths and 1,700 participants joining this 1-week event.



### Fire-Fighting team

It has been COBRA's tradition to organize a safety week to provide knowledge about safety in particular to workplaces. The highlight of the event was the accomplishment of the 10th generation of COBRA's fire fighter. By the end of 2019, COBRA had 48 professional fire fighters trained up working 24/7 to safeguard the company against any fire-related accident.

The objective to setup our fire-fighting team is to:

1. recruit and regularly train our own fire-fighting team
2. be able to handle emergency case according to standard procedures
3. limit the damage from fire
4. be the coordinator with external fire agencies
5. promote safety awareness among employee







# 03 PEOPLE AND COMMUNITIES

People and communities are process designed for developing its human capital strategically according to the company's vision in order for the company to be able to cope with changes, both internal and external, which will lead to a sustainable business growth. COBRA considers its employees as the most important asset and, therefore, has created various programs for developing its human capital using activities.

# OPPORTUNITIES FOR PEOPLE WITH DISABILITIES

At COBRA, we consider our workforce to be one of our core assets. We are committed to developing career paths for all our employees, including providing opportunities for those with disabilities.

Today, we integrate 19 people with disabilities in various areas throughout the facilities.



Mr. Prayool Phonsan  
General staff, Store Department  
Movement disability  
Has been with COBRA since 2012

- **Mobility**  
Serious difficulty walking or movement
- **Hearing**  
Serious difficulty hearing
- **Cognitive**  
Serious difficulty concentrating, remembering or making decisions
- **Vision**  
Serious difficulty seeing



Mrs. Ratree Fakfai  
General staff, HR Department  
Movement disability  
Has been with COBRA since 2012



# HAPPY BODY

Good health leads to a happy life, both physically and mentally, which results in an energized motivated team capable and ready to do their best. COBRA has continuously supported many activities relating to better health and keeping active at work. These activities do not just offer opportunities for fitness but also comradery, fun and socialization between our teams and their families.

## 2019 SIAM CUP

Being the manufacturer of Watersport boards for Windsurf, Surf, Stand-up-paddle (SUP) and Kite, COBRA encourages its employees to participate in these sports at the annual Watersport Championship. One of the key objectives is to improve employees' quality of life through sports and get-togethers.



Khun Vorapant Chotikapanich, chairman and executives gave an opening remark at 2019 Siam Cup







**245** people  
joined the 2019 Siam Cup

#### Type of competition

- Windsurf
- 5 Man SUP Challenge
- Tiki SUP Challenge





# HAPPY BODY

## COBRA'S CUP

In promoting a better work-life environment, COBRA has several sports areas that are used by staff at lunch and after work. Each year the main futsal stadium outside the canteen plays host to the COBRA Cup. The Cup aims to raise awareness of good health, cooperation, and sportsmanship through sports as mixed teams from across the factory step out onto the court for some fun and excitement.



Khun Manop Plainsinual, Factory manager gave an opening remark at 2019 COBRA's cup





## AMATA SPORTDAY

As part of the Amata Nakorn Industrial Estate (“Amata”) sports day, COBRA has been supporting and participating in this event since its inaugural event.





# HAPPY HEART

Looking after those around us, also helps us with a sense of positive impact. We believe sharing is the meaning of true happiness. By giving back to the society, COBRA organize a number of programs each year to support our local community:

 **279**  
Donators

**218**

Pints of blood collected

Saves **654 lives**

(1 pint save 3 lives)



## BLOOD DONATION

It has been a long tradition for Cobra to organize a “Donating Blood To Saves Lives” event on a quarterly basis. 2019, as always, was another successful year with warm participation from Cobra staff.



Left: Khun Danu Chotikapanich, CEO  
Above: Khun Danai Chotikapanich, CFO are happily giving blood during a blood donor event which is organised at the factory four times a year

## CHILD SPONSORSHIP

The Company is committed to pursuing sustainable business practice whilst working to realize a better future for today's youth. The Company also undertakes community engagement activities in fields where it is best able to do so to help address the needs of our children. Besides the education scholarships, the company has regularly given to employees' children, COBRA also provide education sponsorship for disadvantaged children in Chonburi and also remote areas.

As with other CSR programs, we are committed to creating a better society by offering those disadvantaged children the opportunities as well as financial support to pursue higher education.

Today, we provide 9 child sponsorships to YWCA organization and 3 child sponsorships to World Vision organization.



## FAREWELL PARTY

COBRA has been throwing a farewell party as part of our culture, for our staff for their commitment and long years of service. On December 19 2019, a total of 4 retiring employees were invited to the farewell party to be thanked by the company.



Khun Chacrey Isapong, our former dedicated CFO, attended the retirement party on December 19, 2019



# HAPPY RELAX

Our employees are our most important resources. This means that more than just a worker we are also a community of over 1,250 people spending hours together each week. Consequently, it is also important to relax and celebrate the work done. Each year we organize a “Thank you” party and other events and invite our employees to join these celebrations.

## THANK YOU PARTY

The Thank You Party is held annually around year-end to help enhance the corporate relationship amongst the staff and management team. In 2019, 1,250 people joined the Thank You party event with various shows and lucky draws given out to staff.





# HAPPY BRAIN

Knowledge is one key attribute to self-improvement which leads to becoming a professional in our field and as a result, a secure career path into the future. At COBRA we are committed to providing knowledge not just within our team but also to the next generation of bright minds.

## STUDENT FORMULA SPONSORSHIP

Since 2010, COBRA has been sponsoring the Student Formula projects from many leading Thai universities (e.g., Chulalongkorn University, King Mongkut's University of Technology Thonburi, Thai-Nichi Institute of Technology, etc.).

The main purpose of this project is to build a mini-formula car for the TSAE Auto Challenge organized by the Society of Automotive Engineering Thailand (TSAE).

COBRA provides assistance to the students participating in this project in terms of the space for production and for the testing of raw materials, as well as technical support from our experienced engineers and technicians.

A group of students together with COBRA staff preparing the Formula car



## FACTORY VISITS

The Company proudly welcomes selected visitors to observe production activities in our facilities at Amata Nakorn Industrial Estates, Chonburi, Thailand. Most of our visitors are university professors and both domestic and international students who are interested in composites manufacturing. The main objective is to provide opportunities for students to gain real-life knowledge. With the knowledge gained from these visits, we strongly hope to give them insights into composites manufacturing in order for them to apply in their further education and careers.



**229 Visitors**  
came to visit COBRA in 2019

5 Universities  
3 Organizations

# HAPPY SOUL

Thailand has a long history and strong connection to spirituality. Many of our staff practice Buddhist ethics and COBRA works to offer the staff regular opportunities to express and share these ethics, taking part in many of the nationally significant ceremonies and many other local events.

## SONGKRAN FESTIVAL

COBRA organizes a Songkran festival celebration, the Thai New Year's festival, for its employees every year. The event provides opportunities for employees to perform water pouring on Buddha statues in the belief that it will wash away the sins and bad luck. The event also provides opportunities for young employees to show respect to the elders by pouring water over the palms of elders' hands in return for good advice and life lessons.



## BUDDHIST FESTIVAL

In Thailand, there are many holy days of Buddhist events held throughout the year by the Thai people in order to celebrate the important dates in the Buddhist calendar. It has been COBRA's long tradition to organize Buddhist events right in its factory by inviting the monks to deliver principles of Buddhism to the employees as well as providing opportunities for COBRA's employees to give alms to the monks.





# HAPPY FAMILY

Strong family relationships are the foundation of a good society. Our policy is to support building a strong family through various programs showed below:

## EDUCATION SCHOLARSHIPS PROGRAM

COBRA realized the importance of education as being the foundation of a strong family institution, and hence, has been providing an education scholarships to employees' children.

The program started in 2012, and has been around since then, providing opportunities as well as financial support to our employees and their children.



**133**

education scholarships given to our employees' children in 2019



# HAPPY SOCIETY

Social sharing makes a better living society. We believe well-being leads to a strong foundation for unity, love, cooperation, and harmony. By giving back to the society and helping to develop the communities, COBRA organizes many programs including humanitarian relief efforts during natural disaster, safety training via safety week events, and many more.

## CLEAN UP THAILAND'S CHAO PHRAYA RIVER

COBRA International supports the mission to clean up Thailand's Chao Phraya River with the donation of 10 lightweight kayaks.



COBRA International was delighted to support the recent 14-day Kayaking for Chao Phraya River clean up mission late last month with the donation of 10 light-weight kayaks for the team. The clean-up campaign was organized by Asst. Professor Prinya Thaewanarumitkul of Thammaset University, Bangkok and involved kayaking along the Chao Phraya River for 14 days in an effort to clean the waters of all trash and raise further awareness of the massive environmental issues that are escalating in Thailand's waters. With 10 people in the principal team paddling COBRA-built kayaks, the campaign also attracted an additional 30 volunteers who joined the trip.

Throughout the clean-up, volunteers collected tonnes of garbage from various points on the Chao Phraya River, having paddled a distance of 400kms. Every day, the paddling team would make several stops where further volunteers joined efforts to clean up specific areas. On December 22nd, a group of 10 COBRA employees also joined the clean up on COBRA SUP boards paddling 5km around the Bang Kachao Area in Bangkok.

When they finished, analysis showed that they had amassed over 2 tonnes of trash— in particular bags, bottles, cups and foam food boxes.





“The waste that we continuously litter into the river is going to flow out into the ocean. Thailand is creating a huge environmental problem for the world. The Chao Phraya River is the largest river in Thailand and is responsible for releasing the most trash into the Gulf of Thailand. We have to stop it now.”

Law Asst. Professor Prinya Thaewanarumitkul,  
who led the campaign

“Our country’s environmental issues are a huge problem and are a big challenge to address. Asst. Professor Prinya’s team did an excellent job in raising awareness and starting to make a difference. COBRA will continue to support in any way possible.”

Danu Chotikapanich, CEO



The Kayaking for Chao Phraya River campaign began on the 10<sup>th</sup> December and volunteers completed around 400 km to reach the destination—the Gulf of Thailand—on kayaks built by COBRA International.





# GREEN INITIATIVES 04

## JEC INNOVATION AWARD 2020



We are very proud to announce that our latest sustainability project has been recognized by the JEC Innovations Awards committee and selected as a finalist for the 2020 JEC Innovation awards.

Working in partnership with Aditya Birla Chemicals and with our customers Starboard and Maui Fin Company (MFC), COBRA has successfully integrated novel recyclable epoxy resin systems (Aditya Birla Chemicals' proprietary Recyclamine® technology) into its series production of water sports components and has demonstrated a closed loop process to re-use the recovered reinforcement fabrics and thermoplastic polymers produced by the recycling of the thermoset composite.

The successful accomplishment of the project is a massive leap forwards towards sustainable development and circular economy. Using Aditya Birla Chemicals recyclable epoxy systems to infuse watersports fin moulds and its recyclable epoxy RTM system to produce components, COBRA and our partners have initiated a sustainable closed loop recycling process that will significantly reduce composite material waste volumes.

The award winners will be announced in Paris during JEC World 2020 on the May 2020. Stay tuned!!

## KEY OBSERVATIONS

The following are some of the key observations noted during the audit:

1. By only producing molded boards with qualifying Sicomin bio-resin, and having a comprehensive specification process that follows each board through the production line, the opportunity for a non-qualifying board to be laminated with the ECOBOARD logo is significantly minimized, if not negated. Resin barrels, dispensing stations and relevant equipment are also all clearly marked and maintain.
2. There has been a dramatic expansion of the number of brands and board types making ECOBOARDS through COBRA's facility since the initial audit in 2016. Sustainable Surf would like to commend COBRA and it's brand customers for the key role that they are playing in increasing the number of ECOBOARDS made each year. NSP, Starboard SUP and Windsurf, Surftech, Airush and The Surfboard Agency (Stacey, McCoy, Vampire, LSD) are all making some or all of their ECOBOARDS at COBRA.
3. Reinforcing point '1', the Cobra site holds ISO 9001 certification. The management systems, policies processes and procedures that underpin this, further limit opportunities for non-qualifying boards to 'carry' the ECOBOARD logo.

The Amata Industrial Facility where COBRA is located also holds ISO 14001 certification, ensuring the same level of control is also applied to





“ We harness the power of water-sports to tell a new, powerful story, connecting our passion for play – into the urge to protect the oceans... AND live a ‘DEEP BLUE LIFE’ ”

**Sustainable Surf** is a California-based 501(c)(3) non-profit charity organization founded by social entrepreneurs Michael Stewart and Kevin Whilden. We have offices in Los Angeles (heart of the Southern CA surfing industry), and in San Francisco (nexus of sustainable business and innovation in Northern CA).

**Our Mission:** Be the catalyst that transforms surf culture into a powerful force for protecting the ocean playground.

**Our Strategy:** We take an integrated “systems thinking” approach with our innovative programs and campaigns, which engage both individuals and businesses together in partnership to solve the most pressing environmental issues facing our oceans. Specifically, we focus on addressing environmental impacts such as climate change related impacts (ocean acidification, sea level rise and coastal erosion), marine plastic pollution, and water quality issues that threaten our shared “surfing habitat.”

How we engage Individuals – Provide engaging on-ramps for individuals to make lifestyle choices that can lower their negative impacts on the ocean and coastal environment, while boosting their positive impact on their local communities.

How we engage the Industry – Consult with surf related businesses and organizations to improve their environmental performance, and help communicate their efforts in an authentic and effective way.

**Program Goals:** Our programs are designed as onramps to engage, educate and entertain participants, while producing multiple benefits (environmental, social, and economic) at the local level in the communities in which they operate, as well as at the global level. ”

## RESULTS:

### Conformance with all Reporting Areas

The audit confirmed, and further reinforced, that COBRA International has comprehensive systems in place to ensure that boards ‘carrying’ the ECOBOARD logo meet the ECOBOARD Project requirements. The organization has sector- leading processes and procedures that ensure boards are made to the ECOBOARD specification, appropriate protections are in place for staff regarding occupational health and safety risks, and broader environmental impacts are considered and managed.

the environmental management systems relevant to COBRA’s operations.

4. Worker health and safety (WHS) and health and wellness programs are at a very high standard. COBRA has implemented many key activities and programs to promote the improvement of safety and support its workers and the broader community.

5. COBRA is actively pursuing an extensive range of environmental initiatives to improve energy inputs, waste and water management, shipping and packaging, and supply chain sustainability.

These are documented and publicly reported via the company’s Sustainability Report.

6. Understanding that employees are integral to the success of the organization, COBRA provides a range of programs to encourage participation in activities that utilize the water-sport products they produce. Cobra supports an employee Windsurfing Club, where employees can participate in Windsurfing, Kitesurfing, Kayaking and Stand-up-paddle boarding.



