

Sustainability Development 2016

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About this Report



COBRA has issued its 3rd annual Sustainability Report as part of its focus and commitment to all stakeholders in disclosing the company's key activities throughout the past year

COBRA's Code of Conduct since 2007 stated that "COBRA will do business in a socially and globally responsible way. We will strive for standard, clean and safe working environment, provide secured job for employees, and build products that provide happiness and enhance quality of life. We will develop products to be environmental 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 social responsibility activities both internal and external during the period from January 1, 2016 – December 31, 2016. All information refers to the COBRA group of companies.

COBRA Business Background



The COBRA group of companies ("COBRA") started its business on the 6th March 1978 (under the name "Windglider Thailand") in Bangkok, Thailand by Mr. Vorapant Chotikapanich, the company's current chairman and majority shareholder. Established initially as an own-brand manufacturer, COBRA started its production with light-weight windsurfing boards. In 1987, COBRA also offered OEM serving the worldwide market with composite watersport equipment and by 1999 had become the leading manufacturer of windsurfing boards with over 50% World market share. During this time, COBRA also expanded its product range to incorporate the enormous surfboard and rapidly growing kiteboard markets with the aim to diversify its product line.

In 2005, COBRA entered into the Marine manufacturing business via a joint venture. In 2006, by receiving the first order from a top-class German Automotive brand, COBRA entered into a completely new market as a manufacturer of carbon parts for premium super cars. Whilst diversifying its product range into both Automotive and Marine markets, COBRA has never lost focus in its core business of watersports. In 2009, Stand-Up-Paddle boards (SUP) were introduced to the market and COBRA immediately grabbed the opportunity and became the world's leading player in SUP manufacturing.

Today, with its state-of-the-art production facilities of approximately 100,000 sq.m. COBRA is recognized as the World's leading manufacturer of watersport products while being a crucial partner to the World's most respected premium car brands. COBRA's versatility and experience in product design and consistent manufacturing quality make it an invaluable partner to the world's leading companies.

Corporate Profile

1978
Amata Nakorn Industrial Estate, Thailand (70 km South-East of Bangkok)
Over 3,000 dedicated employees
100,000 m ²
ISO 9001:2015 ISO/TS 16949:2009 (Automotive)



Sustainability Development

"

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Apart from this, COBRA will organize further social activities that will create a happy society around us.

COBRA's Code of Conduct, 2007

Throughout its almost 40 years, Cobra group of companies ("COBRA") long term direction has been to move its Sustainability Development forward through Product, Process, and Happy Workplace perspectives. A significant move was in 2000 when COBRA has moved its operation to Amata Industrial Estate ("Amata"), one of the leading industrial city developer.

"Reliable utilities and a supportive infrastructure are the backbone on an industrial park. Without them companies within the estate will be unable to operate. Amata recognizes this reality and takes steps to insure that what it provides goes beyond the basics so that its customers are insured of an operating environment that is safe, secure, reliable and a pleasant place in which to work" (source: www.Amata.com)

As part of its strategy, COBRA is putting R&D budget into inovating environmental-friendly products and minimizing production pollution while developing its human capital not only on work-related competencies, but also physical and spiritual health through Happy Workplace, a campaign launched in 2006 by the Thai Health Promotion Foundation to create delightful atmosphere in workplaces which is one of our fundamental business principles.

Maintaining the Environment

(Source: www.Amata.com)

Initiatives from Amata

Amata's management team and its employees are serious about minimizing the impact made by company's operations on the environment. This is demonstrated by the recent ISO 14001 accreditation the company received from TUV Rheinland for its two industrial estates in Thailand.

The company has long had a 'zero-discharge' waste management program for waste water. Each day the company treats and reuses 74,700 cubic meters of waste water: 40% is used to water green areas, including the company's Amata Spring Country Club golf course; 30% is used at on-site power generating facilities operated by the joint-venture Amata B. Grimm Power Company; and 30% is recycled to be used as part of the regular water supply.

Each day 85 tons of solid waste is collected at Amata's waste transfer station. Seventy percent of this is burned to produce 1.5 MW of power each day; 20% is used as sanitary land fill; and the remaining 10% is recycled to be used once again.

Amata, through joint-ventures, subsidiaries and companies in which it holds shares, has also embarked upon a program to use technology to monitor and control lighting, watering and other items that utilize precious resources. The company looks forward to the day when it can determine precisely what resources are being used by checking a display board at a single point on an industrial estate.

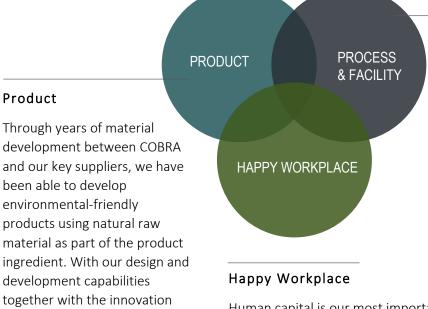
Oversight from the Industrial Estates Authority of Thailand (IEAT)

Amata's activities are reviewed and monitored by IEAT, a government enterprise operating under the Ministry of Industry charged with the development and management of industrial estates. IEAT's mission is to develop land, infrastructure and facilities for business activities that support industrial manufacturers and service providers while maintaining sustainable growth. Simultaneously IEAT is also responsible for environmental development and safety to ensure the least possible impact on communities from industrial estate activities.



To achieve its goals for reducing environmental impact, a master plan was developed in 2010 with implementation targeted by 2019 to turn Thailand's industrial estates into 'eco industrial estates'. An integral part of this plan is a movement by IEAT to strengthen and broaden its regulations. IEAT's strategies focus on environmental and safety management and corporate social responsibility, including safety measure outlining and training. Public participation has been encouraged in order to ensure operational transparency.

At COBRA, we categorize social responsibility into 3 areas as follows:



techniques, we are now heading

to the green direction as

committed.

the production line. This employee, efficiently managing waste, to expanding its green area.

Human capital is our most important asset. COBRA has developed its human capital in many different area through various activities, for example, provide education scholarships for employee's child, support child sponsorship in different organizations, organize blood donation, and so on. With a strong human capital, the company can grow its business sustainably.

Process & Facility

Throughout its various production lines, COBRA has been working on different types of "Process" built-into ranges from implementing electricity savings, providing opportunities for challenged

1. PRODUCT

In 2007, COBRA incorporated sustainability guidelines into its code of conduct. We have focused our efforts on work environment and product design. In 2017, we are launching an annual sustainability report which you can find on our website www.cobrainter.com. We have achieved all our goals in electricity and water consumption reductions, dust

control, waste management and green area improvements.

On the product development side, we are following the Cradle-to-Cradle design concept of Prof. Dr. Michael Braungart as we believe this circular economy is the only final answer to a sustainable world. Efforts are made in all possible direction although ultimate success is still in the far distance.

We would like to encourage everyone to join forces in bringing a true sustainable product to our composite industry. Below are a few baby steps we are making in our journey

2009 Innovation Awards

Environment & Recycling

We have joined forced with the French technical textile specialist Porcher Industries to develop a new environmental-friendly surfboard using high-performance renewable cellulose reinforcements i.e. Greenlite[™] as an alternative to glass fiber. The Greenlite [™] reinforcements that are based on pure cellulose fibers

are bio-degradable and can be used with bio-based plastic materials for the production of 100% bio-based reinforced plastics with good mechanical properties and low weight using conventional processing equipment.



NSP

2010 Coco Mat

When nature and science collide, the result is dramatic and the same goes for the Coco Mat series by NSP. The natural Coco-fiber sandwich shell wraps the secure cell EPS core. It is then vacuum molded with clear epoxy resin and finished with a clear, fluid matt performance skin. Coco Mat is both extremely light weight and has an organic strength rarely found in man-made fibers. This is a technology that has been developed and patented by NSP. Every Coco Mat board is unique, with a natural look and will perform like no other.

2015 Bio-Based Surfboard

We excited the world with an accomplishment of environmentalfriendly boards which have 40% Bio-Based content by weight. By using bio-based materials (i.e. cork, flax fabric, or banana fiber) together with 56% Bio-Based Epoxy and Bio-Based Paint, we are now heading to the green direction as committed.



A 100% natural, sustainable and recyclable material, cork oaks have unique ability to absorb CO from the atmosphere. It is estimated that the cork oak forests can absorb up to 14 million tons

from the atmosphere. It is estimated that the cork oak forests can absorb up to 14 million tons of CO per year. It helps to control erosion, regulates the hydrological cycle and contributes to fighting global warming.

Flax fabrics Board

Cork core sandwich Board 100% Environmentally Friendly

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

Flax fibers can be combined with standard or bio-based resin. Cobra can offer a complete solution for your bio-based composites. Flax fibers are grown in Europe (85% of the world production) and around 90,000 hectare are cultivated every year. The low density of Flax fiber makes it nearly twice as light as glass fibers. It also has a better fatigue property compared to glass fiber. The drapability and mechanical performance of these fabrics are tailored to fit modern composites manufacturing. All yarns are perfectly aligned and do not crimp. ampliTex[®]/ non crimp _ax fabrics result in the strongest and stiffest natural fiber composites currently on the market. Low energy consumption to produce the fiber (1/10 of glass fiber)

Banana Fiber Board

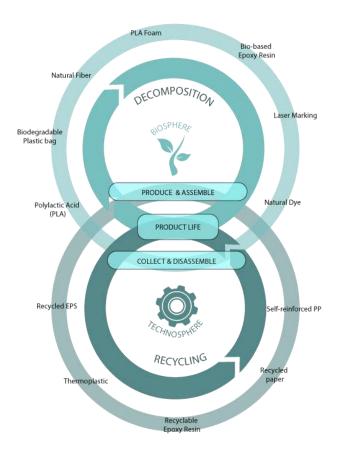
"Biodegradable material"

Banana fiber is a natural bast fiber. It has own physical and chemical characteristics and many other properties that makes it a fine quality fiber. Appearance of banana fiber is similar to bamboo or ramie fiber, but its fineness and spinnability is better than the two. It is highly strong fiber, has low elongation, and has light weight which makes this material suitable for composite application. It is biodegradable and has no negative effect on environment and thus can be categories as eco-friendly fiber



The resin system is made out of high-content of carbon from independent laboratory using carbon 14 measurement. The system obtains a rate of 56% of the molecular structure from plant origin. This percentage is function of the origin of the carbon contained in the molecule.

Cradle to Cradle Diagram



Environmentally Sustainable Materials and Products in a Cradle-to-Cradle Life span

For any material or product to be fully environmentally sustainable according to the 'C-2-C Life Span' Certification Board, all materials must be free from toxicity, contain no or little PVC, chloroprene or other banned chemicals. The materials must not leach problematic chemicals during their life cycle and must optimise any problematic chemicals used that can not be avoided so they are as non-polluting as is feasible. When materials are recycled this must include all their technical nutrients and when materials are disposed of it should be possible to compost as many biological nutrients as can be done

Source: environmentally sustainable clutter free living

- EPSREM ER 100% Recycle EPS (Granular)
- Greenpoxy 56 High content bio based epoxy resin
- UD Flax 120 g/m2 Strong natural fabrics that reduce toxicity, greenhouse gas emissions and non-renewable energy consumption
- Polylactic Acid (PLA)
 Bio degradable plastic derived from renewable resources
- Recycled packaging Most of our packaging are made from recycled materials, without any bleaches or dyes
- Eco Tape Made of recycled paper instead of plastic tape

2016 SUSTAINABILITY REPORT COBRA GROUP

2. Process & 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 its people on social responsibility, has been working on various types of "Process" built-into the production line. The key ones are shown below.

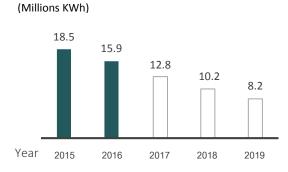
2.1 Energy Reduction

Energy Reduction Target for 2017: 20% less consumption in 2017



2.1.1 Electricity Savings Program

COBRA encourages its employees to use energy efficiently. The company setup a cost control committee, consisting of maintenance and other key functions, to oversight all cost-related activities throughout the Cobra group of companies. The monthly electricity cost during 2014 – 2016 is shown below:



Electricity Consumption

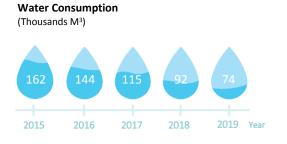
From above, through various electricity cost savings programs initiated in 2016, we could see some good results in 2016. The activities include changing from normal lights to energy-saving LED lights, installing inverter to control peak-hour, installing cooling system to control heat, reducing size of machines and pumps to consume less energy, and so on.

Electricity Saving Program

20	016 Actual	2017 F	Plan
LEDs Installed	2,150	3,000	Bulb
Install VSD Motor Blower	55	2	Machine
Install Inverter	33	-	Machine
Change New Air pu	ımp 2	-	Machine
Install Heat pump	-	36	Machine
Install Biofuel	-	1	Set
Install VSD Air Compressor	-	2	Set
Install Ultra MDB	-	3	Set
Install MESS	-	100	Set

2.1.2 Water Savings Program

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

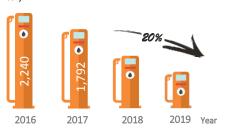


Currently not only reducing the water usage is one of our top priorities, we also aim for improving the quality of waste water before it is released back to the Amata Industrial Estate's system.

2.1.3 Gasoline Savings Program

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

Gasoline Consumption (Liter)





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2.2 Efficient Waste Management

Waste management was one of the topic COBRA has been focusing heavily in the past years. In the first quarter of 2015 we improved the waste area by building a complete new 2,400 sq.m. waste station. The objective is 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 environmental-friendly place for our staff.



The new waste station consists of 7 separate sections with each section storing specific types of waste ranging from EPS foam, paper carton, different kinds of plastic material to aluminum foil. The floor of the new waste station was lifted up to avoid flooding which could cause more pollution.

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 for either re-use within the company, or sell to 3rd parties
- 3) Non-toxic waste to be sent to government agencies for a proper landfill

2.3 Green Area

Since 2015, COBRA encourages its employees to build and maintain green area in the designated area throughout the company. The participation of the employees was very well responded and below is the summary:



Survey Results

		2016	2017 Target
Perennial Plant	(tree)	182	330
Shrub	(M ²)	1,380	1,656

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Remark: Perennial plant is referred to any tree taller than 3 meters

### 2.4 Opportunities for Challenged

At COBRA, we consider human capital to be one of our core assets. We are committed to developing career path for normal employees as well as providing opportunities for the challenged ones.

Today, we integrate 20 handicaped employees into various areas throughout the facilities from supporting units, warehouse, to main production lines.

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

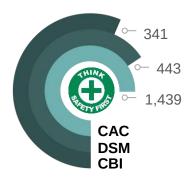


Ms. Supod Hemhong Sewing staff, Sewing Department Movement disability Has been with COBRA since 2012

| In total, COBRA has<br>20 challenged employees |                                |    |  |  |  |  |
|------------------------------------------------|--------------------------------|----|--|--|--|--|
|                                                | Persons                        |    |  |  |  |  |
| Mobility                                       |                                | 14 |  |  |  |  |
| Hearing                                        | 3                              |    |  |  |  |  |
| Vision                                         | 2                              |    |  |  |  |  |
| Cognitive                                      | 1                              |    |  |  |  |  |
|                                                |                                |    |  |  |  |  |
| <ul> <li>Mobility:</li> </ul>                  | Serious difficultly walking or |    |  |  |  |  |
| moveme                                         | nt                             |    |  |  |  |  |
| • Hearing: Serious difficulty hearing          |                                |    |  |  |  |  |
| • Vision: Serious difficultly seeing           |                                |    |  |  |  |  |
|                                                |                                |    |  |  |  |  |

• **Cognitive:** Serious difficultly concentrating, remembering or making decisions

### 2.5 Zero-Accident Competition



COBRA organizes a zero-accident competition for its factory-based subsidiaries of Watersports, Automotive, Marine, and Accessories business units. In 2016, the reward went to CAC, the Automotive business unit, for a straight 1,439 days without any single accident. This high-level of commitment regarding safety has been one on the key focuses among the companies of COBRA.

◀ 2016 Zero – Accident Competition Result (Days)

# 3. Happy Workplace

Happy workplace is a 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 human capital as the most important asset and, therefore, has created various programs for developing its human capital using activities described below.

### 3.1 Happy Body

Good health leads to happy life. COBRA has been continuously supported many activities relating to better health as showed below:



### Amata Sports Day

As part of the Amata Nakorn Industrial Estate ("Amata") sports day, COBRA has been supporting and participating in this event all along.





In 2016, 19 employees represented COBRA in the Amata Sports Day

2 team, 12 employee 4 team, 4 employee 4 team, 3 employee

### COBRA's Cup

In promoting a better work-life environment, COBRA has organized a futsal competition with an objective to create awareness of good health through sports.







17 Futsal teams 1 Champion

### 3.2 Happy Heart

Social sharing makes a better living society. By giving back to the society, COBRA organizes many programs as shown below:

#### **Blood Donation**

It has been a long tradition for COBRA to organize a "Donating Blood saves Lives" event on a quarterly basis. 2016, as always, was another successful year with warm participation from COBRA staff including our CEO, Khun Danu Chotikapanich.



### **Child Sponsorship**

The Company is committed to pursuing sustainable business practice while working to realize a better future for 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 make a better society by offering those disadvantaged children the opportunities as well as financial support to pursuit their higher education.



Today, we provide 8 child sponsorships to YWCA organization and 3 child sponsorships to World Vision organization.

### 3.3 Happy Heart

Our employees are the most important resources. The company is always aware that employees' relaxation is necessary not only for themselves, but also for their working performance. Consequently, we organize "Thank you" party and invite our employees to join these celebrations.



Khun Michel Roeffaers, CEO of CAC, gave a present for the lucky draw on the party

Khun Supon Worathongchai, Chief Service Officer, gave a present for the lucky draw on the party





#### **Farewell Party**

COBRA has been organizing a farewell party, as part of our culture, for our staff for their commitment and long service year. On December 19, 2016, a total of 5 retiring employees were invited to the farewell party to be thanked by the company

Retiring employee and team leader on Award Ceremony

### 3.4 Happy Brain

Knowledge is one key attribute to self-improvement. To be a professional, we all need to go through learning processes. We at COBRA are, committed to provide knowledge to the society as much as we can do with the following programs:

### 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 miniformula car for the TSAE Auto Challenging organized by the Society of Automotive Engineering Thailand (TSAE).

COBRA has been providing assistance to the students participating in this project in terms of location for production and testing, raw material for making various parts of the car, tools and equipment as well as technical support from our experienced engineers and technicians.



A student during a test drive inside COBRA's facility

#### **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 students both domestic and international who are interested in composites manufacturing. The main objective is to provide opportunities for students to gain real-life knowledge. With all knowledge gained from these visits, we strongly hope to give them insights in composites manufacturing in order for them to be able to apply in their future education.



263 Visitors came to visit COBRA in 20165 Universities4 Organizations





A group of professors from BIO and Thai Composite Association came to visit COBRA on September 8, 2016

### 3.5 Happy Soul





#### **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 importance of dates in the Buddhist calendar. It has been COBRA's long tradition to organize Buddhist events right in its factory by inviting the monks deliver principles of Buddhism to the employee as well as providing opportunities for COBRA's employees to give alms to the monks.



COBRA employees gave alms to the monks during Makha Bucha day, the day the Buddha was born, reached his enlightenment, and died on the very same day

In Remembrance of His Majesty King Bhumibol Adulyadej: 1927 - 2016

On October 17, 2016, COBRA organized an event in remembrance of His Majesty King Bhumibol Adulayadej to pay highest respect to our great King and the Father of our nation. His Majesty King Bhumibol's royal legacies will always be remembered.

#### **Songkran Festival**

COBRA organizes a Songkran festival celebration, the Thai New Year's festival, for its employee 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 employee to show respect to the elders by pouring water over the palms of elders' hands in return for good advices and life lessons.



Khun Danu Chotikapanich, CEO of COBRA show respect to the elders during Songkran festival in 2016

### 3.6 Happy Family

Strong families 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, to provide opportunities as well as financial support to our employees and their children.



118 education scholarships given to our employees' children in 2016







### 3.7 Happy Society

Social sharing makes a better living society. By giving back to the society, COBRA organizes many programs including humanitarian relief efforts during natural disaster, safety training via safety week event, and many more.

#### Humanitarian Relief Program: Chiangmai 2016

During December 3 – 4, 2016, COBRA organized a humanitarian program to donate clothing including shoes and socks as well as medicines and other important items for basic needs. The destination was villages on the top mountain deep in the rural area in Chiangmai, northern part of Thailand. The villagers are in need to clothing due to the cold temperature of an average of 10 - 15 degree Celsius throughout most of the year.



#### **Global Climate Change Awareness Program**



Don Hua Ror Municipality in which our factory is located organized a program to promote awareness of global climate change through activities of Ride, Plant and Collect. COBRA, as always, setup a team to participate with the Municipality in this program.



### Humanitarian Relief Program: Homeless Child Center, Chonburi, Thailand

On August 11, 2016, COBRA organized a humanitarian program to provide lunch to homeless children at this center. There are total of 350 homeless children at this



#### Safety Week

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 8<sup>th</sup> generation of COBRA's fire fighter. By the end of 2016, COBRA had 48 professional fire fighters trained up working 24/7 to safeguard the company against any fire-related accident.





