

Enable a Sustainable Future

Sustainability Report 2018



We are OXEA – a globally active chemical company. Never losing touch with tradition, we are constantly moving forward. Our core competency is the production and sale of oxo chemicals. OXEA's portfolio includes over 70 products supplied to customers. These products are used for the production of coatings, lubricants, cosmetics, printing inks, and much more.

We treat our employees, business partners, and customers with respect. Safety, trust, communication, and a strong family culture are our basis for value creation.

CONTENTS

05

Company Profile

14

Game Changer

22

Reporting Section

OXEA

04 Foreword

05 Company Profile

06 Locations

07 Our History

08 OXEA's Value Chain

09 Applications

10 Product Overview

11 Strategy – Vision and Goals

12 Board of Directors

13 OXEA's Leadership Team

Propanol 2 unit – a success story

14 Game Changer

Reporting Section

22 Introduction

23 Sustainability at OXEA

24 Sustainable Governance

30 Economic Performance

32 Environment, Health, and Safety (EHS)

43 Social Performance

52 GRI Index

55 Imprint

FOREWORD

OXEA

04 Foreword

- 05 Company Profile
- 06 Locations
- 07 Our History
- 08 OXEA's Value Chain
- 09 Applications
- 10 Product Overview
- 11 Strategy – Vision and Goals
- 12 Board of Directors
- 13 OXEA's Leadership Team

Propanol 2 unit – a success story

Reporting Section

GRI Index

Imprint

Dear Reader,

For OXEA, 2018 has been another successful and eventful year. We have accomplished various projects and initiatives that you will read about in this report. Although this is already the third edition of our Sustainability Report, it is something very special as we have given it a new structure:

The report is built around a main story focusing on a game changer – not only for OXEA, but also for the printing industry: the successful launch of our new production unit for propanol at our Bay City site. Propanol as part of Propyls means a real step ahead for packaging printers to massively lower the consumption of solvents and thus reduce the burden on the planet. We want to give you some insight into this project, its success factors, and what made it so special: our employees. I invite you to read all about it on page 14.

For further information on our business-relevant economic, ecological, and social facets, please refer to the Reporting Section starting on page 22. Our most important goal is to strive for zero environmental, health, and safety (EHS) incidents, and therefore I would also like to highlight the introduction of leading indicators to further strengthen our EHS culture.

It was an exciting year, and we hope to give you a meaningful view of OXEA's endeavors. At OXEA, we strive for continuous improvement based on our core values of safety, trust, respect, and communication, and we hope to give you an insight into how we embody and develop sustainability topics further at OXEA.

Happy reading,



Oliver Borgmeier

“At OXEA, we see sustainability not as a program, but as a commitment.”



Dr. Oliver Borgmeier, Chief Operating Officer since January 2019, Executive Vice President Global Operations



COMPANY PROFILE

OXEA

- 04 Foreword
- 05 Company Profile**
- 06 Locations
- 07 Our History
- 08 OXEA's Value Chain
- 09 Applications
- 10 Product Overview
- 11 Strategy – Vision and Goals
- 12 Board of Directors
- 13 OXEA's Leadership Team

Propanol 2 unit – a success story

Reporting Section

GRI Index

Imprint

OXEA is one of the leading producers of oxo chemicals, with a global production capacity of over 1.3 million tons per annum and sales of about €1.2 billion worldwide. We sell over 70 products into a wide range of end markets and for various applications.

Ensuring its global presence, OXEA maintains six production sites: three in Europe (Oberhausen, Marl, and Amsterdam), two in the United States (Bay City and Bishop), and one in China (Nanjing), as well as several decentralized sales offices and subsidiaries (see graphics on next page).

OXEA was formed on March 1, 2007, through a merger of the oxo business units of Celanese and European Oxo. The company name refers to the oxo process, which was discovered over 80 years ago at the Ruhrchemie site in Germany and still plays a decisive role in OXEA's daily business.

In 2013, OXEA was acquired by Oman Oil Company S.A.O.C. (OOC), a commercial company wholly owned by the Government of Oman.

Today, OXEA employs more than 1,400 people worldwide.

1.3 million tons
of production capacity

Annual revenue of
1.2 billion euros

Headquartered in
Monheim,
Germany

6
production sites

70
products
shipped to all continents

1,400
employees globally



LOCATIONS

OXEA

- 04 Foreword
- 05 Company Profile
- 06 Locations**
- 07 Our History
- 08 OXEA's Value Chain
- 09 Applications
- 10 Product Overview
- 11 Strategy – Vision and Goals
- 12 Board of Directors
- 13 OXEA's Leadership Team

Propanol 2 unit – a success story

Reporting Section

GRI Index

Imprint



Production Sites

Bishop
approx. 35 employees

Bay City
approx. 180 employees

Amsterdam
approx. 25 employees

Oberhausen
approx. 900 employees

Marl
approx. 70 employees

Nanjing
approx. 50 employees



OUR HISTORY

OXEA

- 04 Foreword
- 05 Company Profile
- 06 Locations
- 07 Our History**
- 08 OXEA's Value Chain
- 09 Applications
- 10 Product Overview
- 11 Strategy – Vision and Goals
- 12 Board of Directors
- 13 OXEA's Leadership Team

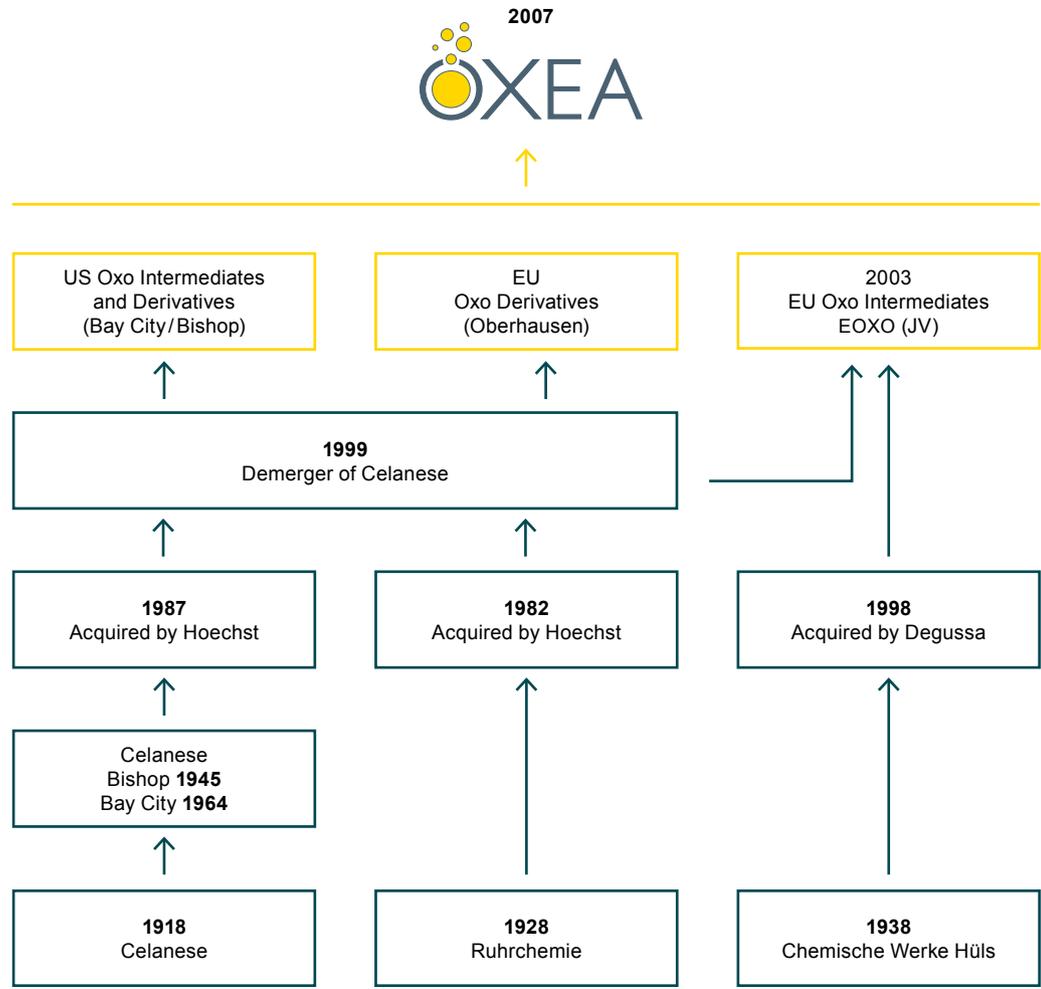
Propanol 2 unit – a success story

Reporting Section

GRI Index

Imprint

OXEA is a young company (started in March 2007), the roots of which date back to 1918 and which was part of a number of renowned predecessor companies. A diagram of our history is shown below.



OXEA'S VALUE CHAIN

OXEA

- 04 Foreword
- 05 Company Profile
- 06 Locations
- 07 Our History
- 08 OXEA's Value Chain**
- 09 Applications
- 10 Product Overview
- 11 Strategy – Vision and Goals
- 12 Board of Directors
- 13 OXEA's Leadership Team

Propanol 2 unit – a success story

Reporting Section

GRI Index

Imprint

OXEA produces and sells more than 70 products worldwide. Our products can be found in a wide variety of everyday applications and market segments, such as raw materials for coatings and ingredients for personal care formulations, but also as a component of safety glasses in the automotive industry, in lubricant formulations for cooling systems, and for the manufacture of printing inks.

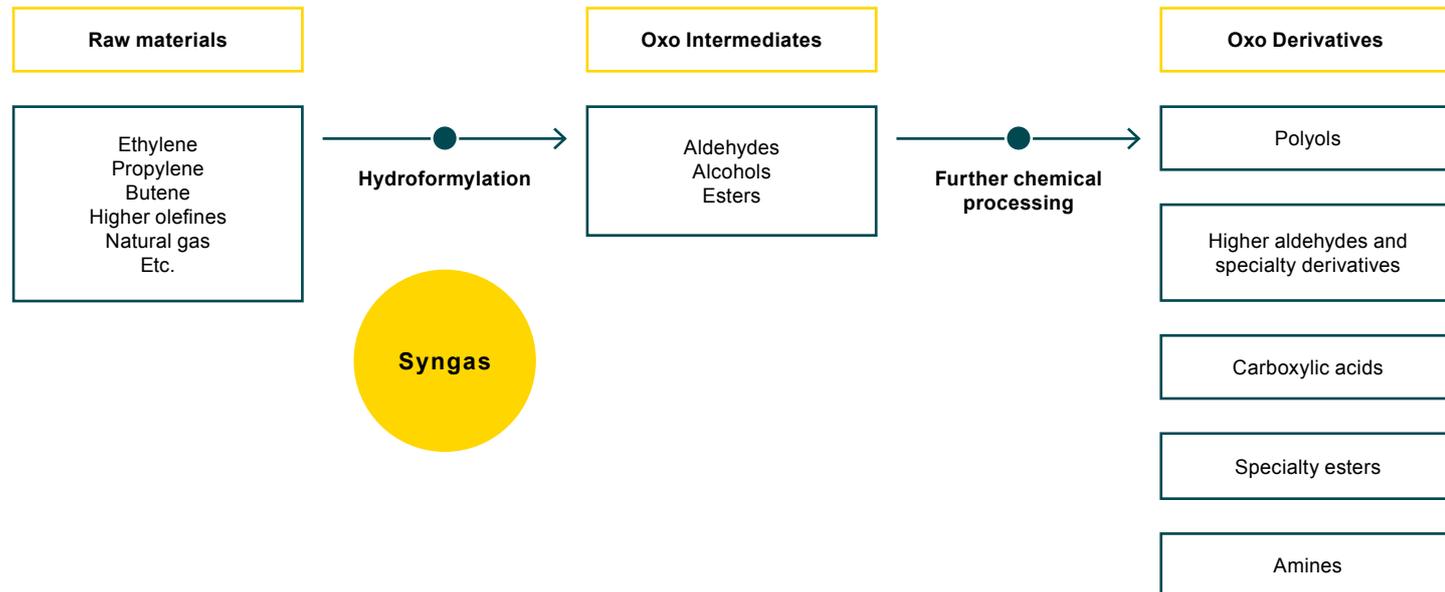
OXEA's highly integrated production platform is based on the oxo process invented in 1938 by Otto Roelen at our site in Oberhausen. The oxo process, otherwise known as the hydroformylation process, transforms olefins, which are unsaturated hydrocarbons such as propylene and ethylene, to aldehydes by adding syngas.

These aldehydes are either sold externally or are used internally (i.e., captive requirements)

as precursors for other Oxo Intermediates and Oxo Derivatives such as carboxylic acids, polyols, amines, and specialty esters (see graphic below).

Due to the chemical nature of the molecules, application areas are widely spread. The following graphic presents our core competencies along the oxo chemicals value chain and also shows applications and market segments in which OXEA's products are used.

Oxo Process



APPLICATIONS

OXEA

- 04 Foreword
- 05 Company Profile
- 06 Locations
- 07 Our History
- 08 OXEA's Value Chain
- 09 Applications**
- 10 Product Overview
- 11 Strategy – Vision and Goals
- 12 Board of Directors
- 13 OXEA's Leadership Team

Propanol 2 unit – a success story

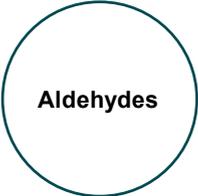
Reporting Section

GRI Index

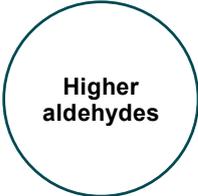
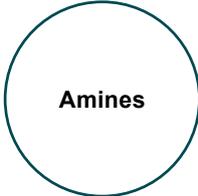
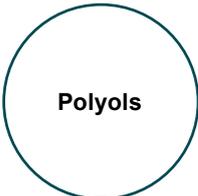
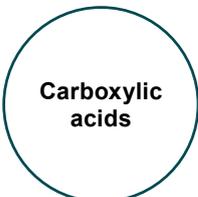
Imprint

This overview shows applications and market segments in which OXEA's products are contained.

Oxo Intermediates

 Aldehydes	Applications: Lacquers, polymer additives, flotation chemicals, flavors and fragrances
 Alcohols	Applications: Surface coatings, lacquers & paints, polymer additives, lubricants, solvents, disinfectants, printing inks
 Esters	Applications: Chemical intermediates, cosmetics, paints & coatings, printing inks, pharmaceuticals, solvents

Oxo Derivatives

 Higher aldehydes	Applications: Chemical intermediates, flavors & fragrances	 Amines	Applications: Agrochemicals, rubber chemicals, polymer additives, pharmaceuticals, surfactants, dye intermediates, specialty chemicals, corrosion inhibitors
 Polyols	Applications: High-solids coatings, powder coatings, cosmetics, lubricants, polymer additives	 Specialty esters	Applications: Plasticizers, lubricants, coalescing agents
 Carboxylic acids	Applications: Lubricants, siccatives, flavors & fragrances, polymer stabilizers, feed additives, corrosion inhibitors	 Higher alcohols	Applications: Plasticizers, lubricants, flavors & fragrances, surfactants



PRODUCT OVERVIEW

OXEA

- 04 Foreword
- 05 Company Profile
- 06 Locations
- 07 Our History
- 08 OXEA's Value Chain
- 09 Applications
- 10 Product Overview**
- 11 Strategy – Vision and Goals
- 12 Board of Directors
- 13 OXEA's Leadership Team

Propanol 2 unit – a success story

Reporting Section

GRI Index

Imprint

The product range of OXEA comprises more than 70 chemicals, which are subsequently processed by the industry. This diagram provides an overview of our general product portfolio (excluding customer-tailored products).

Oxo Intermediates	Oxo Derivatives					
Aldehydes/ Alcohols/Esters	Carboxylic acids	Polyols	Amines	Higher aldehydes	Higher alcohols	Specialty esters
Propionaldehyde n-Butyraldehyde Isobutyraldehyde n-Butanol Isobutanol n-Propanol n-Propyl acetate n-Butyl acetate Isobutyl acetate 2-Ethylhexanol	Propionic acid (AF) n-Butyric acid (AF) Isobutyric acid Valeric acid (HP) 2-Methylbutyric acid 3-Methylbutyric acid Heptanoic acid (HP) 2-Ethylhexanoic acid Pelargonic acid (HP + HALAL) Isononanoic acid Isopentanoic acid	1,3 Butylene Glycol TCD Alcohol DM Nepopentyl Glycol (NPG) Trimethylolpropane (TMP)	Propylamines Butylamines 2-Ethylhexylamines n-Octylamine 3-Methylbutylamine Dimethylbutylamine	n-Undecanal n-Nonanal 2-Ethylhexanal C13/C15 Aldehyde Isovaleraldehyde Isononanal Valeraldehyde Propionaldehyde	2-Methylbutanol 3-Methylbutanol n-Heptanol n-Nonanol 3,5,5-Trimethylhexa- isonol (Isononanol) TCD Alcohol M	OXSOF 3G8 OXSOF TOTM LE OXSOF TOTM ST LE OXSOF GPO OXFILM 351 OXLUBE L9-TMP



STRATEGY – VISION AND GOALS

OXEA

- 04 Foreword
- 05 Company Profile
- 06 Locations
- 07 Our History
- 08 OXEA's Value Chain
- 09 Applications
- 10 Product Overview
- 11 Strategy – Vision and Goals**
- 12 Board of Directors
- 13 OXEA's Leadership Team

Propanol 2 unit – a success story

Reporting Section

GRI Index

Imprint

OXEA's vision is connected with a clear goal: we aim to sustainably grow our business by being the global partner of choice for high-quality oxo chemicals and services – and beyond.

With our long history in the field of oxo products, we not only build on our strong technical expertise and process knowledge, but we are also committed to serving specialty applications in sustainably growing markets.

As a company, we are increasing our application and market segment focus to even better understand and fulfill the needs of our customers – today and in the future. We are evolving from a supplier of oxo chemicals into a specialized solution provider for our partners.

The two pillars for our long-term success are a solid base business, mainly formed by our Oxo Intermediates products, and the growth of our Oxo Derivatives business.

OXEA is committed to maintaining its leading position in Oxo Intermediates in the core business markets in Europe and North America, as well as capitalizing on other global growth market opportunities. Through continuous optimization of key technologies, leveraging of regional raw material cost advantages in the USA, and investment in new capacity for our Propyls business, we maintain our focus on balancing the needs of the markets and the expectations of our customers today and in the future.

In addition to providing a key base-load for Oxo Intermediates products, OXEA aims to further develop the value chain of the Oxo Derivatives business in order to serve more stable and high-value-added markets. We pursue this goal through organic growth and selective acquisitions, leveraging our core engineering, manufacturing, and marketing competencies.

Our “star products” and focus areas (among others) comprise:

- Propyls in the packaging and printing industry
- Carboxylic acids as building blocks in lubricants and the animal feed industry
- TCD Alcohol DM as a versatile copolymer in various industries
- 1,3 Butylene Glycol in personal care formulations

All our projects are geared toward our vision and goals and comprise the different aspects relevant for OXEA's sustainable success.

Starting with the understanding of our customers' needs and their translation into OXEA solutions, they range from capacity increases and additions to our product portfolio to technical developments and cooperations with our customers.



A clear strategic direction and innovation form central building blocks for OXEA's success, Cristobal Ascencio, Executive Vice President Strategy & Innovation.

BOARD OF DIRECTORS

OXEA

- 04 Foreword
- 05 Company Profile
- 06 Locations
- 07 Our History
- 08 OXEA's Value Chain
- 09 Applications
- 10 Product Overview
- 11 Strategy – Vision and Goals
- 12 Board of Directors**
- 13 OXEA's Leadership Team

Propanol 2 unit – a success story

Reporting Section

GRI Index

Imprint

Strong Industrial Know-How Thanks to New Board Members

The Board of Directors, as the supreme operational decision-making authority of OXEA, appoints a CEO who is responsible for the day-to-day management of the business, in line with the strategy and long-term objectives approved by the board.

In 2018, five new members joined the board, with the aim to establish a stronger strategic focus and to profit from the comprehensive knowledge of the sector that the new members bring with them. In addition to technical knowledge, diversity is also important for the composition. This has been achieved by the different countries of origin, genders, and experience levels. The Board of Directors will continue to challenge OXEA and thus develop it further.



From left to right: Musab Al Mahruqi, Hilal Al Kharusi, Martin Lundin, Jennifer Midura, Luis Fernandez, Monika Engel-Bader, Patrick Quarles, Nazar Al Lawati, Dr. Salim Al Huthaili (CEO OXEA)

OXEA'S LEADERSHIP TEAM

OXEA

- 04 Foreword
- 05 Company Profile
- 06 Locations
- 07 Our History
- 08 OXEA's Value Chain
- 09 Applications
- 10 Product Overview
- 11 Strategy – Vision and Goals
- 12 Board of Directors
- 13 OXEA's Leadership Team**

**Propanol 2 unit –
a success story**

Reporting Section

GRI Index

Imprint



Dr. Salim Al Huthaili
Chief Executive Officer



Markus Hoschke
Executive Vice President
Global Sales & Marketing



Stefan Schmidt
Chief Financial Officer Executive
Vice President Finance & IT



Hans-Peter Imkamp
Executive Vice President Legal,
Insurance, Communications,
Trademarks



Cristobal Ascencio
Executive Vice President
Strategy & Innovation



Dr. Oliver Borgmeier
Executive Vice President
Global Operations



Dr. Bernhard Herzog
Executive Vice President
Human Resources



Jan Hille
Executive Vice President
Global Supply Chain

OXEA

**Propanol 2 unit –
a success story**

14 Game Changer

Reporting Section

GRI Index

Imprint



Game Changer

With its new Propanol 2 production unit in Bay City, Texas, USA, OXEA is opening up new business opportunities and supporting its customers who want to do business in a more environmentally friendly way. To achieve this, OXEA has been producing additional amounts of n-propanol and n-propyl acetate for so-called Propyls since July 2018. These are used in packaging printers to massively lower the consumption of solvents and thus reduce any burden on the planet. To convince the highest possible number of printers to switch over to Propyls, OXEA has successfully performed field tests and is providing intensive consultation in all parts of the world.



OXEA

Propanol 2 unit –
a success story

14 Game Changer

Reporting Section

GRI Index

Imprint

Chip bags, diaper packaging bags, coffee pods, ... for every conceivable product, printers all over the globe turn thousands of miles of roll stock into millions of colorful packages every day. At the same time, they create vast quantities of ozone, which is emitted into the air and harmful to our climate. This is because a large portion of these gigantic production volumes use printer inks that contain conventional solvents such as ethanol and ethyl acetate. Like all solvents, these evaporate and emit volatile organic compounds (VOCs) that, in light of the ever-tighter regulations worldwide for printers, are becoming more of a problem than ever before. So, eliminating their use is on the agenda. But how can this be achieved?

100,000 metric tons of opportunities

The answer to this question can be found in the USA: in Bay City, Texas, to be precise. After years of construction, the OXEA Propanol 2 unit went into service in the middle of 2018 and is one of the world's most modern production facilities. The new unit is one of the largest investments in the history of OXEA and plays a leading role in the company's growth and sustainability strategy. The reason: with Propanol 2, OXEA can produce around 100,000 metric tons of additional n-propanol every year, a large portion of which is processed further to create n-propyl acetate. This substance and mixture both fall under the term Propyls. Propyls can replace ethanol and ethyl acetate in the printing industry one to one. At the same time, they are clearly a more economical and sustainable alternative. By switching from conventional solvents to Propyls, packaging printers can instantly reduce their consumption of solvents and printing ink by up to 30%.

With Propanol 2, OXEA can produce around 100,000 metric tons of additional n-propanol every year.



OXEA's facility at the Bay City site in Texas.

OXEA

Propanol 2 unit – a success story

14 Game Changer

Reporting Section

GRI Index

Imprint

Comprehensive risk analysis and the most modern environmental technology

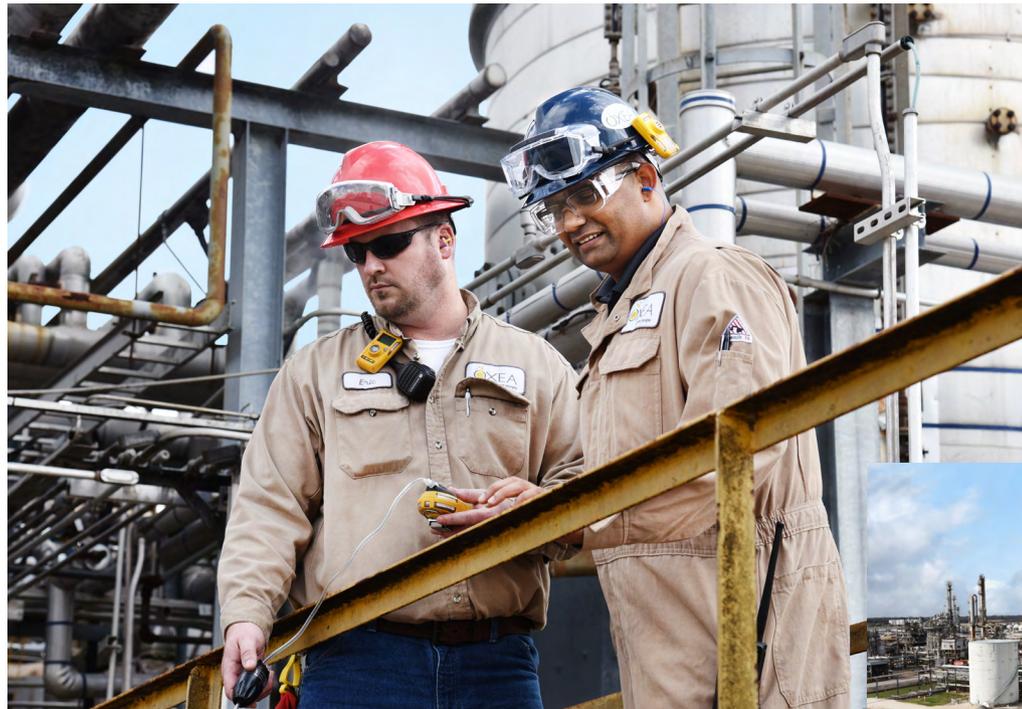
Propanol 2 enables OXEA to provide new opportunities for marketing environmentally friendly products, with the potential to boost demand. The unit also shows how sustainable engineering can lower resource consumption and minimize any potential risks.

“At the very start of our planning, we broke down the facilities into 50 systems on paper and analyzed every single one,” explains Senthil Kumar, Environmental Health & Safety Manager North America at OXEA. “We then

took the results and transferred them to a risk matrix,” adds Tim Allen, Operations Manager in Bay City. “This meant that we could quickly identify unacceptable risk potential and safely eliminate these risks by taking the right steps.”

To avoid volatile emissions, for instance, the project team chose to install sealless pumps. This makes Propanol 2 a completely closed system, without any emissions within the facilities. Moreover, in addition to frequent employee training on hazardous substances and emergency situations, numerous technical safety precautions are taken that go beyond

the basic standards required by the authorities. These precautions include separate fire protection zones with infrared monitoring and sprinkler systems, an automatic foaming system with underground collection basin, a system for reusing extinguishing water, and numerous geographic air monitors.



“Due to the newest technology and the plant design, operation is clean and almost without any noise.”

— Senthil Kumar, Environmental Health & Safety Manager North America, OXEA.



The Propanol 2 unit has been designed and built with the latest state-of-the-art technologies. This is reflected in our daily operation, as the plant runs very quietly and has less potential for any emissions from equipment failures.

OXEA

Propanol 2 unit – a success story

14 Game Changer

Reporting Section

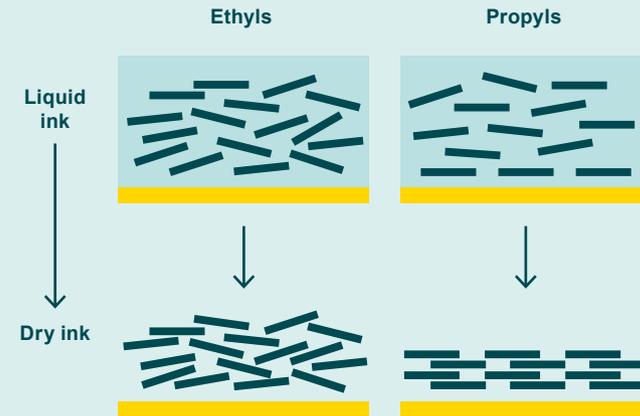
GRI Index

Imprint

Propanol 2 is also setting standards when it comes to environmental technology. To save natural gas, liquefied and gaseous by-products are completely burned off, and up to 100% of the energy created is used to produce steam. Sustainable life cycle management is in place for all other waste, achieving a high reuse quota of more than 90%. The consumption of nickel catalyst for hydrogenation has also been reduced by more than 25% thanks to an improved recovery process. This makes the entire production process environmentally efficient and free of by-products. To minimize the need for wastewater processing, OXEA collects rain and possibly contaminated water in on-site basins; after an analysis of any contamination, rainwater that has been confirmed as clean can be discharged, eliminating unnecessary wastewater processing. This is in addition to the fact that OXEA's Propanol 2 unit was built where a previously closed plant was located in order to avoid building on new earth. The concrete from the foundations of the old plant was recycled, and the still existing, old pipe rack was reused.

Senthil Kumar is especially glad that no significant environmental, health, and safety incidents occurred during the entire project implementation phase, although Propanol 2 started operations four months earlier than planned. "This is a significant achievement for Propanol 2 from an environmental, health, and safety standpoint, and I am very proud of this. Due to the newest technologies implemented and the design of the unit, plant operations are very clean and virtually without any noise."

Comparison of the drying behavior of printing ink on film



When Ethyls are used (left side), the pigments are distributed heterogeneously on the printed film, while when Propyls are used, the pigments form a more homogeneous layer (right side of figure). The chosen shape of the pigments serves as a better representation and does not describe the actual shape of a pigment.

- Solvent
- Film
- Pigments

OXEA

Propanol 2 unit –
a success story

14 Game Changer

Reporting Section

GRI Index

Imprint

“The biggest challenge was thinking of all the details while keeping an overview on everything.”



— **Marcus Heuwes** came from Germany to Bay City in 1997 as an expatriate and has been a project manager at OXEA since 2011. As Project Director for Propanol 2, the engineer was mainly responsible for planning the production facilities and leading the construction phase, from initial planning to the start-up of operations.

Mr. Heuwes, what were the biggest challenges when it came to planning and building Propanol 2?

Markus Heuwes — There are many things that are simply daily routine, because OXEA relies on a structured process with clearly defined procedures and safety requirements for each project phase. But despite this, it's not like we erect new production facilities every day. The biggest challenge was thinking of all the details while keeping an overview on everything. A project of this massive size only functions when everyone knows what it's about, can contribute their know-how, and is motivated from the start to the very end.

How did you manage this?

MH — By having an open mind and being transparent. Communication is key to success, which is why we brought all stakeholders into the planning from the very beginning – from the team for occupational safety to the management team and, especially, the staff who will be operating the unit in the long run as internal customers for the project within OXEA. This enabled us to consider all their requirements in the planning stage, to learn from what we have achieved so far, and to create suggestions for improvement for the next steps. This requires being open-minded and treating others with respect; values that are strongly anchored in OXEA's corporate culture. At the same time, one has to know their own limits as a relatively small site and, if necessary, get support from outside. Recognizing this and implementing it was one of the most important factors for our success.

How important is this new production unit to Bay City?

MH — Propanol 2 has made a significant contribution to securing the Bay City site in the long run and has made it even more attractive. On an emotional level, because this has been the first investment for a new production unit in Bay City for decades; and on an economic level, because propanol is one of our top products, with growing demand. What's more, we were able to create new jobs in Bay City. This is also good for the site, and a good sign for the local community.

OXEA

Propanol 2 unit – a success story

14 Game Changer

Reporting Section

GRI Index

Imprint

Huge potential for demand

OXEA is the world's largest producer of propanol. The second unit in Bay City will increase production volumes by a further 75%. To ensure that demand increases in order to fully utilize this massive capacity, OXEA previously analyzed sustainability-relevant market trends in package printing and generated a needs profile. "We are seeing rising demand worldwide for Propyls, with a growth rate of 5 to 6% every year," says Lucia Paniagua, Global Lead & Business Development for Propyls. However, there are enormous regional differences in this number.

For instance, Propyls are readily available in North America, Russia, and many areas of Latin America. As a result, packaging producers there, who rely on solvent-based flexographic and gravure printing methods, have already been using Propyls for many years across the board. The sales potential for Propyls directly correlates to branch growth, explains Lucia Paniagua. This is in strong contrast to Europe, Southeast Asia, India, and countries such as Turkey, China, and Brazil. Here, the use of conventional ethanol/ethyl acetate and other solvents has been the standard, because Propyls had virtually not been available there up to some years ago. "There is huge potential for demand for our product in these regions, regardless of branch growth," according to Lucia Paniagua. "We are currently working on convincing packaging printers to switch to OXEA's system."

"We are currently working on convincing packaging printers to switch to OXEA's system."

— Lucia Paniagua, Global Lead & Business Development for Propyls



6%

growth rate every year

— Propyls worldwide
The global demand for Propyls grows 5 to 6% every year.

OXEA

Propanol 2 unit – a success story

14 Game Changer

Reporting Section

GRI Index

Imprint

“The slower evaporation process of Propyls lowers the VOC concentration in printing operations and emissions to air.”

— Naoko Roth, Global Commercial Business Director, Oxo Intermediates, OXEA



Studies show: Propyls are more economical and sustainable

To persuade printers to switch to Propyls using convincing arguments, OXEA commissioned worldwide industry tests and scientific studies. They show that printers using Propyls save 30% in solvents on average and 20% in printing ink, without compromising quality. “At the same time, the printing machines did not need to be changed in any way,” says Naoko Roth, Global Commercial Business Director, Oxo Intermediates. “Printing companies can therefore simply replace ethanol and ethyl acetate with Propyls to achieve these savings. Additional investments are not necessary.”

This is thanks to the special properties of Propyls. They evaporate slower than conventional solvents and therefore have a much smaller environmental footprint. “The slower evaporation process with Propyls lowers the VOC concentration in printing operations and results in fewer emissions to air,” explains Naoko Roth. Moreover, lower amounts of solvent need to be recycled, which lowers energy consumption.

The ecological benefits, however, are not argument enough. “Many printing companies are only willing to switch if they do not have to pay more,” says Naoko Roth. As the studies show, Propyls can also score points in this respect. That’s because they stabilize the printing

process. The result is fewer machine halts and fewer scraps. At the same time, productivity increases, because the printers can print at a higher machine speed while ensuring the same high quality.

Naoko Roth is optimistic that many potential customers will be convinced by these arguments. “We are seeing rapid growth mainly in South America, India, Europe, and China.” And Naoko Roth has clear objectives. “In the next four years, we want to completely utilize the production capacity of Propanol 2: in other words, an additional 25,000 metric tons a year.”



“Every switchover is a success. Not just for us.”

— Jens Klabunde, Business Development Manager, OXEA

OXEA

Propanol 2 unit – a success story

14 Game Changer

Reporting Section

GRI Index

Imprint

Mr. Klabunde, OXEA is not the only company that produces propyls. What is special about your product?

Jens Klabunde — We’ve performed numerous industry studies over the past five years, meaning massive amounts of development work. This means we know exactly how printing companies can successfully switch over to Propyls. And we share this know-how with potential customers. In other words: we don’t simply deliver our products to the door, we serve as an advisor and coach inside the companies and give tailored support to enable the printers to switch over without a hitch. Our products come with customized technical service, which other producers don’t offer.

How do potential customers react to your product offering?

JK — In very different ways. Some are skeptical, because they don’t see a reason to change. Others are really interested, because they want to be environmentally friendly and to stand out from the competition by offering ecological production. In many parts of Asia, in contrast, the environment is secondary. But that is also slowly changing.

Like in India. Mainly toluene continues to be used there, but this is now going to be legally banned because it’s considered to cause cancer. In the near future, a massive switch to other solvent systems will be taking place here and in other countries due to ever-stricter laws.

Is replacing a solvent with another an act of sustainability?

JK — Solvents are absolutely necessary for flexographic and gravure printing. But if printers have to replace solvents, they should choose the system with the best footprint. 30% savings is a high number. It means up to 600 metric tons of substances in a single large company that no longer end up in the environment and in the airways of the printing company’s staff. Every switchover is a success. Not just for us.



— **Dr. Jens Klabunde** has been with OXEA for eight years. The biotechnician and chemist is not only responsible for finding new applications for OXEA’s product portfolio, he is also a frequent guest in printing companies around the world. As a coach, Jens Klabunde helps printers to switch to Propyls by performing tests on-site and providing tailored support.

Sustainability is not only a buzzword at OXEA; we embody it in many different facets and it accompanies us in our everyday working life.

Since the publication of our first Sustainability Report in 2016, we have been bundling and streamlining our activities further to take the next steps to fulfill the expectations of our stakeholders.

OXEA

**Propanol 2 unit –
a success story**

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

SUSTAINABILITY AT OXEA

Sustainability and corporate social responsibility (CSR) play an important role in all OXEA processes and our everyday work life, and are reflected in many different ways.

At OXEA, we set ourselves targets that go beyond regulatory requirements, fitting the size and nature of our company. We see and embrace sustainability as a holistic concept and aim to constantly sharpen our profile further to meet our stakeholders' expectations.

To help evaluate our sustainability and CSR performance, OXEA is registered on the Ecovadis platform and currently holds Silver Status.

We are also a listed member of Responsible Care and support the Sustainable Development Goals of the United Nations. We aim to conduct an updated materiality analysis (please compare Sustainability Report 2016) with reference to the Sustainable Development Goals of the UN (SDGs) for 2019.

Our company goals for 2018 cover economic, environmental, and social aspects relevant to our business – for more details please refer to the different reporting sections.



SUSTAINABLE GOVERNANCE

OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Governance Structure // Management Structures

The Leadership Team consists of seven members heading the different organizations. They form the most senior management level within OXEA and report to the CEO. The CEO coordinates the activities of the Leadership Team and is the main point of contact with the Board of Directors.

Leadership Team meetings are held on a frequent basis, led by the CEO, and various reporting tools across all organizations ensure a constant flow of information and allow global monitoring of all OXEA-related activities. All levels of authority can be found in OXEA's Manual of Authorities. In mid-2017, the CEO appointed a new Leadership Team, including both organizational and personnel changes, empowering and preparing the organization for the achievement of strategic targets in 2018 and beyond.



OXEA

**Propanol 2 unit –
a success story**

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Derivatives Marketing, Intermediates Marketing, and the Sales organization were combined to bundle competencies and build upon synergies – all geared toward optimal customer orientation.

Furthermore, the Business Performance & Strategy group was transformed into Strategy & Innovation, condensing the focus on strategic projects and technical innovation. With this, the R&D group (formerly part of Global Operations) was also moved into the Strategy & Innovation group.

Sustainability Management (formerly part of Business Performance & Strategy) was integrated into the Product Stewardship, Quality Management, and Analytics organization (PSQ) as part of the Global Operations organization. The PSQ organization functions as an interface with all organizations, ensuring that quality standards are met. The advantages of this function and deep understanding of processes were built upon to approach sustainability as a holistic concept and roll out operative measures. The Manager Sustainability reports to the Vice President of PSQ.

Integrated management system (IMS)

OXEA has implemented its integrated management system (IMS). The IMS serves the purpose of implementing the guidelines of the corporate policy and the company vision, as well as applicable legal requirements and standards (e.g., ISO requirements).

Management review meetings are carried out at least once per year to determine the effectiveness and performance of the IMS. Decisions and measures at these meetings relate to the strategic orientation of the organization, the stipulation of (new) goals, process improvements, etc.

Company Scorecard (CSC)

As one instrument to measure the success of OXEA, the company has introduced the Company Scorecard (CSC). The CSC displays the EHS (environment, health, and safety), financial, operative, and strategic goals over a specified time period (e.g., the fiscal year), and is updated on a monthly basis to determine the status quo versus the set targets. In the goal-finding process, different options for the coming fiscal year are discussed with the OXEA board at the end of the year and decided upon (including the weighting of goals). The CSC also provides guidance for the setting of individual performance targets.

Key performance indicators (KPIs) of the scorecard cover and monitor all areas as described above (EHS, finance, operations, strategy).

OXEA has been using lagging indicators (industry standard) for monitoring environmental, health, and safety performance (EHS performance) since the late 1990s.

In 2018, a new component was added, the so-called “leading indicators”, which are set to prevent incidents. >> **For more information about the leading indicators, please refer to the EHS leading indicators 2018 section.**

Compliance management and Code of Conduct

Adherence to legal requirements and internal guidelines (e.g., the Code of Conduct) is mandatory for all OXEA employees. OXEA has a Compliance Council in which all functions are represented, e.g., Marketing & Sales, Customer Relations, Supply Chain, Global Operations, etc., and the Legal Department acts in a consulting role. This group holds regular meetings in order to assess legal risks, coordinate preventive measures, discuss potential compliance cases, and continuously improve processes.

All OXEA organizations are subject to regular audits according to the IMS and processes defined in risk management >> **see the Risk management and internal audit system section.** Every OXEA employee is requested to report any and every possible breach of the Code of Conduct to the Compliance Council or the OXEA whistleblowing hotline, either by e-mail or by phone. For 2018, OXEA lists no recordings.

In 2018, OXEA published an updated Code of Conduct. The updated version includes a specific paragraph concerning child labor and more detailed information on the whistleblowing hotline, and includes a section on data protection.

OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Every new OXEA employee receives the Code of Conduct and corresponding training depending on the exposure level of the employee's role. Refresher training on the Code of Conduct and compliance guidelines is to be conducted every two years – also depending on the exposure level of the employee.

For improved follow-up and registration of the training, an e-learning program is in preparation. Information on all changes within the Code of Conduct is provided automatically by the change management system (information by e-mail).

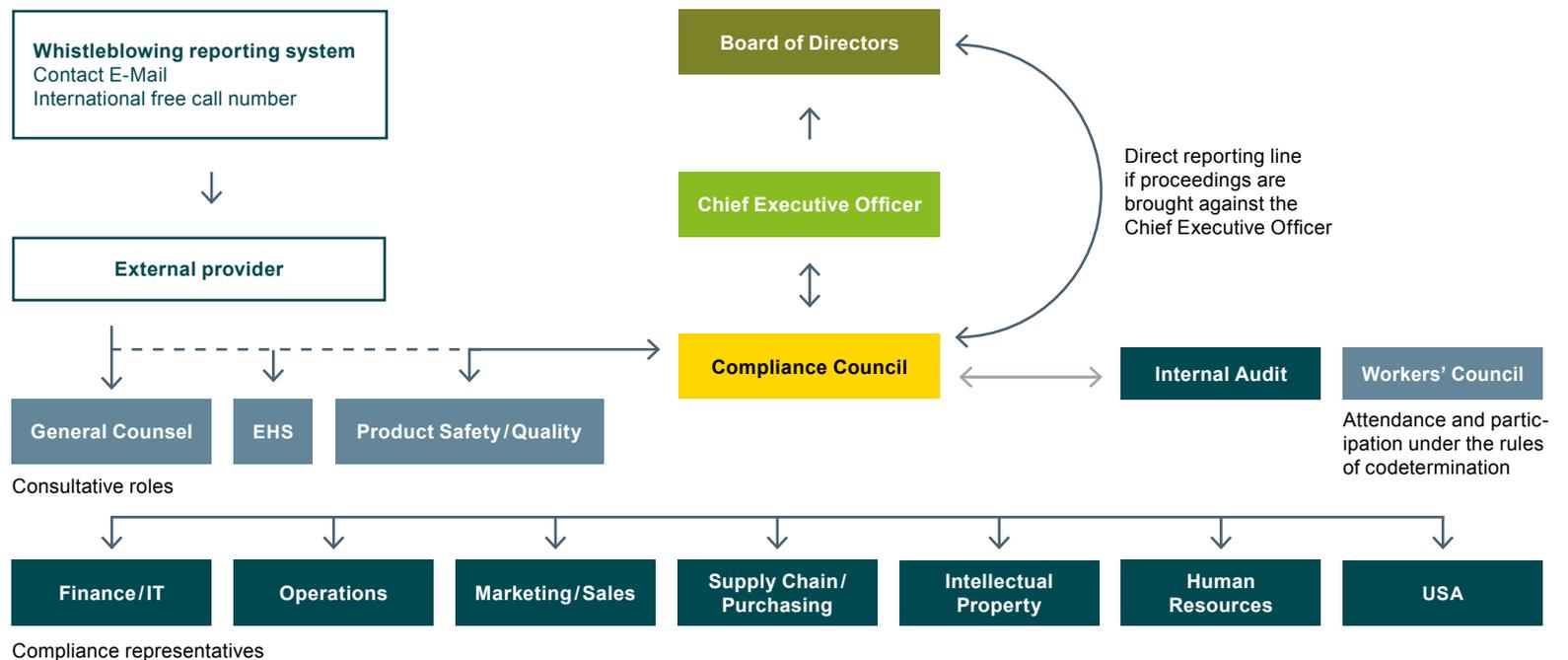
The Compliance Council reviews country- and region-related corruption indices on a yearly basis to identify possible areas of risk. Relevant parties within OXEA will be made aware of risks and trained accordingly.

Risk management and internal audit system

The goal of risk management is to identify and evaluate risks at the earliest possible stage, and to limit such risks through adequate measures, as well as to avoid any risk that might

jeopardize our ability to continue our business sustainably. Our risk management includes a strategic business planning module combined with detailed reporting tools, which are used as an internal early warning and control system.

All functions report potential risks directly through a risk management system to the Management Team. Moreover, the Management Team submits an annual risk report to the board and the Audit and Risk Committee of OXEA S.à r.l., Luxembourg.



OXEA

**Propanol 2 unit –
a success story**

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Areas of risk for OXEA include:

Operating risks

OXEA has high safety standards for the operation of its plants, in order to protect employees and the environment, and has established a clear Code of Conduct and company principles. It has also taken organizational measures to avoid illegal acts or noncompliance with guidelines. Overall risk exposure in this area is low, due to the countermeasures taken.

Financial risks

The protection against financial risks is a material part of the risk management system of OXEA, is based on detailed guidelines and instructions, and is controlled by management. Compliance with the requirements set out in the financing contracts is regularly ensured through stringent contract management and forecasting of the agreed financial covenants.

Commodity price risks – raw material supply

OXEA does not consume crude oil and is therefore not directly exposed to the price volatility of this commodity. However, several of the raw materials purchased by OXEA are directly or indirectly related to naphtha or other crude derivatives. As feedstock cost is one of the primary drivers for raw material price develop-

ments, along with supply and demand changes and exchange rate developments, OXEA is exposed to fluctuation in raw material prices as well. OXEA maintains purchasing contracts with major suppliers to ensure secure supplies at contract market conditions, in order to avoid spot price risks.

Currency risks

Currency risks as defined by IFRS 7 arise on account of financial instruments being denominated in a currency that is not the functional currency and being of a monetary nature; differences resulting from the translation of financial statements into the Group's reporting currency are not taken into consideration.

OXEA is exposed to currency risks from its investing, financing, and operating activities. OXEA's assessment of exchange rate risk from operations is low, due to the countermeasures taken.

Market risks

Besides the risks associated with the development of general economic conditions, fluctuations in demand from important customers represent a risk in the sales market. OXEA counteracts these risks through its active customer relationship management and related strategic measures. >> [please refer to Strategy – Vision and Goals](#)

A detailed risk report is included in our Financial Statements 2018.

OXEA has established an appropriate risk management system (R2C = Risk to Chance) and internal audit system covering all processes on all levels within the company. This risk management tool is a comprehensive system based on a defined risk strategy with procedures covering the following elements:

- Risk identification
- Risk analysis
- Risk evaluation
- Risk control
- Risk reporting

The risk management is based on the COSO Framework, supported by the legal rules of the German Corporate Governance Code (GCGC), as well as the Corporate Sector Supervision and Transparency Act (KonTraG) and the German Commercial Code (HGB). The OXEA Management Team is committed to acting responsibly and addressing business risks that could negatively impact the OXEA Group, in order to safeguard the assets of OXEA.

OXEA

Propanol 2 unit –
a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Internal Audit's risk management process



The Internal Audit Function supports the Audit and Risk Committee and the Management Team on a global basis in monitoring all organizations and potential risks and opportunities (internally and externally induced). Internal audit is an independent, objective assurance and consulting function designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluating and improving the effectiveness of risk management, control, and governance processes. OXEA IAF provides internal audit work in compliance with the International Professional Practices Framework of the Institute of Internal Auditors.

The main objective of the OXEA Internal Audit Function (IAF) is to assist the Audit and Risk Committee (ARC) and OXEA's (senior) management in achieving the company's objectives and in their oversight responsibilities, by providing objective insights, assurance, and advice.

The Audit and Risk Committee, as appointed by the Board of Directors, meets at least on a quarterly basis and reviews the effectiveness of the risk management process.

For 2019, OXEA is targeting the establishment of a further-optimized enterprise risk management (ERM) system. An updated risk analysis is intended to be completed within 2019.

Supply chain management

The purchasing of raw materials is part of an integrated planning approach (S & OP process = Sales & Operations Planning process).

The procurement budget entails the costs of raw and support materials, maintenance and repair operations payments (MRO), and logistics costs. Around 55% of the budget is spent at the production sites in Europe. OXEA has more than 1,900 suppliers globally – the majority providing MRO services.

Major raw materials >> see the value chain in section 1 for the production of Oxo Intermediates and Oxo Derivatives are olefines (ethylene, propylene, higher olefines), syngas, and natural gas. Around 70% of raw materials are sourced locally, close to our production sites.

OXEA employs a "supplier evaluation tool" for the rating of its suppliers in the respective procurement organizations. The supplier rating consists of different parameters referring to quality and safety aspects, as well as to environmental parameters. Supplier ratings are revised on a regular basis.

The supplier evaluation allows for a ranking of suppliers and subsequently has an influence on the preference and selection of suppliers. Over 95% of our suppliers (based on volume and spending) hold ISO certifications.

In 2018, OXEA started to work on the integration of social aspects into the supplier ratings in Europe, which will be rolled out to the other regions. OXEA's supplier base is mainly situated in OECD countries, therefore the risk exposure in the area of human rights breaches is relatively low.

Data protection

As a company that takes responsibility for the protection of its customers, employees, and others, OXEA works to comply with all data security laws and avoids unauthorized transfers of personal information.

No complaints were issued regarding data protection in 2018.

OXEA

Propanol 2 unit –
a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Stakeholder Engagement

Key to OXEA's sustainable success is constant interaction with our stakeholders. Among others, key stakeholders of OXEA are our employees, business partners, and local communities that are impacted by our activities.

A transparent and consistent information flow is key for trustful relationships. At OXEA, we employ different channels throughout the different organizational levels; the most important one being direct contact.

Employees

OXEA stays close to its employees via the intranet, regular newsletters, the publishing of an OXEA journal, regular town hall meetings, and other related tools. In line with our company value of open communication, there is constant dialog between OXEA representatives and the senior management.

More than 70% of OXEA's employees are contracted representatives in collective bargaining agreements.

The IMPULSE online-based tool invites OXEA employees to enter ideas for improvement in all areas. Ideas are collected and evaluated by defined and qualified OXEA employees on a regular basis. In 2018, around 321 ideas were collected, of which around 150 will be implemented (final numbers not available yet, data based on experience of past years). All successfully submitted and implemented ideas will be rewarded.

OXEA employees worldwide actively engage in health and safety programs like "iSafety", also known as "Safety = I", and provide input for improvements within the company. For more details, please refer to the Occupational safety section.

Business partners

Conferences, trade shows and fairs, regular customer visits, special events like roadshows, and OXEA's webpage are just some of the channels we use to communicate closely with our business partners. Strong customer orientation and excellent communication with our suppliers play essential roles for our business.

In November 2018, an EHS partner day was held in OXEA's Oberhausen plant with local partner companies of OXEA. The day was used for an exchange of best practices, various presentations on proper safety equipment, and practical exercises.

In 2018, OXEA's Customer Relations organization conducted a global customer satisfaction survey to measure customers' satisfaction regarding lead time, technical information, communication with the customer, complaint handling, etc. All regular customers, who in total accumulate to ~70% of OXEA's average turnover per fiscal year, were included. The next survey is set to be carried out in the year 2020 (biennial rhythm).

The results present OXEA as a highly valued supplier demonstrating excellent communication with its customers.

Local communities

OXEA's impacts on local communities are multiple; OXEA represents an important employer, especially in Oberhausen and Bay City, where our major production sites are located, and offers job opportunities and apprenticeships. OXEA also has a high level of responsibility for environmental, health, and safety impact as a manufacturer of chemicals.

We involve local communities via regional media and social events (such as open days), allowing our neighbors to get an insight into our current activities. Furthermore, we are represented in various local organizations, e.g., the "Texas Chemical Council – Outreach Committee" and the "EmscherGenossenschaft" in Oberhausen, where OXEA takes an active role in the renaturation project of the Emscher river.

In September 2018, OXEA opened its doors to the public in Oberhausen. Neighbors and interested people were allowed onto the premises of the Oberhausen site and could learn about OXEA and talk to OXEA employees.

The Bay City plant hosted an Opening Ceremony and Luncheon to celebrate the new Propanol 2 unit in September 2018. Members of the community were invited and the attending guests included elected officials, the chamber of commerce, and economic development leaders.

ECONOMIC PERFORMANCE

OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance**
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Global economic development*

In 2018, the global economy continued its growth momentum after the economic recovery that started in 2016. At the same time, however, the expansion has become less balanced and may have peaked in some major advanced economies, while the emerging market and developing economy group continued to expand at broadly the same pace as in 2017. Slower export growth contributed notably to the eurozone slowdown. The US economy maintained robust growth, and also picked up with strong private consumption and income growth, with private sector activity buoyed further by considerable fiscal stimulus. The Chinese economy moderated in response to regulatory tightening of the property sector and nonbank financial intermediation.

Growth of global gross domestic product (GDP) in 2018 remained stable at 3.7%. For more details, please refer to OXEA's Financial Statements 2018.

Business development at OXEA

2018 was another strong year for OXEA. OXEA's performance in 2018 was driven by the positive development of the Derivatives business and strongly performing US Intermediates business. OXEA profited successfully from overall healthy demand, an optimization of its product mix, and capacity increase.

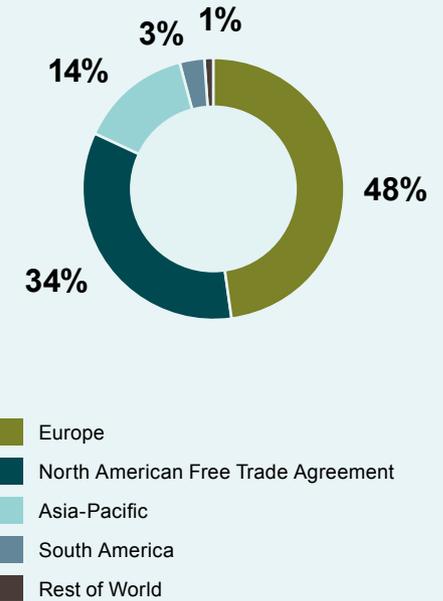
It was possible to partly balance out negative influences such as the turnaround at the plant in Oberhausen, weather-related low Rhine levels, and increased import duties into China.

With a trend toward healthy growth in the global economy and the chemical sector, OXEA started the fiscal year 2018 with very strong performance. The second quarter was negatively impacted by the major turnaround and corresponding five-week downtime of the whole plant in Oberhausen, Germany.

In July, OXEA successfully started up its new 100,000 mt per annum global-scale Propanol 2 production unit at its Bay City, Texas, USA, site. The now fully operational, state-of-the-art unit increased OXEA's production capacity for n-propanol by 75%. Supported by strong global demand, product portfolio optimization, and the new unit, OXEA delivered the strongest quarter of the year in the third quarter.

The fourth quarter in 2018 was negatively influenced by several one-off events, and on November 20, 2018, OXEA had to declare force majeure for individual product groups due to an incident at the syngas supplier at the Oberhausen site in Germany. Additionally, OXEA was affected by a 5% additional import duty on two products exported into China. Despite the turnaround in Oberhausen and the negative one-off events in the fourth quarter, OXEA revenues grew substantially to €1,453.6 million in 2018, 10.0% higher than the previous year (2017: €1,321.3 million).

Revenue by region



*OXEA's analysis of the global economy is based on figures and forecasts provided by renowned institutions, such as the Organization for Economic Co-operation and Development (OECD) and the International Monetary Fund (IMF).



OXEA

**Propanol 2 unit –
a success story**

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance**
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

OXEA steers and monitors its business performance throughout the year. Relevant KPIs for business performance (among others) are EBITDA, sales, and EBITDA margin.

OXEA's strong performance was duly recognized by our financial investors and rating agencies. In March, the credit rating agency Standard & Poor's Global Ratings (S&P) upgraded its long-term corporate credit rating for OXEA to B+ from B with a stable outlook. In late July, Moody's Investors Service also upgraded the corporate family rating (CFR) for OXEA to B2 from B3.

Outlook 2019

Global economic growth for 2019 is expected to remain steady at its 2018 level, although the global expansion is becoming less synchronized. Compared with 2017, a smaller share of countries, particularly among advanced economies, is expected to experience an acceleration of activity in 2019. The forecasts presented here for GDP are based on a report from the IMF in October 2018 and the OECD economic outlook in November 2018.

The world economy is projected to decline to 3.5% growth in 2019 before picking up slightly to 3.6% in 2020. For more details, please refer to OXEA's Financial Statements 2018.

After strong performance in 2018, OXEA's expectations are for that to continue in 2019. We expect robust growth based on a further-improved product mix aimed toward specialized derivatives, high demand for carboxylic acids and polyols, and a volume increase based on the new propanol unit in Bay City.

Possible negative impacts on the business are monitored closely. >> [See the Risk management and internal audit system section](#)

>> [For anti-corruption training, please refer to the Compliance management and Code of Conduct section.](#)

ENVIRONMENT, HEALTH, AND SAFETY (EHS)

OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)**
- 43 Social Performance

GRI Index

Imprint

Environmental protection, health care, and safety, including occupational and process safety, are collectively ranked our first priority among the OXEA core values.

It is OXEA's policy to design, build, run, and maintain our manufacturing units and processes with a focus on high environmental and safety standards. Our products are developed, evaluated, and documented in a responsible manner, so that our employees, customers, the public, and the environment are protected from avoidable risks. We ensure that all employees

receive appropriate training, thereby enabling them to effectively contribute to EHS performance and EHS improvement processes.

Our key goal within OXEA is to achieve zero EHS incidents.

OXEA's EHS management and standards are based on the requirements of national regulations, the requirements of ISO 14001, ISO 9001, ISO 50001, and OXEA internal policies, which go beyond regulatory requirements. Policies following these EHS standards

are documented in our integrated management system (IMS) (please refer to the Sustainable Governance section). Our site in Oberhausen also holds the SCC (Supplier Contractor Certification) certificate.

The following graph shows OXEA's ISO certifications:

Certificates	ISO 9001:2015	ISO 14001: 2015	ISO 50001:2015	SCCP	GMP+ B1	GMP+ B2	ISO 9001:2008
Europe							
Marl	X	X	X			X	
Monheim	X	X	X		X		
Oberhausen	X	X	X	X			
Amsterdam	X	X	X				
North America							
Bay City	X	X					
Bishop	X	X					
Dallas	X	X					
Asia							
Nanjing							X



OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Two key targets in 2018 were the ISO 14001 certification of our sites in Bay City and Bishop. Another milestone in 2018 was the ISO 50001 certification of our site in Amsterdam.

As planned, our facility in Nanjing started its preparations for the ISO 14001 certification in 2018. The certification is targeted for the year 2020.

EHS performance

OXEA’s EHS performance is reflected, measured, and evaluated in the Company Scorecard (CSC). OXEA has been using lagging indicators for monitoring environmental, health, and safety performance (EHS performance) since the late 1990s (still part of Hoechst AG at that time). An additional component was introduced in 2018 by OXEA, known as “leading indicators”. The leading indicators are a form of “measuring before an incident”. Safety-relevant data is collected in order to make predictions and thus serves to help avoid incidents and to improve EHS performance and culture through preventive measures. >> **For more information, please refer to the EHS leading indicators 2018 section.**

EHS performance 2018 (compared with 2017)

The following table and graphs depict the EHS performance in 2018 within each category:

Incidents	2017	2018
Environmental incidents		
K1	0	0
K2	2	3
Injuries		
K1	5	4
K2	3	3
Fire and explosion incidents		
K1	0	0
K2	0	0

An OIR rate (OSHA Incident Rate) of 0.58 was achieved (prior year: 0.65), with a Lost Time Injury Rate (LTIR) of 0.33 (prior year: 0.41). For the German sites, the Thousand Man Quota (TMQ; reportable injuries per thousand employees) in 2018 was 2.67 (prior year: 4.44). The OSHA (Occupational Safety and Health Administration) indicators serve as an internationally applied standard for work-related injuries.

Typical incidents at OXEA are “slip and trip” incidents, as well as “cuts and bruises”. Incidents directly linked to contact with chemicals, which might be understood to be typical for the chemical industry, are in general less common.

In 2018, there were no serious or major fire and explosion incidents.

Product releases due to leakages at heat exchangers led to the three environmental K 2 incidents.

In 2018, OXEA’s Bay City facility won several awards acknowledging excellent environmental and safety standards:

For the second time in a row, the Bay City Facility won the Excellence in “Caring for Texas” award by the Texas Chemical Council (TCC), rewarding OXEA for its environmental protection and community involvement programs. Bay City won the top award from TCC for “Caring for Texas”, competing with 28 other companies of similar size (61–200 employees).

OXEA Bay City also won the “TCC Zero Incident Award”, awarding those TCC member manufacturing facilities demonstrating zero OSHA-recordable injuries or illnesses, as well as the “TCC Zero Contractor Incident Rate Award” rewarding manufacturing facilities without any recordable OSHA injury or illness of contractor employees, and the “TCC Zero Process Safety Incident Rate Award” awarding manufacturing facilities without any Tier 1 or Tier 2 process safety incidents.

OXEA Bishop was also awarded the “TCC Zero Process Safety Incident Rate Award” in 2018 and won the “Texas A&M – Mary Kay O’Connor Process Safety Center Award for Distinguished Process Safety Initiative”. This is an award presented by the Mary Kay O’Connor Center for Process Safety Management at Texas A&M University for outstanding initia-



OXEA

Propanol 2 unit –
a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

tives in Process Safety Management in the Chemical/Petrochemical Industries. Only one company is awarded per category.

Furthermore, Bay City was awarded the prestigious “Elite Safety Silver Award” from the AFPM (American Fuel and Petrochemical Manufacturers) in 2018. The Elite safety award metrics include process safety performance, emergency response, environmental ratings among industry, and community involvement. With this award, the Bay City facility is among the top 1–5% of performers in industry safety.

OXEA’s facility in Amsterdam was able to celebrate another year without a Lost Time Injury Rate (LTIR). The Amsterdam plant has now been running for the last 17 years (6,209 days) without any lost time incidents.

OXEA is performing within the range of the leading companies in the chemical industry and showing continuous improvement regarding EHS criteria. We are dedicated to further improving our performance – our goal remains at zero EHS incidents.

iSafety initiative (or Safety = I) – successful through safety, environmental protection, and health care

One corporate program actively involving every employee is the iSafety initiative, which was started at the end of 2014 and since then has further developed year by year.

The iSafety initiative challenges every single employee to ask him-/herself: What can I contribute to improve safety, environmental protection, or health care?

The initiative comprises various projects and aspects tailored to the different organizations. The iSafety initiative has become a fixed part of every OXEA employee’s daily life. The single elements are adapted to the needs of the respective sites.

The iSafety initiative comprises many elements, e.g., the monthly carrying out of SIP meetings (Safety Involvement Program) at the European sites. A monthly SIP agenda for review is distributed by the EHS organization and consists of statistics and different operational environmental, health, and safety topics, and can be adapted as needed. Participation at SIP meetings is recorded and documented. Each employee is expected to be provided with periodic SIP meetings by their supervisor.

Changing focus areas were worked on and covered by iSafety; a major one being the safe implementation of the turnaround in Oberhausen. During the 2018 turnaround at the Oberhausen site, the initiative was omnipresent through banners and posters, reminding each employee of their responsibility and impact.



At the Oberhausen turnaround 2018, awareness banners were placed throughout the entire site – in line with iSafety.

Global EHS Day 2018 – worldwide umbrella concept with success – part of the iSafety initiative

As in 2017, OXEA’s Global EHS Day was once again held in September at OXEA production sites and offices, inviting all employees to participate. The aim is to raise awareness of environmental protection, health, and safety, and to interactively involve employees in discussions, feedback, etc.

An EHS lunch was held at OXEA’s facility in Amsterdam under the umbrella of the Global EHS day. Employees of the facility in Marl spent their EHS day at a Safety Working World Exhibition. At the headquarters in Monheim, the focus was set on “safe travels”, and the day closed with a presentation comprising results of the iSafety workshops held in the months before.

OXEA

**Propanol 2 unit –
a success story**

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

The production unit in Nanjing used the Global EHS Day for detailed firefighting and safety training and a discussion on the Safety Production Responsibility System.

The site in Oberhausen combined the Global EHS Day with the nationwide Open Day for more than 4,300 visitors to OXEA's plant in Oberhausen. The Open Day offered an excellent opportunity to cover EHS topics – not only for OXEA employees but also for local residents and other visitors.

EHS at the OXEA sites

Each OXEA site has one or more assigned EHS persons. These persons, in cooperation with the EHS organization, consult and support leadership, as well as all other employees, to solve EHS-related problems and to improve EHS performance and culture. By auditing and controlling, they provide support to ensure compliance with national regulatory requirements as well as with OXEA's EHS standards and policies. They also support a global cross-site and cross-functional exchange on EHS topics.

The Global Product Stewardship, Sustainability, Quality Management, and Analytics organization (PSQ) is responsible for all matters of product safety >> **please also refer to the Product safety section** and quality management. PSQ and EHS are both part of the Global Operations Group and responsibilities are strongly interlinked.

EHS committees and councils

Each OXEA site has established dedicated EHS committees or councils, consisting of a site Leadership Team, EHS experts, and employee representatives, who jointly work on EHS topics. At the German sites, "Arbeitsschutz- und Umwelt-Ausschüsse" work on the EHS programs. At our sites in North America, China, and the Netherlands, similar councils are established, such as the Employee Safety Councils in the USA.

EHS leading indicators 2018

With the introduction of the leading indicators program, OXEA intends to strengthen predictive EHS work and support the improvement/development of the EHS culture.

**EHS inspections by management:
on-site inspections by management**

Regular rounds of plant facilities and departments are conducted by groups of up to five persons at management level. The group consists of employees with responsibilities inside and outside the specific facility and department, allowing for cross-functional exchange and communication.

Communication between management and employees is extremely important. A particular EHS topic is selected for each round. Concerns and observations that are brought up during these tours will be followed up on.

The number of inspections required in the first year was exceeded by a large margin. It was particularly encouraging that these inspections were often carried out by groups of managers from several different areas of the company. This contributes to improved understanding and collaboration between the individual departments. We had set 300 inspections as our (stretch) goal; by the end of the year it was over 400.

In 2019 we want to intensify the focus on having managers from all business areas conduct inspections together.



OXEA

Propanol 2 unit –
a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

416

EHS Leadership Walkthroughs

9,324

Participants of EHS Moments

565

EHS Moments

24,900

Participants of monthly
EHS training sessions**EHS training**

The purpose of EHS training is to create awareness of the importance of EHS topics, to convey the relevant knowledge to all employees, and to profit from the experience of others.

Our goal for 2018 was for every employee in the Operations area to receive at least one EHS training course per month, while Administrative employees would receive one

per quarter. That meant a (stretch) goal of approximately 16,800 trained employees per year; nearly 24,900 were registered. We were pleased to note that both Operations and Admin contributed equally to exceeding this goal.

EHS Moments

Every meeting at OXEA, whether internal or with business partners or visitors, is started with an EHS-relevant theme – a short statement that covers the various aspects of environmental protection, health, and safety.

In 2018, around 90% of qualifying events were opened with an EHS Moment. We were thus able to exceed our goal of 80%.

565 EHS Moments were reported, with external guests present at around 100 of these meetings. This means that we were able to reach over 9,324 people within the reporting period, and demonstrated to 888 external participants how important EHS topics are to us.

For many of our colleagues, beginning a meeting with an EHS Moment has become a habit.

Environmental protection

OXEA is committed to the protection of the environment, the reduction of adverse environmental impacts, and meeting all environmental compliance obligations crucial to our industry. Furthermore, our goal is to achieve an above-compliance state, based on our internal policies. There were no incidents related to non-compliance with regulations or environmental laws in 2018.

At OXEA, we have and will continue to incur substantial ongoing capital and operating expenditures for environmental protection measures.

In 2018, we invested €7,546,384 in environmental protection, compared to €4,700,000 in 2017. The sum includes dedicated EHS activities and projects (e.g., waste management, emission control, renaturation of the Emscher river) and singular cost positions that can be linked to a direct impact on the environmental footprint (e.g., dedicated modernization projects in the production area aimed at energy savings).

The spending in 2018 was higher than in 2017 (and 2016), since the turnaround in Oberhausen was used to implement various modernization measures (please refer to the Turnaround 2018 in Oberhausen section).

Costs for REACH, the energy-efficiency program, the Propanol 2 unit, ISO site certifications, and general PSQ-related costs, etc. are not included in the environmental spending.



OXEA

Propanol 2 unit –
a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Energy

In an energy-intense industry, efficient usage of energy is essential to reduce the environmental footprint.

OXEA's target is to increase energy efficiency while reducing overall energy consumption

With its extensive experience in the production of oxo chemicals of more than 80 years, OXEA runs its production units highly efficiently. Based on the highly developed and optimized oxo production process, major potential for optimization of OXEA's energy profile and subsequently the GHG (greenhouse gas) emission profile lies in increased energy efficiency.

At our site in Oberhausen, we operate our own power plant – thus offering a key opportunity for OXEA-driven changes and improvements with a significant impact.

Projects to reach the targets described above include modernization measures in the power plant, as well as technology projects in production and related areas.

As reported in our Sustainability Report 2016, OXEA has identified projects to increase energy efficiency and had started to work on the identification of energy goals, which were first implemented and communicated in OXEA's corporate goals for 2018 in Europe:

Increase OXEA's total energy efficiency by 2.5% by 2020 (base year 2017)

An efficiency gain of 2.5% represents savings of around (depending on conditions, etc.) 20,000,000 kWh. The reduction of energy usage translates into CO₂ emissions of ~12,000 tons.

OXEA's power plant is the main provider of energy for the whole Oberhausen site and also provides energy to third parties off-site. The power plant is an important provider of district heating to "Energieversorgung Oberhausen AG" (evo), also contributing to an overall reduction of CO₂ emissions in the municipal area.

The most important fuels for the generation of energy at OXEA in Oberhausen are liquid wastes, exhaust gas, distillation residues, and to a minor extent natural gas – therefore, the reuse of "waste" (residues from the production units) in a closed cycle represents by far the largest share for energy generation.

As long ago as 2016, a process of simple steam pressure reduction was supplemented by the combined heat and power (CHP) process of a new back pressure turbine in the power plant.

At the end of 2017, OXEA replaced another steam turbine with a highly efficient turbine. The new turbine generates significantly more electrical energy with the same steam input. This results in an increase of energy efficiency by up to 15% in this process area.

In 2018, OXEA achieved the interim set goals for the energy efficiency program in Europe.

Various energy efficiency/savings programs are run at OXEA sites.

In 2018, our production site in Nanjing implemented a six sigma project with the support of OXEA colleagues in Germany, leading to an average reduction of electricity usage of 20% per hour (absolute numbers vary and depend on product mix of the unit).

In Bay City, different energy saving projects are conducted and planned in the production area. A possible reduction of steam loss is one focal area to be evaluated in 2019.

Apart from the projects with a big impact, OXEA also has an eye on the smaller projects, often direct results of ideas handed in by our employees. In 2018, OXEA started to exchange light bulbs for LEDs in Bay City (though not demanded by regulations), not only leading to energy savings but also to greater stability of the power network in Bay City. The exchange should be completed in 2020.



OXEA

Propanol 2 unit –
a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Since 2018, our headquarters in Monheim have been 100% supplied with certified “Ökostrom” electricity, taking into account a higher electricity price than for the “normal” residual mix. The energy consumption globally for 2018 sums up to:



We are currently working on the refinement of our data basis and updated calculation methods, therefore data from recent years is not directly comparable. Reports for the years 2017 and 2016 did not include the complete data set and values for energy.

A comparison of relevant data is intended to be published in the next Sustainability Report. Furthermore, the evaluation of additional energy-saving potential linked with waste reduction programs and emission reduction targets is planned for 2019.

Energy Efficiency Network (EEN)

OXEA is a member of the “Energy Efficiency Network”, consisting of 13 companies in the chemical and paper industry based in the Rhine-Ruhr area. The EEN started its work in 2016, originally with 11 members (please refer to Sustainability Report 2016), and entered its second two-year period in 2018.

The initiative is based on the agreement between industry associations and the federal government to reduce energy consumption by the end of 2020, following the German federal government’s goal to reduce greenhouse gas (GHG) emissions by 40% by 2020 based on the year 1990.

The EEN has been set up to share experience and best practices and provide support between industries to drive energy efficiency projects and a reduction in usage.

Up until mid-2018, the network’s cumulative energy consumption had been reduced by 158 million kWh. This corresponds to the annual energy consumption of 50,000 households and translates into 80,580 tons of CO₂ emissions (emission factor of 510 g CO₂/kWh, German national grid).

OXEA reports its savings from the energy efficiency program achieved in the different projects anonymously to the EEN.

Emissions to air // Greenhouse gas emissions

The generation of GHG emissions and related climate change through global warming has become one of the major environmental concerns globally.

Main contributors to global direct CO₂ emissions generated by OXEA’s activities are the production of energy in Oberhausen and Bay City for the supply of OXEA and third parties (please also refer to the Energy section), the generation of synthesis gas (CO/H₂) for the hydroformylation process, and the incineration of off-gas in Bay City. Indirect CO₂ emissions are insignificant in comparison and therefore omitted in the reporting.

With our target to increase OXEA’s total energy efficiency by 2.5% by 2020 (base year 2017) in Europe, we have established a first target of reducing GHG emissions in Europe by around 12,000 tons by 2020 based on comparable production volume.

In our production facility in Bay City, the process control of the synthesis gas unit was changed in 2017, which led to a significant reduction in flaring of synthesis gas and subsequently to a reduction of natural gas needs and CO₂ emissions.

The overall increase in direct CO₂ emissions compared to 2017 and 2016 is based on generally higher production rates in 2018, the change of product mix in the production units, and the starting up of the Propanol 2 unit.

OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)**
- 43 Social Performance

GRI Index

Imprint

In 2019, we aim to evaluate meaningful contribution areas and targets for OXEA to reduce GHG emissions further.

Indirect emissions // Scope 2

The publication of relevant Scope 2 emission data is planned for the Sustainability Report 2019.

Water consumption

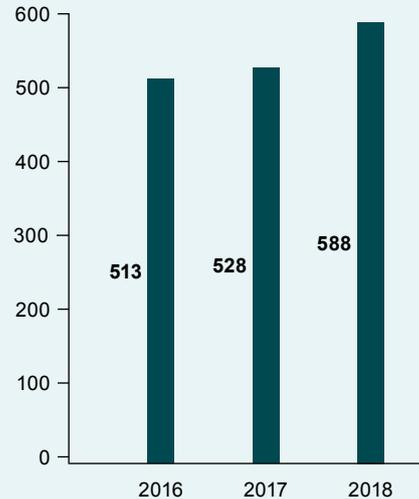
OXEA's goal is to use water in a responsible and efficient manner. OXEA's main usage of water is for cooling purposes in the production units in closed state-of-the-art cooling cycles; the water is reused and recycled multiple times by means of our production processes. Another major usage area of water is the generation of steam.

OXEA production sites are generally not located in water-stressed areas.

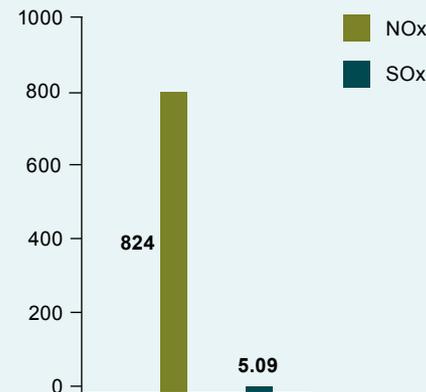
For Bay City, the LCRA (Lower Colorado River Authority), which supplies water to the Bay City plant, monitors the level in the river and reservoirs, sends out reports to the major users, and activates drought levels during water scarcity. Levels are tracked very closely and communicated periodically to the users to take measures to reduce water usage as needed.

OXEA ensures that its water usage does not increase energy consumption or otherwise negatively impact the environment. Wastewater is purified and discharged according to regulatory requirements (please see next page).

Direct CO₂ emissions (Scope 1) [kt]



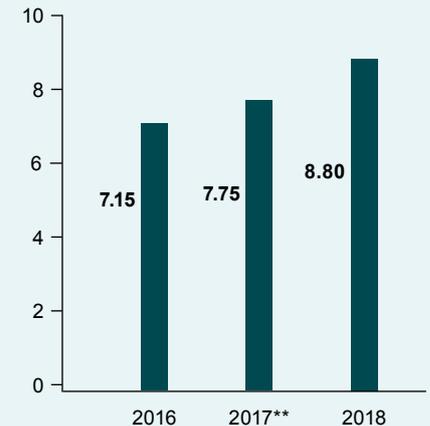
Emissions of NO_x, SO_x in 2018 [t]



The main source of water is surface water derived from rivers close by to our production sites.

The relatively higher water consumption is mainly driven by higher production rates and the new Propanol 2 unit in Bay City.

Global water withdrawal* [million m³]



* Values contain water withdrawal for the whole Oberhausen and Bay City sites including volumes supplied to third parties.

** Number does not include water withdrawal of Bishop site.



OXEA

Propanol 2 unit –
a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Effluents and waste

OXEA's target is to avoid waste wherever possible, and our processes are set up accordingly.

With our extensive experience in the production of oxo chemicals of more than 80 years, OXEA runs its production units highly efficiently. Our value chain of Oxo Intermediates and Oxo Derivatives is highly integrated, and the site product of one reaction builds the starting material for another production chain. Therefore the generation of "waste" (materials for disposal) is kept to a minimum in our production processes. OXEA is dedicated to working on further improvements in projects across the value chain – to minimize the input of raw materials and maximize the output of products. We plan, construct, and operate processes to generate either no waste or as little waste as possible. Each OXEA site has waste management in place.

In Bay City, the adaption of the process control unit (please refer to the Emissions to air // Greenhouse gas emissions section) also represented a waste avoidance project. For 2019/2020, a recycling project is planned, leading to a significant reduction of landfill volumes of waste (to be reported in Sustainability Report 2019).

For the disposal of waste (solid and liquid), OXEA works together globally with qualified and specialized waste disposal companies. In the cases of our sites in Marl and Bishop, the sites are connected with the waste management systems of Evonik and Celanese – including for wastewater.

The major part of OXEA's water consumption is used for cooling purposes and steam generation; production process water or cleaning water between production cycles represent a smaller share.

In Nanjing, the wastewater pretreatment facility is operated by a contractor company. After pretreatment, the low-concentration wastewater is drained to the NCIP wastewater pipe network for further treatment.

In Oberhausen and Bay City, OXEA runs wastewater treatment units. In Bay City, the wastewater treatment unit comprises a physical and biological cleaning step. Clean water is then released back into the Colorado river.

The Oberhausen site currently runs a physical wastewater treatment for part of the effluents. The wastewater is further biologically treated at the wastewater treatment plant of "Emschergenossenschaft (EG)".

As part of the "Emschergenossenschaft (EG)", OXEA is actively involved in the renaturation project of the Emscher river. Driven by the formation of the coal industry in the Rhine-Ruhr area over 100 years ago, the previously unrestrained Emscher river was transformed into an open sewage channel system created by man. The EG wastewater treatment plant, located 2 km (1.25 miles) downstream from the OXEA Oberhausen site, cleans the whole Emscher river before it flows into the Rhine. With the introduction of the EU Water Framework Directive (2000/60/EC) in the 1990s and the

goal to achieve "good ecological and chemical status" of all community waters, the target was set to channel wastewater in closed conduits through the Emscher region and to convert the Emscher river and its tributaries into natural waterways again.

One key part of the project is the building of a segregated channel for wastewater and effluents generated at the OXEA Oberhausen site that will directly lead into the Emscher wastewater treatment unit. In 2018, OXEA ran different dedicated projects related to linkage with the channel system, as well as related to the renaturation.

The Emscher conversion project is intended to be finalized by the end of 2020.

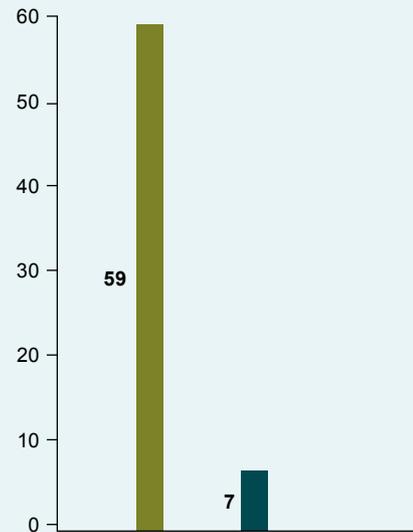


OXEA**Propanol 2 unit –
a success story****Reporting Section**

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index**Imprint**

Another project run in Oberhausen in 2018 was the renewal of an “Auffangbecken” in the production area as a preventive measure within the framework of the “Gewässerschutzrichtlinie”.

Waste numbers 2018

■ Hazardous waste [kt]*
■ Non-hazardous waste [kt]

* Includes waste for energy recovery and recycling.

The charging and treatment of wastewater locally varies depending on the value chain; at all our sites we comply with local regulations.

We have refined and corrected our database of waste numbers for 2018. Numbers differ from 2017 and 2016.

Product safety

As a manufacturer of Oxo Intermediates and Oxo Derivatives, OXEA is responsible for the safe handling and usage of its sales products. All our sales products are therefore tested accordingly and accompanied by appropriate documentation and labeling that allows safe handling by all people in contact with our products.

OXEA's safety data sheets (SDS) include all safety-relevant information necessary for the identified usage of the product.

Safety data sheets are available for all OXEA sales products; for each sales product either the national or a standard SDS is provided for the countries in which the product is marketed. For national SDS, more than 30 languages are supported. Electronic distribution ensures customers receive the latest SDS before the first delivery of a product or once an SDS has been updated. In addition, SDS are available on OXEA's homepage. All SDS are kept up to date and checked at regular intervals (please also refer to the REACH section).

Changes in national legislation such as the revised AwSV (Ordinance on the Handling of

Substances Hazardous to Water) in Germany trigger additional measures. The AwSV requires all plant operators to classify all substances and mixtures in their plant according to a predetermined schema, to maintain the corresponding documentation, and to keep it up to date.

For the German production sites, all sales products, raw materials, intermediates, and mixtures throughout the entire production process were reassessed in 2018 to ensure correct assessment of the hazard potential under the new regulations. Results of the activities are documented and build the basis for possible future projects (cross-site).

In 2018, no incidents were reported related to documentation and labeling of OXEA products.

REACH

As an importer and exporter of chemicals into the European Union, OXEA is responsible for the REACH registration of OXEA's end products and intermediates and the provision of data regarding product safety and impact on the environment (please also refer to the Product safety section).

*“REACH (EC 1907/2006) aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. This is done by the four processes of REACH, namely the registration, evaluation, authorisation and restriction of chemicals”**
(*Citation from the ECHA webpage)

OXEA**Propanol 2 unit –
a success story****Reporting Section**

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index**Imprint**

In May 2018, the phase-in period of REACH came to an end and the legislation has entered its normal working life. With ten new registrations and PPROD (Product- and process-orientated research and development) submissions, OXEA registered all its remaining products by the May deadline, as well as two new products. 25 dossier updates were performed, reporting changes in volume bands, results of new (eco-)toxicological studies, updates to the chemical safety report, or general dossier quality improvements. For seven products, OXEA claimed ceased manufacture. The ECHA (European Chemicals Agency) officially concluded the substance evaluation of n-butanol without any need for further action.

In this way, OXEA successfully completed the registration of 100% of its sales products, as well as all interim products/precursors relevant for import and export into and out of Europe.

OXEA is the lead registrant for 40% of its sales products.

As a member of Cefic, OXEA sends one representative to the “Evaluation Network of Experts”, a working group dedicated to the process of improving the quality of the dossiers.

OXEA acts as active member of the VCI (Verband der Chemischen Industrie) and is represented in the “Arbeitskreis REACH Umsetzung”, dealing with the implementation of REACH regulations (e.g., life cycle analysis).

Beyond the requirements of the ECHA, OXEA proactively checks all relevant product data on a regular basis and evaluates the correctness of the dossiers handed in to ensure best data quality. OXEA’s target is to evaluate 25% of the REACH dossiers per year.

OXEA does not have any sales products in its portfolio that are considered SVHCs (substances of very high concern) or PBTs (persistent, bioaccumulative and toxic).

Turnaround 2018 in Oberhausen

From May 26 to June 23, 2018, OXEA carried out a “turnaround” of the whole Oberhausen site. The turnaround is obligatory for all German sites, takes place every five years, and is required by German regulations. All production activities have to be stopped and every facility is checked regarding its operational safety, proper control of processes, and documentation of the latter.

The turnaround was planned thoroughly with all necessary functions involved, including external companies. All preparational work was checked and rated by an external accredited consultancy to ensure smooth implementation and identify possible risks and potential for improvement.

During the time of the turnaround, different maintenance and modernization projects such as updating the control unit for part of the production, revamping a cooling tower, etc. were successfully completed – contributing to

the reduction of energy usage and water consumption.

The turnaround was completed with only three days’ delay, and OXEA had a very successful start-up without any incidents.

An essential element of the successful carrying out of the turnaround was the strong communication and EHS training of third-party companies beforehand, as well as adequate quality management and general maintenance.

Biodiversity

All OXEA production sites are located in established industrial areas. In general, OXEA sites do not include any natural habitats. Our production sites are either surrounded by farmland or inhabited areas, or are adjacent to rivers.

At the Oberhausen site, OXEA provides nesting aids for the peregrine falcon, an endangered bird species, in chimneys. Since 2004, a couple of peregrines have been bringing up to four young birds each year. The project is supported by the plant’s fire brigade and the “Wanderfalkenschutz NRW”.

At our Bay City facility, the mature forested areas and wastewater ponds attract different bird species like the belted kingfisher, as well as other animals. The water quality of the ponds is suitable to serve as a food source for the birds.



SOCIAL PERFORMANCE

OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Working at OXEA

Labor practices and performance management

Our employees form our most important resource. OXEA believes in the value of its employees and the diversity and experience they bring to the organization.

Our Human Resources Strategy builds upon OXEA's core values: safety, trust, communication, and respect.

We continually strive to strengthen our attractiveness and competitiveness for (future) employees by pursuing a strategy that is both future-oriented and consistent with our core values.

OXEA's HR strategy focuses with: attracting, growing, and retaining talent.

Various initiatives, programs, and tools are utilized globally to ensure we attract the right employees, develop them, and can thrive with a workforce with growing experience in the future. The HR organization plays an important role in pursuing and implementing these goals by operating as a partner of the various OXEA organizations, in order to keep OXEA fit for the future of personnel management. The HR strategy builds on the pillars listed in the diagram on the right.



OXEA

Propanol 2 unit – a success story

Reporting Section

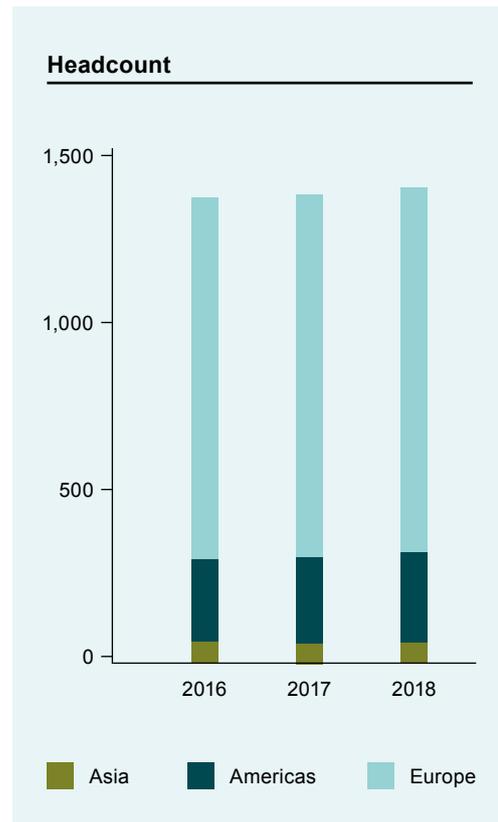
- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance**

GRI Index

Imprint

The number of people employed by OXEA in the 2018 financial year grew slightly across all regions to 1,401 (recording date: December 31, 2018, number excludes apprentices).

At OXEA, we attracted 89 new qualified staff members worldwide. Approximately 66% of our workforce operates in research, production, and engineering, to a large extent supporting our strategic investment projects.



OXEA uses different channels for attracting talent into the diverse employment areas. In Oberhausen, OXEA represents an important employer. By offering apprenticeships in technical and commercial areas, OXEA is the most important provider of industrial apprenticeships in the city. The apprenticeship model is run as “dual education” that offers apprentices the opportunity to work and study at the same time.

Nearly 100% of the apprentices are offered a permanent job within OXEA once they finish the program successfully.

Another educational program is the FOX trainee program, tailored specifically for university graduates with a master’s degree, and OXEA implements regular exchange programs in cooperation with the Oman Oil Group (e.g., Oman Oil Graduate Program).

With three new FOX trainees and 39 fresh apprentices, a total of 104 young people worked and studied at OXEA’s own center for vocational education and on the job in 2018.

OXEA globally fosters cooperation with universities in different areas and offers opportunities for graduate students to conduct a part of their thesis at or with OXEA.

For the development of OXEA’s employees, training, coaching, and personal development are key components of our personnel policy. Through our internal training programs, we provide our employees with state-of-the-art individual development and qualification op-

portunities – tailored to their job profiles and needs. Training covers a wide variety of topics and ranges from software training and job-specific training to OXEA-specific topics, and can be internally or externally conducted.

As in 2017, OXEA’s employees received an average of 15.5 hours of training in 2018.

All development activities for the individual employee are part of what is known as the performance management system, which provides an overarching concept by bundling together all performance-promoting activities, continuous education, and seminars. Additionally, it builds the framework for the development of each employee.

In 2018, OXEA introduced a performance management system, following the Cooperation and Leadership model introduced in 2017. The new performance management system allows a more accurate breakdown of company goals into individual goals set for each employee, as specified in the CSC. It promotes regular feedback and actively reinforces the OXEA values with a strong focus on the empowerment of employees.

The Cooperation and Leadership model has a strong focus on the OXEA values, fosters open communication, and enhances a feedback culture between different functions and hierarchy levels. The Cooperation and Leadership model aims to empower employees to take responsibility and supports independent behavior throughout the organization.



OXEA

Propanol 2 unit –
a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Annual performance review 2018

One feedback tool of the performance management system is the employee performance review, which is conducted annually by the employee's direct supervisor and should be accompanied by an additional two to three intra-year reviews or feedback sessions. This review is based on the principles of the Cooperation and Leadership model.

All employees are assessed using predefined categories. An assessment scale is used to grade the achievement of each category's requirements. The results are officially recorded and evaluated by HR, who forward the agreed development measures such as further training activities to the Human Resources Development department (for scheduling and implementation together with the organizational units).

With the new performance system in 2018, the OXEA values have been actively integrated as performance criteria and receive greater focus than in previous years.

100% of OXEA employees are covered by the annual performance review.

OXEA Academy – 2018 news

OXEA's in-house training program has been revamped and newly implemented, using the Cooperation and Leadership model as a framework.

The idea is to promote leadership capabilities of individual employees, and to define develop-

ment goals for each person in the best possible way. Overall, an inspiring atmosphere with possibilities for development and responsibility acceptance are the intended focus.

The understanding at OXEA is that demonstrating leadership is not the same as carrying out a supervisory role. Instead, leadership is something an individual does to inspire others and have a positive impact on them.

In the academy, two groups have been defined, OXEA's Agile Professionals and Agile Leaders, and the respective seminars have been designed to meet the individual needs of staff members.

Two groups: Agile Professionals (AP) and Agile Leaders (AL)

Agile Professionals at OXEA are all employees who are preparing themselves to assume more responsibility, or who are in their first leadership position. This isn't just a matter of being the supervisor of a group of employees. Rather, leadership is a role that one assumes in order to provide inspiration and positively influence others. "Personality and Leadership" and "Stepping into Leadership" are the first seminars recommended as an introduction. Employees need to apply on their own initiative.

Evaluation criteria include the application form, letter of recommendation, length of time at the company, evaluation information from previous performance reviews, and length of time in management, or, alternatively, a description

of the candidate's role as a driving force in the team. An additional focus area is the exchange of information within the organization, so that the courses will have diverse membership from various business lines, sites, regions, and hierarchies.

Management staff at all levels are considered to be Agile Leaders at OXEA. A prerequisite for participation in the program is the completion of the "Golden Profiler of Personality" test or an equivalent personality test such as the MBTI. All managers should be aware of their own management style and behavior. The course begins with seminars on "Agile Leadership" and "Change Management". Applicants will be personally contacted by their supervisor or by the Human Resources department if they qualify as participants in the Agile Leaders program.

In 2018, a total of 36 employees (one group of 12 people as Agile Leaders and two groups of 12 people each as Agile Professionals) went through different training blocks at the OXEA Academy.



OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Overview of mix and match seminars at the OXEA Academy

Mix and match

- Cross-faculty training groups
- Cross-function
- Cross-hierarchical

Innovation Management

Coaching Skills for Leaders

Self-Marketing

Conflict Resolution

What are innovation and creativity?
Design thinking, disruptive thinking ...

Coaching, mentoring, leading.
Different approaches, different outcomes.

How to present yourself in a convincing way –
feedback.

Conflict – styles and patterns.
The how and the why of conflict escalation.

FOX trainee program 2018

The FOX trainee program (Focus on OXEA) was revised in 2018. This program is geared toward graduates who wish to get acquainted with a specific field by rotating between different areas. At present, OXEA has three trainees in the areas of Human Resources, Marketing, and Operations. The program, which lasts for a total of two years, consists of four six-month job rotations in different areas of the company. In addition, trainees work on one or two projects of their own, approaching these from the various departmental perspectives.

To ensure that both OXEA and the trainees get maximum benefit from the program, it is clearly defined beforehand which tasks will form part of the traineeship and in which projects trainees will be involved.

The aim is to provide trainees with a wide network throughout the company and to impart both theoretical and hands-on knowledge to them. Besides being involved in departmental work, they attend specially designed seminars and workshops and take part in trainee get-togethers. As well as having a designated contact from Human Resources Development, trainees are assigned a mentor from another specialist area.



OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance**

GRI Index

Imprint

Diversity

Fair treatment of all employees, such as equal opportunities, ethics, and non-harassment in the workplace, are of the utmost importance (please also refer to OXEA's Code of Conduct).

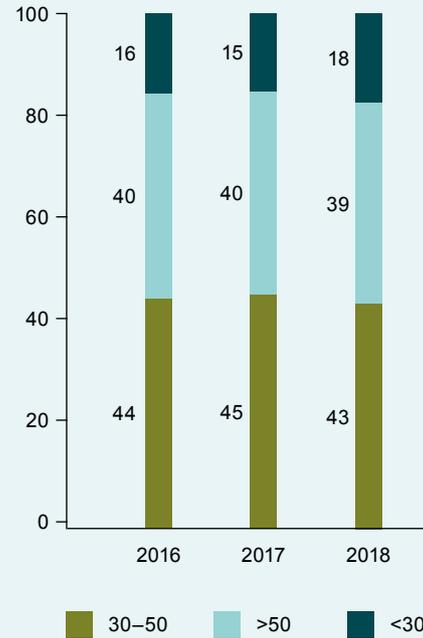
The company is responsible for preserving the principles of equal opportunities and for creating a culturally diverse working environment. Germany's General Treatment Act (or AGG) has high priority and similar rules apply under US law.

Any kind of discrimination may be reported via the whistleblowing hotline, the compliance council, the supervisor, or directly to the HR department. For 2018, no recordings were listed.

Age structure at OXEA is closely monitored and demographic change constitutes a challenge that OXEA is faced with. OXEA's apprenticeship program is one of the countermeasures to fill the workforce pipeline for the future.

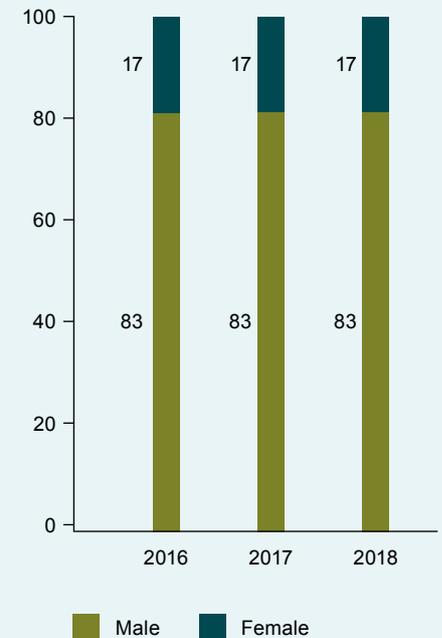
The percentage of female employees of around 17% lies within the typical range of the chemical industry. OXEA offers individualized solutions to females returning from parental leave and is working on strategic initiatives to increase the proportion of women in the company.

Employees by age in %



In 2018, OXEA participated in the "Girls' Day" event (held throughout Germany) for the 18th time in a row and opened its doors at the Oberhausen facility to 22 females still attending high school. The Girls' Day is specifically aimed at informing females about apprenticeship and job opportunities in supposedly male-dominated technical areas.

Employees by gender in %



OXEA

Propanol 2 unit – a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance**

GRI Index

Imprint

Compensation and benefits

The employees' compensation is linked to both company and individual performance goals (please refer to the CSC and performance management system). OXEA's benefit system reflects national standards and can vary depending on hierarchy and remuneration level, service years, etc.

OXEA offers supplementary health insurance to all employees. Furthermore, OXEA employees can benefit from the following programs:

At the European sites, OXEA provides a defined benefit that will be paid upon retirement. Employees who are employed for more than six months are included in the collective agreement for single payments and retirement provision according to the company's collective agreement.

OXEA also offers flexible working hours (respecting core requirements) and long-term accounts. This model offers the opportunity to save up parts of the salary or extra work hours, in order to retire prematurely from work or schedule a personal break while still receiving salary payments. In addition, private accident insurance is provided.

The above-mentioned benefits represent an extract and are offered to permanent full- and part-time employees.

At the US sites, OXEA offers flexible working hours with certain core requirements. Each employee must work 30 hours a week to be

considered a full-time employee and eligible for benefits. Employees are eligible for all provided benefits from their date of hire, which include medical, dental, life, accidental death and dismemberment, and short- and long-term disability insurances. OXEA participates in the 401(k) retirement plan, where we match up to 5% of employee contributions and contribute an additional 5% of the employee's biweekly salary every pay period to this account.

OXEA encourages both paternity and maternity leave models and provides for the employees according to the regulations of the countries in which OXEA operates.

Occupational safety

Relevant data and program descriptions can be found in the Environment, Health, and Safety (EHS) section.

Corporate Health Promotion Program

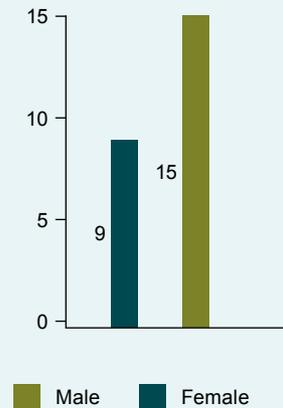
Our employees' health and well-being is a priority at OXEA, and the Corporate Health Promotion Program aims to promote physical and mental capabilities both at work and in their personal lives. It comprises four pillars and covers the areas of mobility, nutrition, prevention, and relaxation. Program components vary at different OXEA sites according to needs and topics in focus. Remotely located employees can benefit from individualized offerings and online courses.

The Corporate Health Promotion Program is currently established at the OXEA European and US sites. OXEA's site in Nanjing is planning to establish tailored health activities at the beginning of 2020.

The Corporate Health Promotion Program offers a wide range of services, activities, and courses OXEA employees can benefit from – either for zero costs or with pecuniary contribution.

These include: physical training and prevention courses (physical fitness, relaxation, nonsmoker training, nutritional training), participation in public sport events, sponsored online courses, etc.

Number of employees returning from parental leave 2018



OXEA

Propanol 2 unit – a success story

Reporting Section

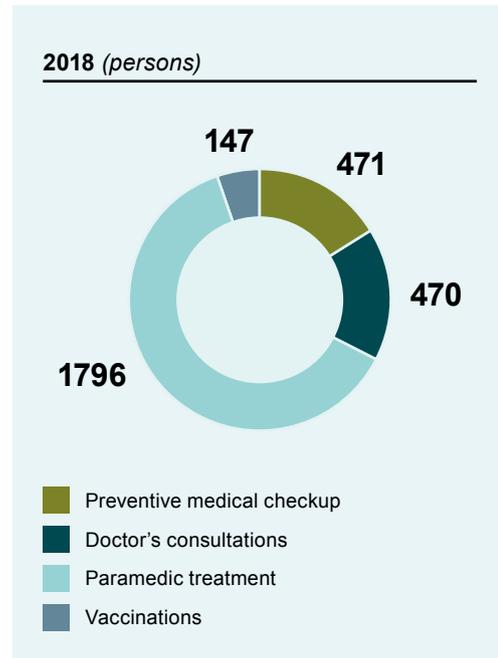
- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health, and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

At our OXEA sites in Oberhausen and Monheim, we offer medical services for employees, including medical checkups, vaccinations, and the services of an optician and orthopedist, through our own medical team. In Marl, those services are provided by Chemical Park.

In 2018, the following services were used:



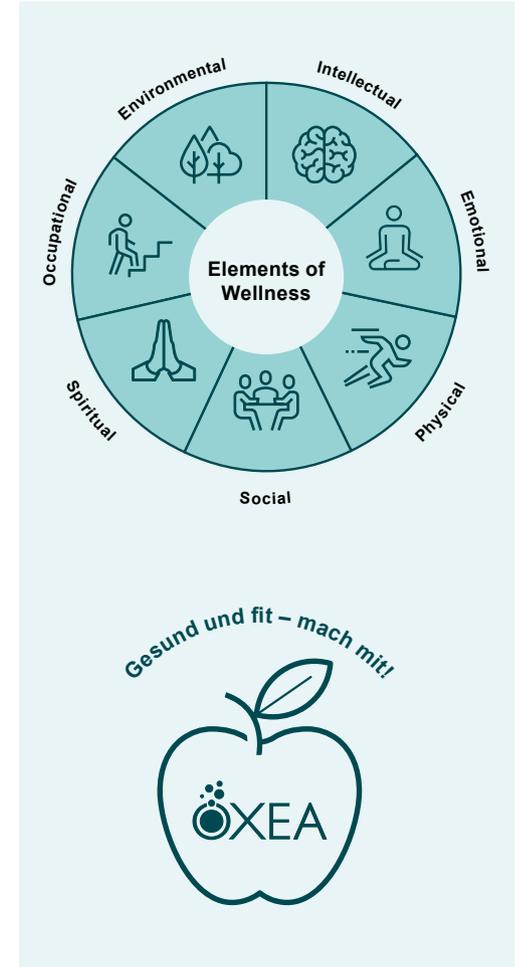
OXEA conducts training for first responders at all sites.

New Wellness Committee in Bay City

In October 2018, the facility in Bay City established what is known as a Wellness Committee. The aim of the Wellness Committee is the establishment of programs and organization of activities that Bay City employees can join to enhance a healthy and satisfying lifestyle (work-life balance).

The committee has more than 25 members and has joined the “Wellness Works” program of the Bay City Matagorda Regional Medical Center, which offers a wide variety of services such as the attendance of local fitness centers for reduced costs.

The plan is to roll out the initiative to the other US sites.



OXEA

Propanol 2 unit –
a success story

Reporting Section

- 23 Sustainability at OXEA
- 24 Sustainable Governance
- 30 Economic Performance
- 32 Environment, Health,
and Safety (EHS)
- 43 Social Performance

GRI Index

Imprint

Local Community Engagement

Growth and success require a solid foundation. At OXEA, this means trust and responsibility. We appreciate and nurture the trust that our customers and our neighbors have placed in us. We intend to be recognized as a valuable corporate citizen and make every effort to operate responsibly in our local communities. We take responsibility for the people who work for OXEA and those who live in the areas surrounding our sites.

We support projects in cooperation with partners such as communities, associations, local governments, and nearby institutions, and extend financial support to programs covering environmental and social aspects.

Our aim is to be a decisive community partner and a responsible corporate citizen by positively impacting social development. We strive to develop a volunteering work culture and encourage our employees to get involved in activities with a positive impact on society.

Supported activities cover:

- Educational initiatives (e.g., training at schools and/or institutions of science)
- Open days
- Sponsorship of events
- Volunteering work* with different focus areas

*Volunteering work: hours during work time are individually agreed upon between the employee and the respective supervisor.

- Cooperation with local universities and schools; internship and employment options for students
- Donations to medical and social institutions and charities
- etc.

In the USA, OXEA employees are active in reoccurring events with specific focus themes: OXEA employees at the Bay City facility regularly participate as volunteers in e.g., the Matagorda Beach Clean-up (twice a year) coordinated by the Texas General Land Office. Trash data (volume and kind) is recorded and helps to determine the source and support avoidance of waste.

Yearly events are the Hazardous Household Waste Collection Day (please refer to paragraph below) and the United Way Day of Caring, for example. In the United Way Day of Caring, OXEA employees are joined by students from local high schools and help with home repairs, lawn work, etc. at the homes of local residents in need of support.

In Europe, we've also opted for a mix of support methods.

Every two years, OXEA supports the MULTI project in Oberhausen. The basic idea of the MULTI is a peaceful meeting of young people from different cultural backgrounds. In common activities, young people recognize similarities, but also differences. During the MULTI, hundreds of bridges will be built between the young people. The project aims to foster a tolerant, diverse culture.

Another important partner is Friedensdorf International. OXEA supports the institution annually. Friedensdorf International is an NGO in Oberhausen that brings sick and injured children from war and crisis zones to Germany for medical care. After medical treatment, the children return to their families.

In addition, we support schools, kindergartens, and sports clubs next to our production sites with various donation measures.

You will find an extract of activities in 2018 in the following paragraphs.

Oberhausen: Open Day 2018

In September 2018, the OXEA site in Oberhausen opened its doors to the public for neighbors, relatives, and anyone interested to view the premises of OXEA (please also refer to Global EHS Day), as part of a VCI-wide event. From 10 a.m. to 4 p.m., different departments at OXEA were available to answer visitors' questions and to present interesting information on their day-to-day work.



OXEA

**Propanol 2 unit –
a success story**

Reporting Section

- 23 Sustainability at OXEA
 - 24 Sustainable Governance
 - 30 Economic Performance
 - 32 Environment, Health,
and Safety (EHS)
 - 43 Social Performance
-

GRI Index

Imprint

**Oberhausen: waste-free environment –
trash collection day**

OXEA's apprentices spent one working day on trash collection around the premises at the Oberhausen site. One driver for the event is OXEA's participation in the Waste Free Environment Initiative**. With events such as this, OXEA wants to set a positive example for plastic recycling and responsible waste disposal. A total of 18 60-liter bags of garbage were collected. The event is aimed at creating awareness.

**Bay City: Household Hazardous Waste
Collection Day**

Household hazardous waste presents a real disposal challenge. While this waste constitutes only a small percentage of the residential waste stream, the potential damage from improper disposal is significant. The health and safety of families, neighborhoods, and the environment are threatened when household hazardous waste is stored or disposed of improperly.

OXEA Bay City employees volunteered at the 24th annual Household Hazardous Waste Collection Day on Saturday, October 27, 2018. The plant has been a major sponsor of the activity for many years. Supporting the event benefits the community, strengthens partnerships with local industries, and reflects OXEA's commitment to sustainability.

Household hazardous waste (HHW) is any product labeled toxic, irritant, corrosive, poison, combustible, or flammable. Items include used batteries, motor oil, pool chemicals, pesticides, and herbicides, as well as paints and household cleaners.

The data from previous events reflects the positive impact on pollution prevention to which the activity contributes. In 2017, the Matagorda HHW event collected 13,032 gallons of paint, 2,365 tires, 10,905 pounds of household waste, and 12 pallets of electronic waste – and that was only part of the collection! The volume highlights the importance of proper waste management, not only at the plant, but also at home.

Marl: Site on the Move

Hundreds of employees gathered at the sports field next to the entrance of the chemical park in Marl on June 2018. "Site on the Move" (Standort in Bewegung) was the motto of the 17th sports day, which was not only about medals, but about a good cause. Eleven OXEA employees from Marl took part in this event, which was organized by Frank Krause. Among the participants were CEO Salim Al Huthaili and Markus Rüter, who each ran an impressive ten kilometers (6.2 miles). A total of €14,500 was given to the Pustebäume kindergarten.

** The Waste Free Environment Initiative is an international campaign sponsored by the Gulf Petrochemicals and Chemicals Association (GPCA)

GRI CONTENT INDEX

 OXEA

 Propanol 2 unit –
 a success story

 Reporting Section

 GRI Index

 Imprint

This report is oriented to the Sustainability Reporting Standards 2016 of the Global Reporting Initiative (GRI), which is the most established framework for sustainability reporting worldwide. The report covers the OXEA Group of companies (OXEA). The group structure is described in OXEA's Financial Statements 2018.

GRI Indicator		Page
GRI 101: Foundation		
GRI 102: General Disclosures		
Organizational Profile		
GRI 102-1	Name of the organization	5
GRI 102-2	Activities, brands, products, and services	8–10
GRI 102-3	Location of headquarters	5
GRI 102-4	Location of operations	5, 6
GRI 102-5	Ownership and legal form	5
GRI 102-6	Markets served	8
GRI 102-7	Scale of the organization	5
GRI 102-8	Information on employees and other workers	44
GRI 102-9	Supply chain	28
GRI 102-12	External initiatives	23
Strategy		
GRI 102-14	Statement from senior decision-maker	4
GRI 102-15	Key impact, risks, and opportunities	26–28
Ethics and Integrity		
GRI 102-16	Values, principles, standards and norms of behavior	25, 26, 43
Governance		
GRI 102-18	Governance structure	11–13, 24–26
Stakeholder Engagement		
GRI 102-40	List of stakeholder groups	29
GRI 102-41	Collective bargaining groups	29
GRI 102-42	Identifying and selecting stakeholders	29
GRI 102-43	Approach to stakeholder engagement	29
Reporting Practice		
GRI 102-53	Contact point for questions regarding the report	55
GRI 102-54	Claims of reporting in accordance with the GRI Standards	52
GRI 102-55	GRI content index	52ff.



OXEA
Propanol 2 unit – a success story
Reporting Section
GRI Index
Imprint

Material topics		
GRI 201 Economic Performance		
GRI 103	Management Approach (including 103-1, 103-2, 103-3)	30
GRI 201-1	Direct economic value generated and distributed	30
GRI 201-3	Defined benefit plan obligations and other retirement plans	48
GRI 204 Procurement Practices		
GRI 103	Management Approach (including 103-1, 103-2, 103-3)	28
GRI 204-1	Proportion of spending on local suppliers	28
GRI 205 Anti-corruption		
GRI 103	Management Approach (including 103-1, 103-2, 103-3)	25, 26
GRI 205-2	Communication and training about anti-corruption policies and procedures	25, 26
GRI 205-3	Confirmed incidents of corruption and actions taken	25
GRI 302 Energy		
GRI 103	Management Approach (including 103-1, 103-2, 103-3)	32–38
GRI 302-1	Energy consumption within the organization	38
GRI 302-5	Reductions in energy requirements of products and services	37, 38
GRI 303 Water		
GRI 103	Management Approach (including 103-1, 103-2, 103-3)	32–36, 39
GRI 303-1	Water withdrawal by source	
GRI 304 Biodiversity		
GRI 103	Management Approach (including 103-1, 103-2, 103-3)	32–36, 42
GRI 304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	42
GRI 304-3	Habitats protected or restored	40
GRI 305 Emissions		
GRI 103	Management Approach (including 103-1, 103-2, 103-3)	32–36, 38
GRI 305-1	Direct (Scope 1) GHG emissions	39
GRI 305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	39
GRI 306 Effluents and Waste		
GRI 103	Management Approach (including 103-1, 103-2, 103-3)	32–36, 40
GRI 306-1	Water discharge by quality and destination	40
GRI 306-2	Waste by type and disposal method	40
GRI 307 Environmental Compliance		
GRI 103	Management Approach (including 103-1, 103-2, 103-3)	36
GRI 307-1	Non-compliance with environmental laws and regulations	36

OXEA	GRI 401 Employment	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	43–45
	GRI 401-1 New employees hires and employee turnover	44
	GRI 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	48
	GRI 401-3 Parental leave	48
Reporting Section	GRI 403 Occupational Health and Safety	
GRI Index	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	32–36, 48, 49
	GRI 403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	33
Imprint	GRI 403-3 Workers with high incidence or high risk of diseases related to their occupation	33
	GRI 404 Training and Education	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	44–46
	GRI 404-1 Average hours of training per year per employee	44
	GRI 404-3 Percentage of employees receiving regular performance and career development reviews	45
	GRI 405 Diversity and Equal Opportunity	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	47
	GRI 405-1 Diversity of governance bodies and employees	47
	GRI 406 Non-discrimination	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	47
	GRI 406-1 Incidents of discrimination and corrective actions taken	47
	GRI 413 Local Communities	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	50
	GRI 413-1 Operations with local community engagement, impact assessments, and development programs	50
	GRI 414 Supplier Social Assessment	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	28
	GRI 416 Customer Health and Safety	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	41, 42
	GRI 417 Marketing and Labeling	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	41, 42
	GRI 417-1 Requirements for product and service information and labeling	41
	GRI 417-2 Incidents of non-compliance concerning product and service information and labeling	41
	GRI 418 Customer Privacy	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	28
	GRI 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	28
	GRI 419 Socioeconomic Compliance	
	GRI 103 Management Approach (including 103-1, 103-2, 103-3)	25, 26
	GRI 419-1 Non-compliance with laws and regulations in the social and economic area	25

IMPRINT

OXEA

Propanol 2 unit –
a success story

Reporting Section

GRI-Index

Imprint

Publisher

OXEA GmbH
Rheinpromenade 4a
40789 Monheim am Rhein
Germany

Tel +49 2173 9993-0
info@oxea-chemicals.com
www.oxea-chemicals.com

Trade Register:
Amtsgericht Düsseldorf HRB 79958

VAT-Identification Number: DE813758906

Print run

200

Layout

3st kommunikation GmbH,
Taunusstraße 59–61, 55118 Mainz
Germany

Pictures

Sebastian Moelleken, Mölleken Fotografie:
Cover, p. 4, 11, 12, 13, 21
3st kommunikation: p. 3, 14
Michelle Woodley, Memories by Michelle: p.18
John Yoon, Tov Studio: p. 19

All other pictures by OXEA

<https://www.oxea-chemicals.com/en/sustainability.html>



