

ANNUAL REPORT
2018



It's all about **the chemistry™**







What we stand for is:

Passion

SONGWON's team of committed chemical professionals is dedicated to advancing the interests of customers and the industry.

Entrepreneurship

SONGWON is a global leader in chemical specialties that has retained the spirit of its early years: a lean, innovative and flexible organization that seeks and drives new opportunities and sets new trends.

Accessibility

SONGWON people act as extended teams for their clients: they are readily available and always within reach.

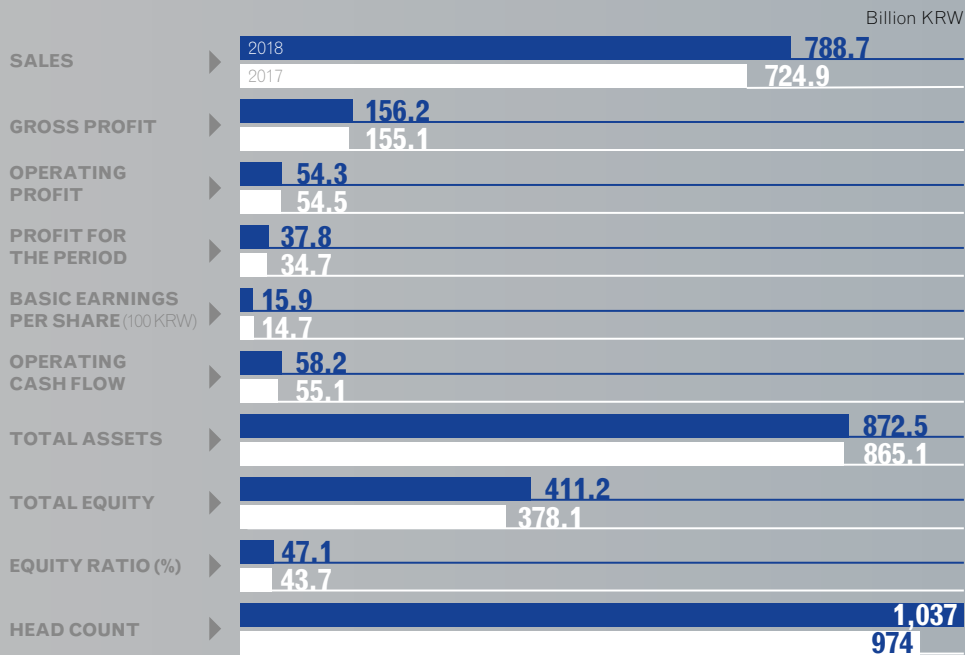
Credibility

SONGWON's past, people, products and processes bear the hallmark of reliability, trust and confidence in the future.

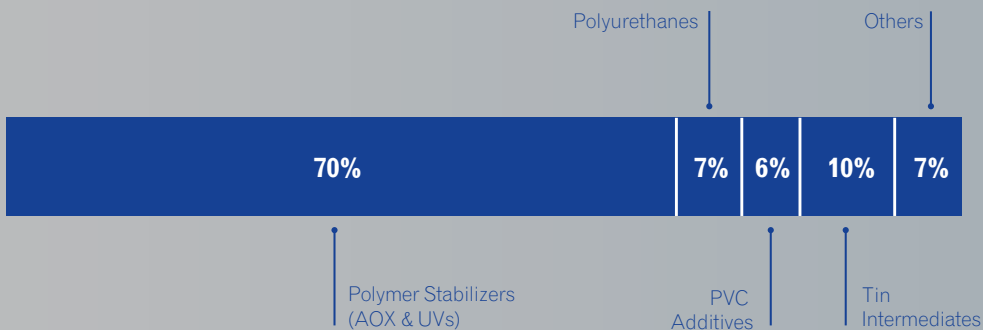
Expertise

SONGWON offers a specialty chemicals knowhow pool to facilitate and accelerate business and industry growth in a sustainable and environmentally responsible manner.

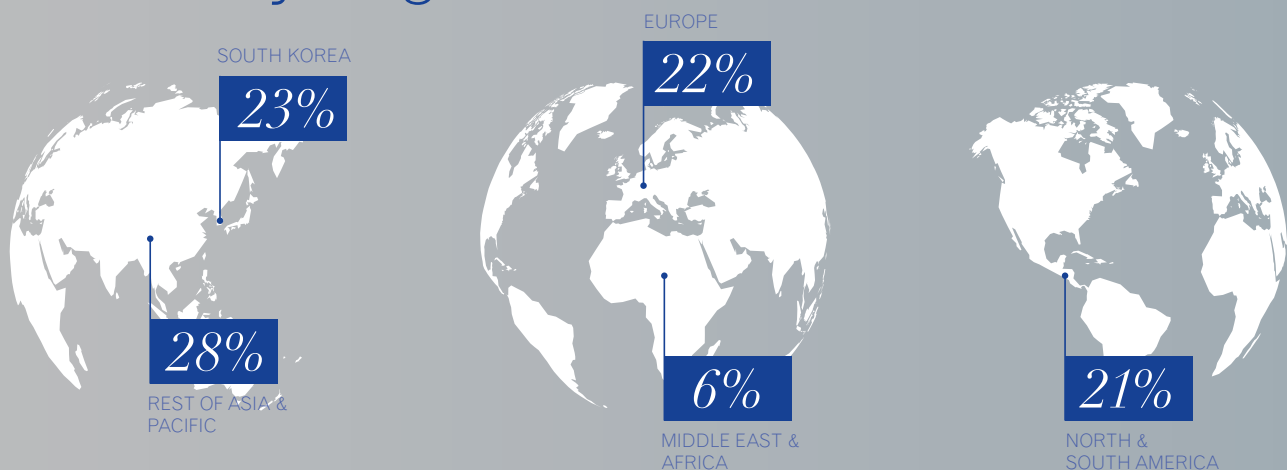
Key Financial Data 2018



Sales by product group in 2018



Sales by region in 2018



1,083

Direct energy consumption (1000 GJ)

54.3

Operating profit (Billion KRW)

115

Total female employees worldwide

29

Different nationalities

37.8

Profit for the year (Billion KRW)

168

Employees working 20+ years

47.1

Equity ratio (%)

1,587

Basis earnings per share (KRW)

58.2

Operating cash flow (Billion KRW)

1,037

Total head count

0.42

Total recordable case rate (TRCR) (%)

9

Manufacturing plants

872.5

Total assets (Billion KRW)

411.2

Total equity (Billion KRW)

1965

1965

SONGWON Industrial Co., Ltd. founded in South Korea with a Head Office and plant in Busan



1973

SONGWON is granted Trader's License by the South Korean Ministry of Commerce and Industry



1986

SONGWON's Ulsan plant comes on stream (South Korea)



1979

SONGWON Moolsan Co., Ltd. (holding company) is founded in Seoul (South Korea)



1988

SONGWON moves Head Office and plant from Busan to Ulsan (South Korea)



1995

ISO-9002 certification awarded to SONGWON



2002

SONGWON opens office in Maeam (South Korea)



1968

SONGWON opens office in Seoul (South Korea)



1977

SONGWON starts up 2nd production site in Suwon (South Korea)
SONGWON Industrial Co., Ltd. becomes publicly traded company (South Korea)



1983

SONGWON establishes 1st R&D Center in Ulsan with Ministry of Science and Technology approval (South Korea)



1987

SONGWON opens office in Tokyo (Japan)



1992

Company moves to new SONGWON building in Seoul (South Korea)



2001

SONGWON Japan K.K. established in Tokyo (Japan)



2005

SONGWON Brilliant Chemicals Co., Ltd. established in Shanghai (China)



Maeam plant for main Antioxidants comes on stream (South Korea)
 SONGWON's Ulsan plant receives ISO 14001 Environment Management System Certification (South Korea)



2007

ChemService Asia Co., Ltd. established in Seoul (South Korea)
 SONGWON China Ltd. established in Hong Kong (China SAR)
 SONGWON International-India Pvt. Ltd. established in Mumbai (India)
 SONGWON Trading Shanghai Ltd. established in Shanghai (China)

2012



2010

SONGWON Baifu Chemicals (Tangshan) Co., Ltd. established in Tangshan (China)
 SONGWON Additive Technologies-Americas, Inc. established in Houston for production of one pack system (OPS) (USA)

SONGWON makes green field investment for OPS plant in Abu Dhabi (UAE)
 SONGWON Industrial Group acquires Sequent Specialty Chemicals, Ltd. in Panoli (India)

2014

SONGWON opens new OPS plant in Abu Dhabi (UAE)
 SONGWON OPS plant in Qingdao starts up in China



2016

New branches opened in Taiwan, Singapore and Malaysia
 Increased interest in Qingdao Long Fortune SONGWON Chemical Co., Ltd. in Qingdao (China)
 Extended product range with several new products (SONGNOX® 1330, SONGNOX® 5057, SONGNOX® L570, SONGSORB® CS 400)
 Expanded functional monomers production line in Ulsan (South Korea)

2018

2006



SONGWON International AG established in Frauenfeld (Switzerland)
 SONGWON International – Americas, Inc. established in Friendswood (USA)

2009



IBL plant starts up in Maeam (South Korea)
 SONGWON's Maeam plant awarded ISO 14001 Environment Management System Certification (South Korea)

2011

SONGWON Holdings AG ex Mantenere Holding AG acquired in Frauenfeld (Switzerland)
 New AO 1076 production line starts up in the Maeam plant (South Korea)
 SONGWON Chemicals Co., Ltd. established in Shanghai (China)
 SONGWON Additive Technologies AG established in Frauenfeld (Switzerland)
 SONGWON acquires ATG Additive Technology Greiz GmbH in Greiz (Germany)

2013

SONGWON Additive Technologies – Middle East FZE established in Dubai and Polysys Additive Technologies – Middle East LLC in Abu Dhabi (UAE)

2015

SONGWON establishes Qingdao Long Fortune SONGWON Chemical Co., Ltd. JV in Qingdao (China)

2017



SONGWON's new Technology Innovation Center officially opened in Maeam (South Korea)
 New world-scale aminic AOX plant for lube applications starts up in Ulsan (South Korea)



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Dear Shareholders,

In 2018, SONGWON Industrial Group delivered solid results, proving the reliability of our business model, and most importantly continued the successful implementation of its growth and diversification strategy.

SONGWON generated consolidated revenues of 788.7 Billion KRW with an 8.8% increase year-over-year, and a consolidated net profit of 37.8 Billion KRW over a net profit in 2017 of 34.7 Billion KRW, which marks an increase of 8.9%. The Group's operating profit reached 54.3 Billion KRW in comparison to 54.5 Billion KRW in 2017, while EBITDA performance was around 11.0% of sales.

Following a challenging 2017, 2018 also proved not to be an easy year. Although for the first three quarters of the year demand was relatively strong (particularly for plastic related products), raw material prices continued to increase or stabilized at relatively high levels. However, SONGWON was able to raise prices at the beginning of the year in order to protect its profitability.

The year 2018 was marked by much geopolitical and global economic turmoil, with growing concerns and uncertainties relating to such things as conflict, protectionist and nationalistic sentiments, trade tensions and Brexit etc. In the 4th quarter of the year, these issues and the traditional end-of-year slowdown culminated in a significant decrease in demand.

In spite of these challenges and a difficult business climate, it proved to be a milestone year again for SONGWON, particularly in relation to advancing our strategic goal to become a major global specialty chemicals company, and furthering our aim to build a strong balanced portfolio of businesses. We have started to see the newer businesses we entered into a few years ago (e.g. Fuel & Lube (F&L) additives), becoming more significant and positively contributing to SONGWON's earnings and competitive edge.

Maurizio Butti | Chief Executive Officer

Throughout 2018, we continued to invest in improvements to our manufacturing facilities as well as innovation and sustainability. This year, we also strengthened our innovation capability with the opening of our new application lab for lubes, which is now in full operation and are preparing to open the coatings lab in 2019. SONGWON successfully introduced several new products in 2018, and in our ongoing effort to optimize our offering, we continued to review our portfolio which led to the decision to cease the production of stearates.

During the year, we have again also sought to identify opportunities for strengthening the Group's positions.

In line with this we:

- increased our participation in the Chinese joint venture Qingdao Long Fortune Songwon Chemical Co., Ltd., to 72%;
- entered into a capacity reservation agreement with one of the key players in UV absorbers products, Disheng Technology Co., Ltd.. This new agreement is key to supporting the ambitions of our PS and coating activities in the UV absorbers area.

Polymer Stabilizers (PS)

In 2018, SONGWON saw the positive growth trend for its Polymer Stabilizers business continue, despite the steady rise in the price of raw materials and exposure to unfavorable FX fluctuations. For the first part of the year, supply and demand were fairly balanced and even after the implemented price increases, we were able to retain and grow our business.

The 4th quarter of 2018 began to show signs of weakening, which is expected to continue going into 2019. We anticipate that this will remain the case at least throughout the 1st quarter of the year, so SONGWON intends to continue closely monitoring this situation. We have been successful at further consolidating our position as the global number 2 supplier in the industry in 2018, and are confident that we have measures in place to ensure that SONGWON is ready should the economic development show further deterioration.

Throughout 2018, we focused our efforts on strengthening SONGWON's business by:

- investing in new production lines for 2 new niche antioxidants SONGNOX[®] 1330 and SONGNOX[®] 5057 (the latter investment was shared between PS and F&L additives business units)
- focusing on the continuous improvement and efficiencies of our plants and processes
- selectively investing in the expansion of our manufacturing footprint
- developing our approach to full plant automation which we will begin implementing in 2019
- increasing SONGWON's shareholding in our Chinese joint venture Qingdao Long Fortune Songwon Chemical Co., Ltd.

Tin Intermediates, PVC Stabilizers & Polymers (TPP)

Overall in 2018, TPP delivered sales in line with those of 2017. The polyurethane business (TPU and SPU) has continued to implement its strategy to move towards more value added products and solutions by leveraging SONGWON's many years of industry knowledge and manufacturing experience as well as expanding its regional coverage. Although the strategy has produced the first positive results, the change in approach has not been fast enough and as a result some of SONGWON's more traditional products have suffered due to intense competition. For PVC Stabilizers, we have continued focusing on the two identified directions, developed products especially for some high demanding applications and pursued geographical expansion.

Newer Businesses

During 2018, we concentrated on the ongoing implementation of our strategy to establish a more balanced business portfolio and also on our ambition to grow through the development of new businesses. In keeping with this, we set about identifying their growth potential, seeking the most favorable competitive situations and taking advantage of the opportunities available for us to leverage our strengths with SONGWON's high quality products, technologies, customer base, well-known levels of service, and our first-rate R&D capabilities and process development.



**SONGWON's strategy
has always been
to create profitable
growth and establish
a balanced business
portfolio.**

Fully in line with our expectations, our newer businesses, which were negligible only 2 years ago, started significantly contributing to the SONGWON's activities in 2018. They already represent more than 10% of our overall revenues. With the full support of R&D, process development, manufacturing and engineering, we have successfully been expanding our manufacturing footprint in this area as well and have brought several new products to the market. Therefore, we expect the growth and expansion of our new businesses to continue in the years to come.

Fuel & Lubricant Additives (F&L)

SONGWON's entrance into the Lube Antioxidants market has been a great success and this is clearly reflected in the outstanding business results achieved in 2018. SONGWON became one of the key players in the lube antioxidants market in 2018, with the business tripling its sales. To support continued success and further strengthen SONGWON's business position, we invested in the production of the aminic antioxidant L57.

Due to our broad product range and the investment (shared with PS) that we made to increase our world-scale production capacities combined with the market's need for strong, reliable additives suppliers, we anticipate further positive growth for the business in the coming year. In addition to this, we started up operations of the F&L application lab in our Technical Innovation Center (TIC) and work is well underway on the development of new innovative solutions to help our customers meet the industry's ever more demanding standards for lubricants.

Specialty Chemicals

SONGWON's Specialty Chemicals business recorded 70% growth in 2018, which was completely aligned with our strategic expectations. In the area of electronic chemicals, we made the decision to terminate our co-operation with Heraeus and have successfully approached the market directly. After developing several new innovative products, we have been successful in cooperating with key players in the industry. The expansion of our production facilities in Panoli, India was ongoing in 2018, and we began large scale manufacture of functional monomers in Ulsan (South Korea). We are also in the process of planning a significant debottlenecking of our Maeam plant in South Korea.

Expansion of both our product and customer base for coatings additives has also continued this year. This was supported by the capacity reservation agreement SONGWON entered with Disheng Technology Co., Ltd. and the business is growing according to our expectations. Work has also continued in our functional monomers business. Plans are in place to give the business a more significant and important role to play for SONGWON in future, through an investment (in 2019) in industrial production at our Ulsan facility in South Korea.

SONGWON's work on other proprietary classes of products is continuing and we have now reached the stage where we are confident about already bringing some of these products to the market in 2019. Looking ahead, we expect the growth trend for Specialty Chemicals to continue and even anticipate it to accelerate in the coming years.

Operational Excellence

From the very beginning, operational excellence has always been one of our key areas of focus at SONGWON. All of our efforts related to this over the years have enabled us to maintain our leadership position in the industry. Competitiveness and best-in-class business processes are the also prerequisites of remaining a global leader, together with the ability to flexibly adapt to ever-changing market conditions and swiftly responding to global challenges.

At SONGWON, we translate this into continuous improvement, development and the implementation of tools to achieve greater efficiencies, improve costs, efficiently manage stocks and increase our capacities. For us, it is also very evident that the chemical industry as a whole is going through a phase of transformation (Industry 4.0). In response to this, we have started to develop concepts for SONGWON to move in this direction beginning in 2017 with plant automation. In the next few years, this will remain our main operational focus.

Sustainability

Sustainability and circular economy are emerging as the key factors for the future of our industry. At SONGWON, we have already placed sustainability at the core of all of our activities and it greatly influences the way we conduct our business. We understand that we have a responsibility at SONGWON to add value for all of our stakeholders by successfully balancing environmental stewardship, social progress, ethical business conduct and economic success.

Each year, we place great importance on consistently carrying out a detailed analysis on the environmental and social impact of our operations by:

- continuing to improve our EH&S results, even if we are already achieving best-in-class performances
- integrating EH&S into all of our processes and practices
- continuing to proactively review the risk profile of our manufacturing facilities
- investing in the necessary resources to improve the overall safety of our plants
- continuing to review the environmental impact of our facilities and processes (which are already exceeding the target set by regulators)
- reducing further wastes and emissions as well as SONGWON's use of energy and natural resources
- monitoring the regulatory status and environmental impact of our products
- proactively responding to concerns and identifying potential needs for innovation
- responsibly sourcing raw materials and identifying potential renewable sources
- ensuring proper business conduct from our suppliers

In addition to this, we focused on optimizing the packaging and logistics set-up to identify opportunities for more sustainable solutions.

In 2018, SONGWON achieved a major milestone as one of the 1st specialty chemical companies in the world to introduce a new packaging solution made of 50% recycled polyethylene. In addition, SONGWON was awarded a gold medal for the 2nd consecutive year from EcoVadis for our sustainability efforts, which places SONGWON in the top tier in the industry.

Corporate Governance

Being recognized as a trusted and reliable business partner depends on our deep commitment to creating sustainable long-term value for our shareholders and most importantly, that we maintain consistently competitive and sustainable operations worldwide. We know that this is only possible by ensuring that we have strong and sound governance practices in place and by conducting all of SONGWON's business with the highest level of integrity. We also understand the importance and value in establishing open dialogue with our shareholders and how essential it is to regularly engage with them directly.

We sincerely believe that the Corporate Governance structure implemented at SONGWON after being approved at the Annual General Meeting of Shareholders in 2016, and fully lived in 2017, has provided us with the right foundation throughout 2018 as well. Having a larger Board of Directors comprising internal and external, Executive and Non-Executive Directors, as a well as the clear separation between the Board and Executive Committee responsibilities, and between the Chairman and CEO's responsibilities, has also equipped us with much stronger corporate governance and supported the highest required levels of transparency, control and accountability.

Our People & Organization

We fully acknowledge that our success is founded on the loyalty and commitment of our people. For this reason, we place the utmost importance on doing our best to create and maintain an open, positive, rewarding and challenging working environment. We want our people, to be comfortable in their surroundings, feel free to express their ideas and look forward to a long and fulfilling future career at SONGWON.

In 2018, we finalized two key HR processes. The first is our "Succession Planning" process which is aimed at ensuring that we have the most suitable resources available to take over key positions in a very short period of time, should the need ever arise. The second is our newly established "Talent Pool" which helps us to identify SONGWON's key resources and ensure that our people can deliver to their full potential, that we are able to retain and reward our key resources and high potentials, and also provide them with further development chances. These two processes will be key to supporting the future growth that SONGWON is aiming for.



Jongho Park | Chairman of the Board

Looking ahead

Going into 2019, we believe that we have laid solid basis for SONGWON to continue to deliver profitable growth in the years to come. SONGWON is relentlessly pursuing a clear strategy. Even amid the weakness showing in the general economic outlook and the levels of political and geo-economic unpredictability and volatility increasing every day and highly likely to continue, we are steadily laying a strong foundation for further profitable growth.

We will continue to:

- leverage proprietary technologies
 - adding new technologies and automation to our world-class facilities
 - deliver the quality, service and reliability customers expect
 - grow our robust portfolio
 - develop our new businesses and capitalize on opportunities
 - expand our manufacturing footprint and geographical reach
 - further build on the strong organization of talented individuals
 - maintain our collaborative, long lasting relationships with customers and partners
-

With this approach, we are convinced that we can fortify SONGWON's position as a world-class, globally diversified specialty chemicals leader in the industry.

Over the years, SONGWON has been successful at developing the flexibility and resilience needed to compete in today's demanding and evolving markets while creating superior value for our shareholders at the same time. The unwavering dedication of our employees, management and Board of Directors has been key to making this possible.

SONGWON is well-equipped to face the future. By continuing to strengthen our leadership position in our key businesses and leverage our ability to innovate, we can deliver on our operational excellence, and make sustainability a key driver of our strategy. We look forward to making the next stage of our journey even more successful. On behalf of the Board of Directors, the Executive Committee and the entire SONGWON team worldwide, we thank you, our shareholders for your valuable trust, sustained confidence and continued support.

Maurizio Butti
Chief Executive Officer

Jongho Park
Chairman of the Board

The SONGWON Industrial Group Executive Committee & Board of Directors

Byungsoo Boo

Leader Operations

Byungsoo (BS) joined SONGWON Industrial Group back in 1988 and since then he has held various technology positions in South Korea and Japan. He then became leader manufacturing, responsible for all of SONGWON's manufacturing sites worldwide, ensuring that all operations are efficient, effective and in line with SONGWON's sustainability strategy.

Doug Excell

Leader QA, Regulatory & Best Practices

Throughout his professional career before SONGWON, Doug Excell held a number of supply chain, business management, marketing, procurement and corporate development positions at Compass Minerals, Chemtura, Great Lakes Chemical and Amcol International. He combines vast industry experience with a strong record of achievements in business analysis and strategic planning.

Yung-Ku Ha

Non-Executive Board Member

Bringing decades of economy and finance experience to the Board, Yung-Ku Ha has an advisory role and supports SONGWON's growth strategy by overseeing the financial drivers of the business and tracking progress against strategic objectives. Furthermore, he shares his know-how and significant expertise in financing, investor interaction and strategic planning with respect to the current economic outlook in Korea and global trends.

Choung-Sik Kim

Executive Board Member

Choung-Sik Kim is responsible for ensuring that the organization remains fully compliant and in line with South Korean laws and regulations. He also ensures that all SONGWON Industrial Co., Ltd.'s operations are completely aligned and integrated with the organization's policies and strategies. By clearly communicating and explaining Group policies, strategies and critical decisions to SONGWON's Korean employees, Choung-Sik Kim is able to gain the full alignment of each functional group and achieve the appropriate implementation of the related processes.

Dieter Morath

Non-Executive Board Member

Dieter Morath, the former Executive President of Global Sales of SONGWON Industrial Group, has shifted his focus to guiding the company's future development. This involves exploring and pursuing both organic and inorganic opportunities that support SONGWON's long-term strategy for growth.

Jongho Park

Chairman of the Board

Jongho Park has been a major player in SONGWON's global journey. By successfully steering international expansion, he has contributed greatly to transforming the company from a local South Korean manufacturer into the global specialty chemicals leader SONGWON is today. With a deep commitment to fulfilling SONGWON's vision, he advises and puts forward recommendations to the Board regarding organizational changes and new opportunities. Jongho Park's role in investor relations and fostering solid relationships with all stakeholders is paramount to securing an even brighter future for SONGWON.

Giacomo Sasselli

Leader Strategic Investments

Prior to joining SONGWON, Giacomo Sasselli gained vast experience in a number of key technology positions with the EniChem Group and as Site Manager. Later, he headed the operations of Great Lakes Corporation's global network of polymer additive manufacturing facilities. A true industry veteran, Giacomo Sasselli is responsible for ensuring the industrial feasibility of the new technologies, as well overseeing any significant modifications to the existing ones.

Philippe Schlöpfer

Leader Performance Chemicals

Philippe Schlöpfer brought over 20 years of experience as a key contributor to Ciba's Polymer Additives business with him to SONGWON. During his time with Ciba, he led their global antioxidant product portfolio for the polymer industry and also acquired 15 years of invaluable experience in the Asia Pacific region. His role as Leader Performance Chemicals at SONGWON covers both TPP and Specialty Chemicals.

Gerard Schlosser

Non-Executive Board Member

With his wealth of valuable international experience, especially in Asian countries (Japan, Korea, etc.), Gerard Schlosser supports SONGWON's vision and offers strategic guidance. In close cooperation with SONGWON's shareholders and operational management teams at all levels of the Group, he shares his knowledge and provides direction on business development initiatives, international marketing strategies and improving operational capabilities to ensure the overall growth of the company.

Executive Committee

Maurizio Butti

Chief Executive Officer and Executive Board Member

In his role as CEO, Maurizio Butti leads the organization and oversees the implementation of all SONGWON's business and operating activities, including revenue and sales growth, expenses, cost and margin control to monthly, quarterly and annual financial goal management. Prior to SONGWON, he was EVP Polymer Stabilizers and a Chief Executive Council Member of Great Lakes Chemical Corporation. In the past, he has also held various marketing, business, strategic planning and corporate development management positions at Great Lakes, EniChem and SOL Industries.

Hans-Peter Wüest

Chief Financial Officer and Executive Board Member

Hans-Peter Wüest is responsible for the areas of Finance, IT and HR at SONGWON. Before taking up his key financial role at SONGWON, Hans-Peter Wüest gained a wealth of international experience in a wide variety of financial positions in the manufacturing and service industries. He also held finance leadership positions with DHL/Deutsche Post and Great Lakes Chemicals before SONGWON.



From left to right: Giacomo Sasselli, Hans-Peter Wüest, Byungsoo Boo, Maurizio Butti, Doug Excell, Philippe Schläpfer

Board of Directors



From left to right:
Hans-Peter Wüest,
Yung-Ku Ha,
Dieter Morath,
Jongho Park,
Gerhard Schlosser,
Choung-Sik Kim,
Maurizio Butti

Share Price Development

Positive end to turbulent year

SONGWON ended 2018 on December 31st with a market cap of 457 Billion KRW. In comparison to the market cap level of FY2017, this signified a decrease of 29%. Earlier in the year, in April, SONGWON's share price peaked at 31,150 KRW and reached the highest level of 2018, but also the highest share price in SONGWON's business history. Later, in October, the share price dropped to its lowest level of 15,650 KRW. In 2018, the Korea Composite Stock Price Index (KOSPI) lost 17% overall.

During the turbulent year, the bearish Korean stock market, and the mainly bad economic outlook in Korea negatively impacted SONGWON's share price and resulted in a poorer share price performance in 2018 in general. Looking at the year as a whole, the stakes owned by domestic institutions and foreign investors both decreased by 1.0% and 6.1% respectively.

In Q1/2018, investors' confidence in SONGWON's good future growth prospects positively influenced SONGWON's share price and it moved very strongly at the beginning of the year. This solid investor confidence was supported by the market's expectation that the demand for polymer additives by major buyers would increase on the back of their facility expansions which would result in the tight supply of polymer additives worldwide.

Moving forward, SONGWON's Q2 results did not meet the market's expectations. This, together with concerns that raw material price increases linked to rising oil prices would be likely to negatively affect SONGWON's performance in the second half of the year, eroded investors' confidence in the organization. With trade war tension at its peak at the beginning of October, SONGWON's stock price began slipping further. Throughout the month, the company's stock price was pushed further down by concerns relating to Korea's overall economy. The situation was further exacerbated by institutional investors complying with stop-loss rulings of over 30% loss and being compelled to sell their shares in SONGWON. Despite SONGWON's positive Q3 results announcement, issued on October 26th, SONGWON's stock price hit its lowest level for the year when it dropped to 15,650 KRW on October 29th – corresponding to a PBR level of 1.0x.

However, SONGWON's positive Q3 results revealed the highest quarterly operating profit of the past 3 years which encouraged the market to re-evaluate the organization and conclude that SONGWON's performance could be sustained. Early in November, there were clear indications that the market had regained confidence in the organization and this directly translated into a rise in SONGWON's stock price during the last 2 months of 2018.

“Going forward with regained market confidence, the organization expects to start the new year strongly and believes that it is in a good position to deliver a solid performance for both its customers and investors.”

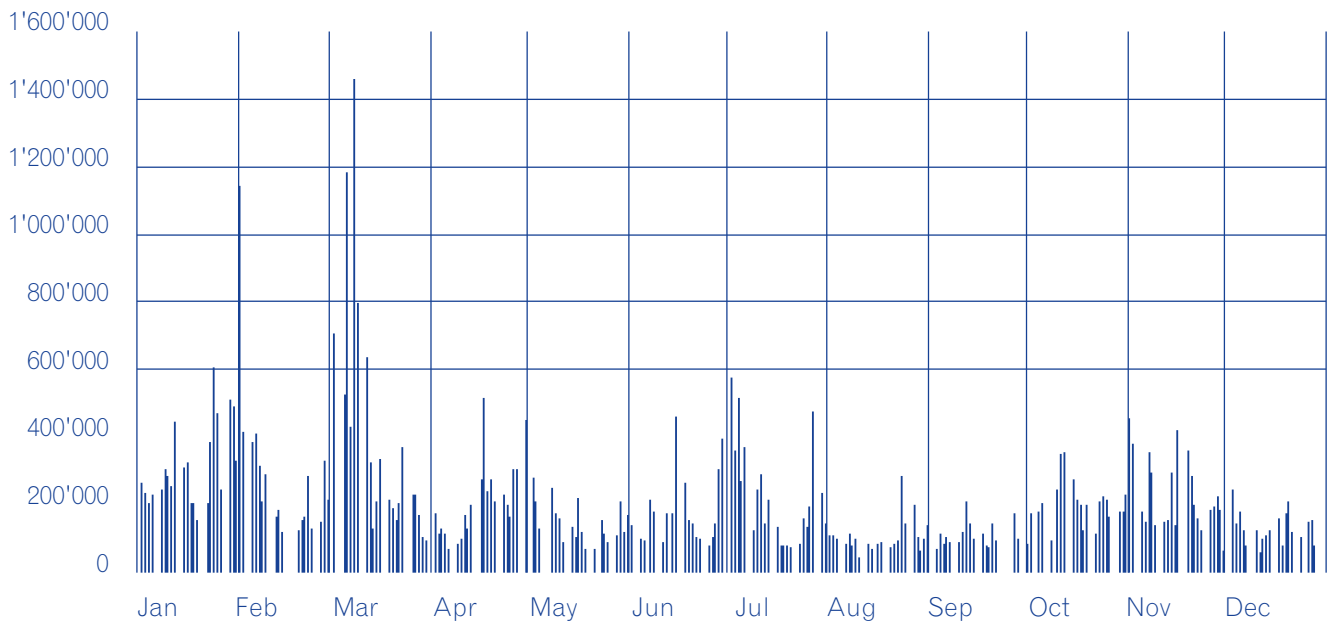
Hans-Peter Wüest, Chief Financial Officer

The organization far outperformed the KOSPI in November and December. SONGWON's stock price rose by 10.4% while the KOSPI only advanced by 0.6% during this period. SONGWON finished the year with a satisfactory result of 19,050 KRW. Going forward with regained market confidence, the organization expects to start the new year strongly and believes that it is in a good position to deliver a solid performance for both its customers and investors.

SONGWON share price 2018



SONGWON share volume 2018



Ticker:	KOSE: A004430	Share price (31.12.2018):	19,050 KRW
Stock exchange:	Korea	52-week high:	31,150 KRW
Listed since:	1977	52-week low:	15,650 KRW
Shares outstanding:	24 million	Free float:	64.45%
Market capitalization: (Million KRW)	457,200	Dividend per share (2018): (28% of nominal share value)	140 KRW

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Our People	62





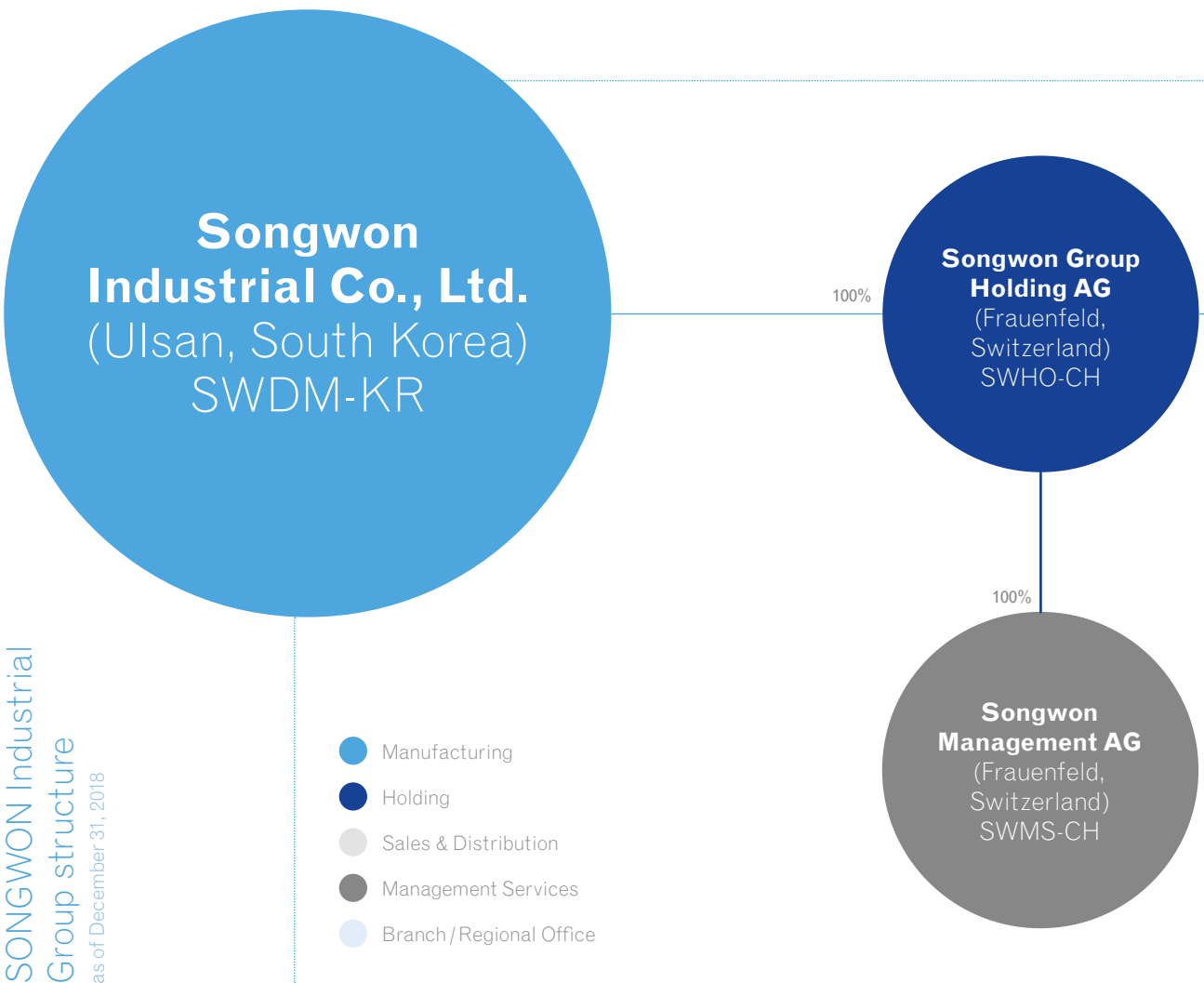
SONGWON Industrial Group

Global strength but local focus

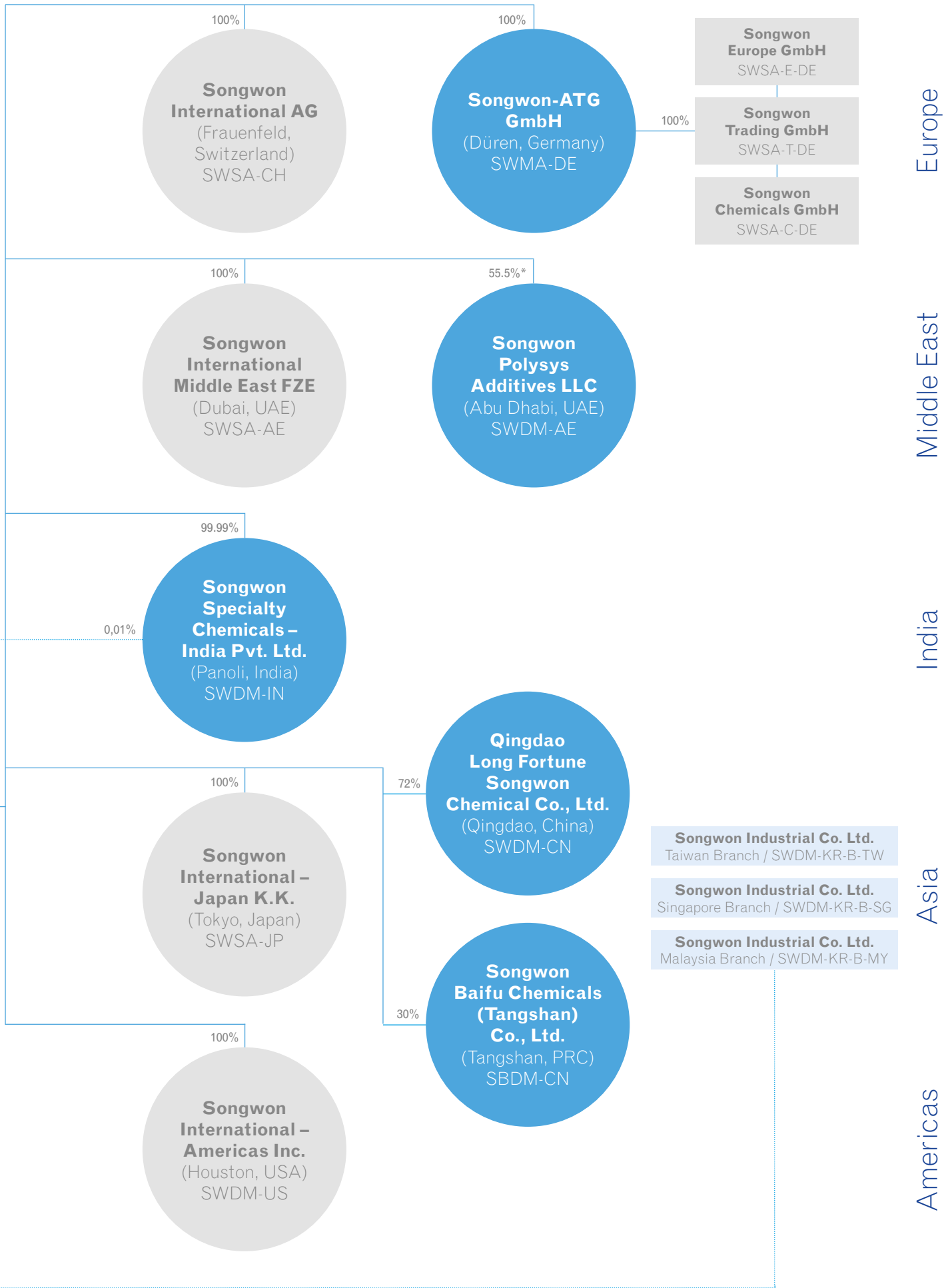
SONGWON, founded in 1965 and headquartered in Ulsan, South Korea, is a leader in the development, production and supply of specialty chemicals.

The second largest manufacturer of polymer stabilizers worldwide, SONGWON has group companies operating all over the world, and offers the combined benefits of a global organization and readily accessible local companies. Dedicated experts work closely together with customers to develop tailor-made solutions that meet specific requirements.

The ongoing efforts to strengthen the foundation of SONGWON Industrial Group's global position are paying off. SONGWON has proprietary technologies and excellent economics. With its combination of wholly or partly owned subsidiaries and joint ventures (JVs), SONGWON is well-balanced to continue expanding internationally. JVs are facilitated by holding companies which enable the organizations to manage risk and also provide further market access and economies of scale.



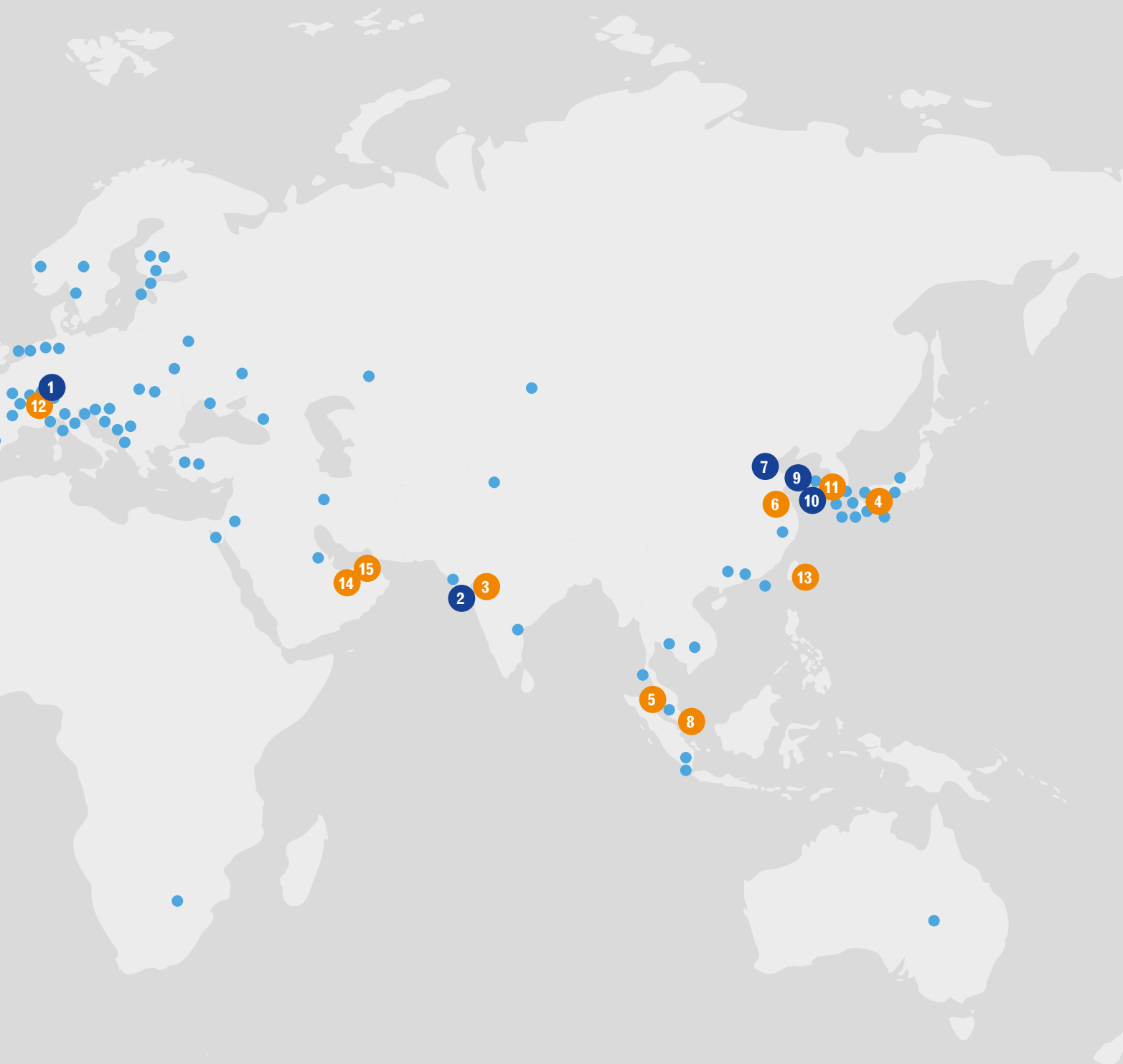
* 36.75% share holding plus 18.75% economical interest } in total 55.5%



Global locations

Headquarters & Affiliates
 Manufacturing
 Applications (GAC)
 Technical Service
 R&D

1	Germany, Greiz		●	●	●	
2	India, Mumbai				●	
3	India, Panoli	●	●			●
4	Japan, Tokyo	●			●	
5	Malaysia, Bayan Lepas	●				
6	PR China, Qingdao	●	●		●	
7	PR China, Tangshan		●			
8	Republic of Singapore, Singapore	●				
9	South Korea, Maeam		●	●	●	●
10	South Korea, Suwon		●		●	
11	South Korea, Ulsan	●	●		●	
12	Switzerland, Frauenfeld	●			●	
13	Taiwan, Kaohsiung City	●				
14	UAE, Abu Dhabi	●	●			
15	UAE, Dubai	●			●	
16	USA, Houston	●	●		●	



Global sales in **57** countries

Logistic hubs & warehouses in **40** countries worldwide

SONGWON Product Groups

Value-adding sustainable solutions

Our extensive range of leading-edge solutions is the result of many years of industry experience combined with close customer collaboration, the latest technologies and SONGWON's long tradition of innovation. One of the broadest product portfolios in the industry, our products are as diverse as the areas in which they are used and designed to add value and provide a competitive advantage while meeting the most demanding application criteria. As a leader in the industry, we also place great emphasis on reducing the environmental impact of SONGWON's products and developing solutions that help our customers use resources more efficiently.

Ensuring that SONGWON is positioned to provide the most suitable solutions for customers is one of the most important elements in the management's global strategy. However, at SONGWON, we recognize that every market has its own unique, ever-changing requirements and conditions, especially in relation to sustainability. In response to this, we listen to and engage with our customers throughout the world so that we can develop solutions that not only match their needs but exceed their expectations. In this way, as an organization, we are able to benefit from the opportunities offered by our target markets and develop our market presence.

In order to optimally meet our customers' diverse needs, we have organized SONGWON's offering into 4 main groups:

1. Polymer Stabilizers
2. Fuel & Lubes Additives
3. PVC Additives, Tin Intermediates and Specialty Polymers
4. Specialty Chemicals

1. POLYMERS STABILIZERS |

protecting plastics during manufacture and use

SONGWON offers a comprehensive range of processing, heat and light stabilizers in a variety of blends and physical forms to facilitate handling and application use.

To prevent degradation when exposed to heat and light, plastics need to be stabilized. Specially designed stabilizers protect polymers during processing and ensure that plastic end products retain their mechanical properties during use which prolongs their life. These include antioxidants, hindered amine light stabilizers, UV absorbers and one pack systems.

2. FUEL AND LUBRICANT ADDITIVES |

extending the life and enhancing the performance of lubricating oils and greases

SONGWON has developed an extensive portfolio of aminic, phenolic, phosphite and thioester antioxidants for lubricants used in automotive and industrial applications as well as for fuels (including biofuels). Antioxidants retard oil oxidation by reacting with and stabilizing free radicals or decomposing hydroperoxides. This extends the life of the oil and enhances its efficiency and performance.

Increasingly stringent regulations for vehicle emissions and drain intervals regulations as well as the rising machinery operating costs have led to an increased demand for new lubricant and fuel additives that protect engine oils, reduce maintenance, and running costs, and improve environmental acceptability.

3. PVC ADDITIVES, TIN INTERMEDIATES

AND SPECIALTY POLYMERS | promoting sustainable value in numerous applications

PVC additives are stabilizers and plasticizers that impart excellent heat stability, anti-weathering properties, transparency, flexibility and durability to PVC plastic end products.

Tin intermediates are high-quality alkyl tin oxides that act as catalysts in electrodeposition coating and esterification reactions.

Specialty polymers (thermoplastic polyurethanes, urethane ink binders, laminating adhesives, polyester diols, and superabsorbent polymers) make outstanding performance achievable in a wide range of demanding applications such as wire & cables, films, printing inks, packaging and hygiene articles.



Adhesives



Agriculture



Automotive



Building & Construction



Coatings



Durable & Consumer Goods

SONGWON offers one of the broadest portfolios in the industry for a wide range of applications:



Electrical & Electronics



Fuel and Lubricants



Packaging



Textile & Fibers



Wire & Cables

4. SPECIALTY CHEMICALS | enabling the use of diverse materials in numerous fast-moving industries

Specialty chemical products such as light stabilizers, photoinitiators, functional monomers and others are widely used in a majority of electronics and coatings applications. By strongly focusing on research, SONGWON identifies new opportunities to develop solutions for electrical and electronic applications to help customers gain competitive edge in this dynamic sector.

Coatings provide color and texture, enhance appearance and extend useful life. SONGWON works continuously to optimize process efficiency, improve durability, reduce VOC emissions, develop waterborne technologies and to meet increasingly stringent regulatory and environmental directives.

Functional monomers add extra effects to polymers and/or significantly improve processing performance. SONGWON's expertise in raw materials, together with experience in producing laboratory-scale to bulk volumes, enables us to work with customers to develop new products and open up additional application fields.

Market, Risks & Opportunities

The global landscape

As a leading organization, SONGWON is subject to numerous risks that are intrinsically linked with our global business activities. The unpredictability of political, socio-economic, market and technology trends in every region often lie far outside the scope of our control and subsequently have the potential to negatively impact our organization. Therefore, we place the utmost importance on constantly monitoring risks as they develop, attempting to predict their potential impact and doing our best to mitigate any serious damage to our business.

At the same time, we understand that risks often go hand-in-hand with opportunities. In response to this, we invest our efforts into the ongoing development of our capacities, products, technology, skills and market understanding to ensure that SONGWON is in a position to quickly identify and capitalize on any opportunities that emerge from risk. By remaining vigilant and looking beyond what others are doing to focus on what our business can offer that our competitors cannot is the path to achieving growth and meeting our investors' expectations. SONGWON is well aware of the risks related to economic volatility and political instability which could potentially lead to a lack of growth, or even to a recession and result in affecting demand. Although it is not in our power to prevent this from happening, we are well-placed to defend our position.

If, for example the current protectionism (deglobalization) trend becomes more serious, it is likely to impact how we do business and force us to rethink the way SONGWON carries out its daily activities in relation to production locations, R&D centers, market focus, etc. However, a business cannot be managed successfully by only reacting to the uncertainties, instability or volatility that surround it. In order to secure SONGWON's long lasting-success, it is also vital to continue to keep in mind both the medium and long-term success factors and to carry on working in this direction.

In 2016, the World Bank issued the statement that "...a broad-based cyclical global recovery is underway, aided by a rebound in investment and trade, against the backdrop of benign financing conditions, generally accommodative policies, improved confidence, and the dissipating impact of the earlier commodity price collapse.". In fact, in 2017 after a global GDP growth

of 3.4%, the strong momentum led to an estimated GDP growth for 2018 (and 2019) of 3.9%¹. The January estimate seemed healthy at the time and the prediction was for growth to even accelerate to reach 4%. However, in October 2018, the International Monetary Fund cut its global growth forecast by 0.2 percentage points from the earlier forecast to 3.7%. This was done due to trade tensions between the US and countries like China and Brexit uncertainty, as well as stresses in emerging markets struggling with tighter liquidity and capital outflows, with downward revisions notable in countries such as Argentina, Brazil, Mexico, Iran and Turkey². Together these situations started taking their toll on the global economy in the second half of 2018.

Although 2019 is projected to show the same growth as 2018, the new year is expected to start slowly as a result of the above-mentioned factors as well as a tightening of global financing conditions which may dampen confidence and economic activity. There is an anticipated recovery beginning in the 2nd quarter of 2019, but significant risks are also predicted to continue, and in relation to the global outlook are leaning to some extent to the downside.

The chemical industry in 2018³

In 2018, the chemical industry registered growth which going forward, is expected to continue at the same pace in 2019. Growth was also notably stronger than usual in the emerging markets and advanced economies. China in particular is impacting growth significantly and according to Cefic, its share of the global chemical market will rise to approx. 44% by 2030 (from the current 40%). For the industry as a whole, China's level of continuing growth is key.

On the contrary, the EU suffered a serious drop in demand, both domestic and export, in the 2nd half of 2018. The region's chemical output was also 1% lower than the previous year⁴. The US continued to show above average growth, principally as a result of its ongoing capacity expansion and Japan experienced slight growth which was driven mainly by its strong domestic demand. Although South America displayed stagnation, growth is expected to return in 2019 on the back of Brazil's ongoing economic recovery.

Key trends in the Chemical industry

For many years, the chemical industry has been regularly affected by negative industrial and economic cycles. In fact, the negative cycle situation has come to be humorously referred to as “5 bad years followed by 5 worse years.”. In reality, the industry was indeed hit very badly during the global crises of 2008-2009 and 2011-2012, and the demand for chemical products should actually grow in line with the growth of the global GDP. On average, this can be considered positive given that key economic megatrends, such as increasing populations, middle class growth in developing countries and intermaterial competition have remained fully intact. However, despite this, the chemical industry has spent years battling against a rapid erosion of its margins which have mainly been driven by overcapacity, swiftly expanding competition in developing countries and through commoditization, with customers demanding more but at lower prices.

The industry's response to the situation has been consolidation, and seeking efficiencies combined with cost-cutting which subsequently influenced chemical companies' capability and interest in innovation. The increase in rules, regulations and a much higher liability potential for the introduction of new chemicals to the market, has directly resulted in a steady rise in the cost of innovation. Even specialty chemicals which had once commanded a premium position have lost their allure.

Aimed at reducing costs, increasing efficiencies and competitiveness, megadeals were announced and implemented. Throughout the entire chemical industry, consolidation efforts have been massive and have led to worldwide concerns regarding competition and regulatory investigation. Then, in 2017 and 2018, a difference emerged with the first signs of change. The increase in technological advances and an intensified focus on sustainability are affecting customers' behaviors which has prompted a part of the industry to begin rethinking its strategy⁵. The result has been the emergence of more flexible, agile and coherent business models and an abandoning of the previous cost-cutting and defensive approach. This recent shift within the industry could lead to improved performances in the short term and to better prospects in the medium term.

This landscape change is forcing the chemical industry to answer to four major trends:

Mergers & Acquisitions (M&A)⁶

With most of the megadeals and acquisitions now completed, the focus in the chemical industry has shifted to smaller acquisitions and divestments aimed at targeting specific portfolio shortcomings and delivering tangible short- and mid-term results. Looking at the size and number of transactions which have taken place in the past two years, the change is very obvious. The general expectation is that mid-size companies will now be acquiring some of the new megacompanies' non-core assets and will be subject to different justifications.

Significant cost savings and R&D synergies which are expected in the mega transactions will shift to more focused and strategic considerations which will involve the management of product portfolios and specific markets. Furthermore, distractions relating to incoherent business portfolios will be eliminated and efficiencies will emerge as a result and not the driver behind these deals.

Digitalization⁶

Although digitalization (industry 4.0, internet of Things etc.) is in the process of transforming almost all industries, the chemical industry has been very late in identifying it as an opportunity and has only marginally accepted it. Instead it has merely been seen as an opportunity for boosting productivity. It has only been recently, that some companies have begun reevaluating the opportunities arising from the digital revolution due to the demands for cutting-edge products which require faster and more agile responses.

This change has been crucial for the industry. In addition to improved profitability and enhanced business performance, adding digitalization to product lines and within products and services, companies are beginning to view digital development as a business strategy.

Deglobalization⁷

The strong resistance to globalization, which involves economic nationalism and trade protectionism, is straining open borders and trade worldwide. For the chemical industry, which has since taken another direction, this could have a large effect. The concentration of R&D resources where results are distributed globally or the investment in

cooperation expansion to other regions are examples of some of the benefits of globalization which are negatively impacted by the deglobalization trend.

If the move towards deglobalization increases its momentum, then players in the chemical industry need to respond. The shift will call for them to rethink the markets they serve, create regional R&D centers, establish regional and global supply chains which are more flexible and develop skilled, local suppliers etc.

Sustainability⁹

Once simply a matter of regulation compliance and NGO deals, sustainability has shifted to become a major issue across all industries. Both customers and investors have made the issue of sustainability one of their main criteria, and thereby joined the general public in expressing concerns for the preservation of resources. This has made it a main factor in the chemical industry.

Sustainability has grown from just a health and safety topic or a way of preventing pollution to include social and economic factors as well as business performance and ethical practices. In contrast to digitalization, the chemical industry finds itself at the forefront of sustainability development. Although the vast majority of chemical companies have a sustainability strategy, most have remained in a reactive position with only scattered or isolated efforts often used as image improvers. Furthermore, most sustainability investments fail to gain approval due to “doubtful” or “soft” returns.

The chemical industry is failing to recognize that the drive for sustainability actually creates a need for innovative product and services, and opportunities for improving cost and profitability.

The key to success for companies lies in the support of new products and services development with clear strategic ambitions, a focus on the main value to be generated, and a commitment to driving change throughout the organization. With the demand for sustainability increasing, executives are gaining more experience in the way sustainability contributes to competitive advantage, investment in more sustainable products and processes which will become more central to an organization’s overall business strategy. The shift will also make it easier to develop and make the business case for new investment. In time, initiatives of this nature could lead to major new sources of earnings and boost the chemical industry’s overall standing in the market worldwide.

As a key supplier to the plastics industry, it is important to mention how sustainability is affecting this industry. Plastics’ unique characteristics make it possible for them to play a major role in the creation of a more sustainable and resource-efficient future. Plastics have positive qualities which can lead to saving key resources such as energy, water and also contribute to reducing food waste, etc. However, they often end up posing a serious threat to the environment and biodiversity. For this reason, a shift towards a waste reduction and circular economy is crucial.

Ensuring that decisions around appropriate solutions are based on sustainability considerations across the entire life cycle rather than simply resource efficiency aspects at the end-of-life of a product, is important when developing a roadmap for a circular economy. In a circular economy, resources remain in use for as long as possible and maximum value is extracted, recovered and regenerated from products and materials at the end of their service life.

SONGWON approach to the key trends

Key for SONGWON is implementing its identified strategy and continuing to work on increasing competitiveness, market offering and innovation while focusing on profitable growth and on a balanced portfolio of business. The emerging key trends carry the potential to be highly disruptive to the status quo and failing to identify, analyze and respond to these trends could jeopardize the future of the company. Whether M&A value and integration, digitalization, deglobalization or sustainability including plastics and the circular economy, it is first critical to identify the impacts of such trends on the industry and on society as a whole. To do this, we must continually engage with stakeholders: suppliers and customers, industry associations, governing bodies, etc.

Doing this is a preparation for the analysis that the management must carry out relating to the possible impacts for SONGWON. Firstly, making sure that the strategy, as developed and implemented is still valid is important. This must be followed by the creation of a set of tactics that enable us to take advantage of the opportunities and minimize the risks, and that allow us to incorporate these into our strategic approach.

While this is taking place, it is crucial that SONGWON maintains a vigilant approach to all issues which could possibly affect society as a whole and particularly SONGWON's stakeholders.

M&A

To strategically expand SONGWON's product offering, acquire key technologies and strengthen our presence in the key markets, we have completed some focused acquisitions and JVs. In addition, we exited a few businesses which had proved to no longer be strategically beneficial for us. While SONGWON is not pursuing growth per se, we do recognize that as a result of the existing trend in M&A, opportunities may arise to accelerate our growth and strategy implementation as well as for us to generate a more balanced portfolio. For this reason, we are keeping a close eye on the situation to enable us to identify such opportunities should they arise.

Digitalization

In line with the rest of the industry, SONGWON has not yet fully embraced the digitalization trend. However, we do recognize the importance of full automation and the benefits of using artificial intelligence, predictive maintenance, etc. In response, we are in the process of implementing changes in our plants and processes. However, while we have not yet identified opportunities to digitalize our products and to modify our business models we still continue to look for opportunities.

Deglobalization

SONGWON is vigilantly monitoring the development of nationalism and trade protectionism. To date, we have been relatively unaffected by these but we are very well aware of the disruptive impact this could potentially have on our business operations. We are always looking at alternative plans in case situation deteriorates.

Sustainability

Although we have already made sustainability an integral part of SONGWON's everyday business practices, we continue to focus on making it a key driver of our strategic development. To support this, we are planning to create a position for a Chief Sustainability Officer in 2019, who will report directly to the CEO.

For us at SONGWON, all topics related to sustainability are of material interest to our organization.

- We consider that topics related to anticorruption and anti-competitive behaviors, compliance, product responsibility, human rights, diversity, health and safety and labor practices, public policies are fully taken care of and understood throughout the organization. Despite this, we fully understand that we cannot afford to reduce our monitoring efforts, and that concerning aspects, such as training and education, there are still areas for improvement.
- Regarding the environmental aspect, we have always been at the forefront of what could be directly managed by us (e.g. energy, water, emissions, effluents and wastes, etc.). Going forward, we want to move to become more involved in managing and improving the indirect effects of our activities.

For example, plastics' key features of durability and lightness help the world to reduce energy consumption and subsequently reduce the carbon footprint. However, only if the plastics are not discarded can durability be considered a positive feature in relation to the environment.

The answer to this issue is the implementation of circular economy. As an additive supplier, SONGWON is in a position to bring new ideas to the table such as new formulations to improve the recyclability of plastics and products which serve to improve the quality of the recycled plastics. SONGWON has already introduced several products which achieve these two aspects some time ago but we are continuing our efforts to identify opportunities to develop new solutions to support the industry. The bag to package our products using 50% recycled plastic that was developed in 2018, is just one of our milestones in this area.

All organizations face certain levels of risk. Natural events, accidents, or acts carried out intentionally to cause harm are all threats which can seriously damage the reputation or image of a company. Regardless of the nature or source of a potential risk, it is the management's responsibility to ensure that processes are in place to limit or manage risks as far as possible.



As part of our risk management process at SONGWON, we carried out a vulnerability audit in December 2017, and January, this year. It involved interviewing people within SONGWON and an analysis of the findings to establish both external and internal areas which need attention or were found to be inadequate in terms of risk.

We believe that the strong strategy we are implementing combined with SONGWON's insight into the chemical industry, and our solid overview of world developments, puts us in the best position to identify and minimize key risks, as well as capture opportunities. This is what our stakeholders expect from us, and this is how we can ensure that SONGWON can continue delivering the most optimal results to meet our shareholders' expectations.

Sources:

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SONGWON focuses on:



Extending our product portfolio

Although we already offer one of the broadest, most comprehensive and cost-effective product portfolios on the market, we continually seek to expand our offering by developing high quality, high performance solutions for new markets and applications.



Meeting our customers' current & future needs

We listen closely to our customers concerns and needs. This helps us to improve, but also continue to consistently provide them with new products and solutions for high-end applications that enhance processing efficiencies and offer them solid ROI.



Remaining competitive & reliably supplying

We successfully retain our competitive edge by creating economic advantages through proprietary technology, economies of scale and backward integration.



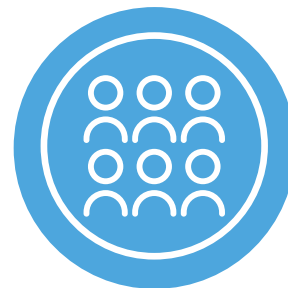
Providing best-in-class & comprehensive customer support

We take good care of customers. We cover all service areas, from customer service to logistics and from technical service to regulatory support, while also placing great importance on regulatory issues and using regulatory development to drive our innovation efforts.



Offering global coverage with local operations

Being a global player with manufacturing facilities in all key areas across the globe, enables us to operate locally. It also allows us to minimize the level of risks to our organization like economic downturns or negative currency developments in specific areas, while allowing us to take advantage of any existing growth opportunities at the same time.



Expanding our team of international professionals

SONGWON's success lies in the hands of a strong talented team of committed, ambitious and loyal people. Dedicated to creating the best working conditions for our entire global team, we also ensure that they know that they are the true assets to SONGWON's ongoing success. Adding new key talents continually strengthens our organization and improves, our already outstanding EH&S performance each year.

2018

HIGHLIGHTS

INNOVATION

New application lab for BU Fuel & Lubricant Additives in the Technical Innovation Center

SUSTAINABILITY

One of the 1st chemical companies in the world to package products in 20kg PE-bags made with 50% recycled PE

COMPLIANCE

22 new EU REACH substances (to date a total of 56 substances registered by SONGWON)

50 new K-REACH substances (to date more than 100 SONGWON substance submissions)

PARTNERSHIP

SONGWON entered a partnership with Disheng Technology Co., Ltd. for the production of UVA light stabilizers

PRODUCTION

New production lines installed for new SONGSORB® CS 400, SONGNOX® 1330, SONGNOX® 5057, SONGNOX® L570

Started large scale manufacture of functional monomers

EH&S

KFPA intensive audit of Ulsan, Maeam & Suwon plants resulted in an improved rating for SONGWON

R&D

10 products from lab process development to production

3 new patents filed

HR

Global team grew to well over 1000 employees representing 29 different nationalities

Sales

Sales Strategy

Effective & well-balanced

SONGWON's highly competent and well-trained sales experts build collaborative long-term relationships with our customers. Whether developing strong customer relationships via our direct or indirect sales channels, everyone in our Sales organization works together to maximize customer satisfaction and plays an important role in helping SONGWON to expand and grow its leadership position. *In order to strengthen our position as a leading specialty chemicals company with an optimized portfolio, SONGWON's management ensures that best global and local practices guide all of our activities.*

This year, in a favorable competitive environment with significant growth prospects, thanks to our systematic approach to new business development, the beneficial overlapping of our customer base, currently available and future products as well as our technologies, SONGWON was in a position to meet market expectations and proactively address customer concerns.

Over the 12 months, we continued to focus on growing our newer businesses and strengthening our foothold in various markets backed by SONGWON's technical expertise and innovation, strong chemical manufacturing competencies and new product developments. In 2018, we also further leveraged our strategic position in South Korea for supplying globally and taking advantage in particular of the wave of growth opportunities in the Asian region.

Throughout the year, our sales organization's in-depth knowledge and understanding of the markets, technologies, business drivers and competition have been key to further expanding our foothold, especially that of our newer businesses. With the insight from our sales teams, SONGWON was in an optimal position to respond to potential market requirements and align our supply with future demand to maintain a comprehensive and well-balanced offering.

As a leader in the industry and a supplier of choice, SONGWON customers have access to:

- high-quality products with excellent performance
- best-in-class technical service & application support
- years of industry experience & reliable, long-term supply
- leading-edge technologies to help them meet their specific challenges
- comprehensive regulatory support

Professional, customer-first approach

Making sure that both local and international customers receive the very best sales support in the market is a priority for us. To achieve this, SONGWON has a solutions-focused and strategically positioned sales organization in place. For us, it is also essential that our experienced sales experts are fully equipped with the in-depth industry knowledge and capability required to provide our customers guidance to resolve their distinctive challenges as well as to make accurate decisions relating to technology that differentiates them in their markets.

By consistently benchmarking our sales strategy against key players in the industry, improving our weaknesses and building on our strengths, SONGWON is well-placed to help our customers realize their strategic objectives and remain competitive in their application areas. Our Sales team's relentless drive to always deliver the best solutions to our customers right when they need them, is something that truly sets us apart in the industry.

Transparency is one of key principles throughout SONGWON. It has also always been an important part of how our sales teams interact with both internal, as well as external stakeholders. Engaging in open dialogue gives our customers peace of mind and increases their confidence in SONGWON. By expanding our understanding of their needs, we are able to align our development activities to reliably provide customers with customized solutions. This is one of the ways our sales teams build genuine long-term, win-win relationships for SONGWON.

Once again throughout 2018, we were able to benefit from SONGWON's highly regarded personalized approach in a fairly strong demand environment. Combining our successful business model with dedicated service enabled us to further build on our solid foundation in the industry, enhance customer relationships and deliver innovative solutions that also helped to grow our customers' businesses.

In 2018, the achieved growth in our key markets was supported by:

Expanding our network

Apart from opening 3 new branch companies in Singapore, Taiwan, Malaysia, we actively grew our distribution network. We select all our partners based on their expertise, sustainability performance, strategic local and regional market knowledge, and their ability to reliably service our customers at the level SONGWON's customers expect from us.

Enhancing our expertise

To support the further development of SONGWON's business especially in new markets, we strengthened our sales organization with new talent and expanded the overall competence within our teams with market-relevant trainings and essential skill-building.

Increasing collaboration

The organizational structure within SONGWON supports synergies and the sharing of knowledge and experience between the sales organization and our technical and business teams. This year, we also held our first customer Innovation Workshop and various trainings with our distributors. Strong collaboration between ourselves and with all of our stakeholders is essential to successfully exploiting fresh opportunities, particularly in new market segments.

Product strategy & development

Business activity overview in 2018

Reflecting back, most of SONGWON's range of products remained stable or showed signs of growth against a backdrop of political tensions, economic uncertainty and intense competition in certain markets. With respect to sales, SONGWON'S product lines performed in line with our expectations.

SONGWON's management has a clear agenda concerning sales. They are driving the organization forward by providing all the businesses with the ideal conditions and necessary requisites to help SONGWON become the supplier of choice in the entire specialty chemicals value chain and thereby fortifying the company's leadership position in the industry.

To this end, SONGWON's management fully supports the leveraging of the marketing synergies and the overlap between its businesses and has increased the level of asset and investment sharing. In order to achieve targets, management aligns SONGWON's resources – from strategic investment decisions and optimized operations to efficient supply chains and sales.

In this way, they ensure:

- *that our customers' needs can be met*
- *a smooth and reliable supply of products to our customers*
- *close cooperation with customers and the understanding of supply needs*
- *continuous development of SONGWON's offering with the introduction of new products*
- *the ongoing improvement of our sourcing/production footprint and world-class manufacturing capability*
- *the most attractive supply position through economies of scale, experience and strategic sourcing*
- *the fulfillment of customers' key service requirements through the newly introduced segmentation concept*

Polymer Stabilizers (PS) highlights

SONGWON already has a solid, well-regarded reputation for PS in the market and despite the usual month-to-month fluctuations, demand for PS was strong again throughout 2018. In line with SONGWON's strategy, PS continued its efforts to improve SONGWON's product range with the introduction of new solutions while increasing its focus on ROI to support future investment and the growth of the industry.

Furthermore, to widen SONGWON's market penetration in key regions such as MEA and China, we continued to broaden our level of approvals in MEA and expanded and upgraded our sales team, as well as our production assets in China. We also finalized a strategic cooperation with Disheng Technology Co., Ltd., in China, for some of our comprehensive range of UVA light stabilizers. These new reserved production capacities have fortified SONGWON's supply reliability for this range of products.

For most of 2018, the market was tight to short for several products and SONGWON responded by raising capacities to meet customers' direct needs but also to secure reliable worldwide supply and exceed market growth. Amid the market situation balanced to tight, and the cost of key raw materials increasing significantly, SONGWON's PS business successfully implemented price increases across the product range.

SONGWON also responded to the situation in the industry by focusing attention on fine tuning internal processes to ensure customers were supplied fairly and smoothly without interruption. PS also introduced a customer segmentation process in 2018, to support its ability to clearly understand customers' key requirements and to ensure that SONGWON is well-positioned to match them with the highest levels of consistency.

Aligned with this, PS is running a stage & gate process where all innovation ideas, which are received from either inside SONGWON or come from external requests, are investigated, evaluated and discussed. This year, a new key marketing role was also added to the PS team to specifically focus on acquiring a deeper understanding of significant market trends and customer needs, and to support the development of solutions to meet these needs in collaboration with SONGWON's R&D and GAC.



To support its overall strategy, PS also ran global sales training sessions in 2018, to further develop and harmonize sales processes and creating a common SONGWON sales language across the entire global organization. This year, PS has laid an even more solid foundation for future success by establishing a clear, well-communicated and coherently implemented strategy and empowering its strong team of talented sales professionals to continue to successfully “walk the talk”.

Tin Intermediates, PVC Stabilizers and Polymers (TPP) highlights

In line with expectations, SONGWON's TPP business also performed well throughout 2018, with polyester diols and polyurethanes sales up. Building on SONGWON's reputation in the industry, TPP directed its efforts to establishing a strong position as a regional/global player and to support this, expanded its foothold outside of Korea to the Asian region (with SPUs) and the US and Europe (with TPUs). The business also adapted its product portfolio to the local requirements of Asian customers and thereby broadened its sales of PVC additives in Asia.

Working in collaboration with SONGWON's other businesses, TPP promoted its products into the same applications such as UVA and coatings this year, and leveraged SONGWON's excellent reputation in antioxidants and UV absorbers to new regions and customers.

In 2018, to gain better access to potential customers, TPP also set up its own distributor channel in Asia for its urethanes and SAP products. Bringing the business closer to customers helped the TPP team increase its understanding of customers' specific requirements which made more effective development possible, and gave them more flexibility to meet these needs.

Several new applications were developed in 2018, which included solvent free PU adhesives and alcohol based ink binders. In keeping with its strategic drive to develop more sustainable solutions, within its PVC stabilizers range, TPP also offered CaZn product to replace lead stabilizers and low VOC liquid stabilizers. In relation to Tin Intermediates, TPP focused on its more environmentally friendly and sustainable Octyl Tin products.

For TPP, 2018 was the year of preparation and planning to become a significant supplier of PVC additives in the Asian region. This involved adding expertise to the team, expanding sales and technical service support, establishing a dedicated distribution network and adapting its product offering to match local requirements. TPP is confident that it has laid the foundations for expanding its reach and achieving more success in 2019.

Fuel and Lubricant additives (F&L) highlights

SONGWON's Lubricant Additives business continued to grow significantly tripling the volumes in 2018. Pursuing its strategy, F&L focused its marketing efforts on the further expansion of antioxidants and other lube related products, as well as advancing SONGWON's position in the market as a key F&L player. The business progressed well with executing its growth strategy this year in accordance with the dynamics of the industry.

F&L growth was supported in 2018 by plant expansion, which provided the increased capacities of lube additives it required and enabled F&L to satisfy both current and projected customer needs. Additional regional distributors were also added to the business network to strengthen its channel to market in regions of growth.

This year, together with the production experts in Korea, F&L successfully commercialized a new antioxidant additive which increased the breadth of the LA product portfolio and facilitated the businesses' expansion into the industrial, food grade and grease market segments.

At all levels of the business, F&L proactively seeks out and listens to the voice of the customer to understand and develop value adding product solutions to match the demands of the market. In 2018, an experienced technical lubricant expert joined the team, and the testing capabilities of the dedicated lube applications lab were also further developed to support the business to identify, and meet the needs of F&L's customers.

Overall, 2018 has been an excellent year for the F&L business. By progressing and successfully executing many elements of our strategy to be an indispensable supplier in the industry, SONGWON has become a

partner sought out by our customers. This was made possible by our relationship-building success with customers, the expansion of company's position within the industry due to our broad product offering and with the expertise and support from across the organization.

Specialty Chemicals (SC) highlights

SONGWON has become a well-regarded specialty chemicals player in the coatings and electronics industries. SC's profitability was higher in 2018 than in the previous 2 years, even in the face of the significant supply challenges the business encountered throughout the year.

By combining years of industry experience, its customer- and solution-oriented approach with best-in-class service and by offering a range of solutions that reflects the needs of the market, SC differentiates SONGWON in the market. Furthermore, our constant drive to develop innovations and custom-fit solutions, and our strong focus on research and innovation have enabled SC to identify new opportunities to help our customers in numerous sectors gain a competitive edge and grow their businesses.

Our most recent innovation, SONGSORB® CS 400 UV absorber has contributed to reinforcing our reputation as a player in the market. In Korea, the new production line at our Suwon site for this new UV absorber, SONGWON's recently established Technology Innovation Center in Maeam and the bulk manufacture of functional monomers in Ulsan all highlight our commitment to further expanding our portfolio for customers with new-generation solutions.

The newly entered, strategic, long-term partnership with Disheng Technology Co., Ltd., for some of SONGWON's UV Absorbers range for plastics and coatings applications, will support long term growth by ensuring supply reliability thanks to the reserved production capacities.

Looking forward, we are convinced that we have well-placed the business for expansion. We are confident that SC can gain a greater market share and see even more success in the years to come on the back of our fully empowered and motivated SC team, capacity increases and SONGWON's cutting-edge solutions.



Customer Service (CS)

Committed, responsive support

One of SONGWON's most notable strengths is the comprehensive and high-quality customer service that our experienced specialists provide worldwide from the 8 CS centers located across the globe. This proximity to our customers, understanding their requirements, and developing solutions together with them is what sets SONGWON apart.

At SONGWON, we see every interaction as an opportunity to exceed expectations and express the value we place on our relationships with customers. CS is committed to providing professional, responsive and accessible customer service that exemplifies SONGWON's values. In the past, closing a sale usually marked the end of a transaction. Today, our customers now expect us to resolve any issues arising during the transaction itself, but also accompany them throughout their business relationship with SONGWON.

Going above & beyond

We provide customers with much more than just high performance products. SONGWON's highly experienced and reliable advisors have in-depth knowledge of customers' needs and their application areas. Working alongside them, CS's main goal is to ensure customers are completely satisfied. The CS team goes above and beyond to make sure they get the products they need – whether they were forecasted or not. Customers want the CS experts to work alongside them and interact with all SONGWON's departments as their direct representatives.

To effectively meet local needs by applying global and regional best practices, SONGWON has CS Centers in:



- China, Qingdao
- India, Panoli
- Japan, Tokyo
- Korea, Ulsan & Seoul
- Switzerland, Frauenfeld
- UAE, Dubai
- USA, Houston

Working proactively for customers

One of the most important aspects of CS is staying ahead of the “curve” with customers, anticipating problems and acting to resolve them as well in advance and as quickly as possible.

Accordingly, SONGWON’s management has always endorsed good communication throughout the organization. In line with this, the company’s structure facilitates the flow of information and helps us take advantage of positive synergies between departments which ultimately benefits SONGWON’s customers. Via the strong channels of communication in place, CS is told immediately about delays or any unforeseen issues so that they can keep the customer well-informed of progress. This also ensures that customers have time to consider how they would like to proceed or whether they want to look for an alternative solution.

With a focus on the customers’ best interests, everyone at SONGWON works as ONE team and not simply as individuals. CS collects feedback from both internal and external stakeholders to enable the team to measure how it’s doing and identify areas where SONGWON can still make improvements. CS then shares this valuable information with SONGWON’s management and the relevant departments so that steps can be taken to ensure SONGWON continues to deliver what customers want and need.

SONGWON’s management ensures that the CS team is constantly trained to keep the representatives up-to-date on various regulations and changes in the external environment so that they can respond appropriately. For example, CS support of Specialty Chemical Sales in Korea was strengthened in 2018 to better capitalize on opportunities. Properly trained and well-informed, their support was well-appreciated and contributed positively to expanding the business.

CS at SONGWON is not just another business function within our organization; it is a mindset that is embedded at the very center of our corporate culture and clearly apparent in all of our activities.

2018 CS successes

CREDIBILITY

When a key customer urgently needed a product that their standard supplier couldn’t deliver, they turned to SONGWON for help. Despite the fact that the specific product they needed from us had not yet cleared by seaport customs, our CS experts were able to successfully fulfill the request by working together with the customs officials to complete the clearance and arranging with our logistics partner to deliver immediately.

ACCESSIBILITY

Over the past few years, CS has played a key role in deepening the relationship between SONGWON and an important Middle East customer. The increased trust between the two companies has placed SONGWON in a position to quickly resolve problems, but more importantly to offer proactive solutions by anticipating issues that could potentially arise. For example, sanctions were imposed ‘overnight’ that affected our ability to supply from SONGWON’s Abu Dhabi facility. However, CS had already anticipated the situation, and in a team effort together with Business Management, Sales and Production, supply was switched to SONGWON’s German (Greiz) and Korean (Ulsan) facilities which prevented any supply interruption to the customer.



SONGWON's Customer Newsletter launched

SONGWON's customer newsletter is issued every quarter and keeps our customers well-informed on the latest product developments at SONGWON, and also provides them with other interesting company-related updates.

At SONGWON, we know that the challenges facing those in the industry today can be tomorrow's opportunities. For this reason, we have always been committed to providing customers with timely and industry-specific information. We believe that by helping customers remain up-to-date and tap into the legacy of industry experience we offer is one of the ways we can support them in their decision-making and equip them for success.



Procurement

Advancing growth & value

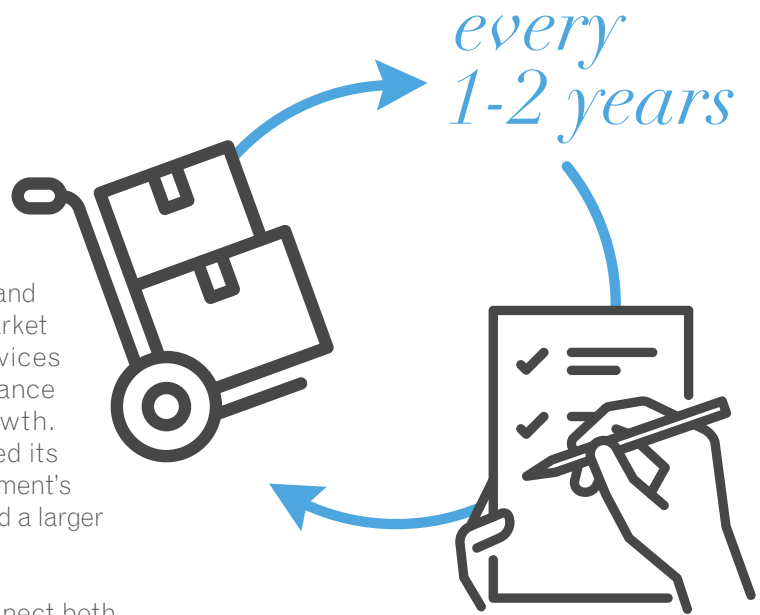
With a global perspective and in collaboration with our extensive network, our Procurement team uses their sourcing and logistics expertise, business insight and market knowledge to acquire the materials, services and innovative solutions that further advance SONGWON's competitiveness and growth. Over the years, as SONGWON has expanded its leadership position in the industry, Procurement's role has also grown and today, it has assumed a larger and more vital role in the business.

One of Procurement's main goals is to connect both internal and external customer needs with the best supplier solutions possible. Supported by SONGWON's over 50 years of industry experience, our experts apply in-depth knowledge of the markets and procurement best practices. Closely collaborating with our businesses and suppliers, they achieve the best value by balancing the quality of supply, price and effective risk management (Total Cost of Ownership).

Safeguarding sustainable supply

At SONGWON, the management's goal is to ensure responsible conduct along the supply chain based on long-term business relationships. To this end, corporate responsibility has been systematically integrated into procurement. This means that when choosing new suppliers or continuing our relationships with existing ones, we do not simply select our suppliers solely on the basis of economic indicators. SONGWON requires good sustainability performance.

By acting responsibly in collaboration with our suppliers, we aim to minimize risks and create stable, long-term business relationships with our partners. For us, this is an important strategic lever for safeguarding both SONGWON's global competitiveness and the supply of materials and services. We have always worked closely with our suppliers and engaged in a dialog with them on ways for maintaining our standards or achieving improvements relating to quality, health and safety, environmental protection, work environment, anti-corruption measures, etc. In this way, SONGWON's expectations are clearly and transparently communicated, as well as the value we place on the presence of integrity in all of our business dealings.



As a rule, Procurement performs an audit on key suppliers every 2 years and strategic suppliers every 1-2 years. This approach continued to benefit both our organization and our suppliers in 2018. For example, throughout the year, the central and regional governments in China continued to be very strict in their enforcement of the new EP (environmental production) regulation. Due partly to collaboration with SONGWON, all of our Chinese raw material suppliers were very well prepared for this situation and we remained unaffected by any supply issues in China. In addition, the team also continued to perform its quarterly supplier checks to ensure that all of our suppliers in China were in full compliance of the local EHS standards and EP rules.

“In line with the management’s overall aims for the organization, the Procurement team has become a strategic partner to the business and plays a key role in helping SONGWON to continue achieving sustainable growth amid today’s volatile environment.”

Deughee (DH) Gi,
Director of Procurement, South Korea



Improving reliability

In 2018, Procurement met its key target of reliably and cost-effectively supplying the quantity of raw materials needed by production and on time as per the SOIP plan. In this way, the team contributed to guaranteeing the sustainable supply of finished products to our customers.

Furthermore, the ICFR (Internal Control over Financial Reporting) was introduced to Procurement in 2018 to ensure the utmost effectiveness and efficiency of operations, financial reporting reliability and compliance with applicable laws and regulations under COSO (Committee on Sponsoring Organizations) framework.

The team's responsibilities were also extended to improve the Procurement's overall effectiveness. Over the past few years, the team's efforts were directed at sourcing raw materials and packaging and this year, they expanded their focus to optimize Procurement's processes and the supplier evaluation and performance appraisal. Investments in education and training also continued and new expertise was added with experience in procurement and global sourcing.

Managing risks effectively

We work with multiple suppliers and engage new suppliers each year across SONGWON's supply chain all over the world. For this reason, identifying areas with potential risk is crucial to our operations and this is why we work hard to ensure that our supplier evaluations and assessments give us a clear view of where potential issues exist or standards could be compromised.

In 2018, Procurement defined the supplier level (1~4) based on complexity, dependency and annual spend for supplier evaluation. Starting in 2019, Procurement's new TFT (Task Force Team) will regularly do supplier site audits of SONGWON's key and strategic suppliers and conduct the RFI (Request for Information) from many non-key and non-strategic suppliers.

This approach enables us to reduce any potential risks, influence change and explore opportunities together with our suppliers for improving quality, delivery and EHS. By contributing significantly to SONGWON's strong performance, sustainability and strategic development, Procurement creates value for the entire Group, as well as strengthens our ability to grow as our customers grow.

Supply Chain

Securing reliable & responsible supply

As a globally operating organization, maintaining a strong supply chain is essential to growth, and to meeting the increasingly dynamic needs of our customers. At SONGWON, we understand that the reliable supply and on-time delivery of high-quality, added value solutions is crucial to both our customers' operations and ultimately to securing their success in the market. This aspect drives all of SONGWON's business activities and particularly our supply chain.

By setting set up an efficient and highly effective supply chain organization that can meet our customers' requirements, we have made sure that SONGWON's products are close to our customers and available when, and where they are needed. With state-of-the-art IT systems, careful planning and optimized processes, SONGWON has created an integrated supply chain which spans sales forecasting, raw material purchases, production planning, and finished product distribution.

Sustainable sourcing

Over the years, customers have come to know that they can rely on SONGWON to deliver quality and value. Today, they also look to us to support their sustainability goals, and they trust us to ensure that the products they purchase from SONGWON are sourced sustainably and ethically.

It has always been our aim to satisfy SONGWON's customers' demands while addressing stakeholder concerns and expectations, and fulfilling our compliance responsibilities. In line with this, SONGWON's management ensures that our supply chain team is equipped with the means to source SONGWON's products with integrity. Furthermore, to ensure that the people who grow, manufacture, service and provide them are treated fairly and the environment is respected. SONGWON's leadership sees this as not just the right way to do things, but the only way. It is clear that this is what our customers expect from SONGWON and ultimately; it also makes good business sense.

To this end, actively managing our supply chain, is not only important to us, it is something we take very seriously. In relation to this, we strive to constantly maintain a KPI driven, responsible supply chain. By incorporating social, ethical and environmental considerations into our sourcing decisions, we seek to support sustainability for SONGWON, for our customers, the local communities in which we operate and for the benefit of our planet.

Mastering today's challenges

The global environment continued to remain competitive and volatile in 2018. For this reason, it was more essential than ever for us to maintain our ability to react and adapt quickly to ever-changing customer demands and circumstances. This represents one of the biggest challenges for SONGWON's dedicated international supply & logistics (ISL) team.

A highly-experienced group of experts, the ISL team understands the complexities of end-to-end supply chains. By ensuring that SONGWON can deliver a robust, effective supply chain process that offers stability, predictability, as well as excellence in quality, timing, cost and delivery to our broad industry customer base, ISL maximizes value for SONGWON and for customers.

ISL makes a significant contribution to the entire company through combining an integrated and collaborative approach to business planning with solid supply chain best practices. One of the key contributors to their success is the ISL team's experience and competence in logistics and warehouse management. Leveraging these, they create a strong basis for SONGWON's sustained competitive differentiation, and achieve long-term advantages for us in the market. Furthermore, ISL exchanges ideas and information with almost all of SONGWON's entities and business units which supports their ability to react in a timely and appropriate manner.

For example, in 2018, an important new lubricants customer requested that SONGWON develop an innovative logistics solution in order to facilitate the creation of a new worldwide cooperation. ISL played an important role in successfully fulfilling the request and helped SONGWON's lubricants business to open up a new horizon of business.

In 2018, ISL:

- completed integration of both inbound/outbound and domestic/international logistics.
 - transformed off-line logistic procedures into on-line and real-time practices.
 - enhanced logistic integration to achieve more accurate and prompt communication and execution.
 - achieved a qualitative leap by pursuing Perfect Order Delivery and increased monitoring.
 - made further developments to its system and processes with new technology and updates.
 - added new, fresh talent to the team and increased their overall skills.
 - initiated plans to pursue rationalization of cost structures and the entire supply chain.
 - leveraged the geographic advantage of SONGWON's close proximity to Busan Port in Korea – the 5th largest container port in the world.
-

Building transparency & avoiding risks

Over the past several years, SONGWON has grown and thus the complexity for ISL has also progressively increased. Today, ISL is managing a much broader customer base, range of products and services, and the addition of more countries and regions has widened their scope of responsibility.

For us at SONGWON, upgrading our own technology and streamlining supply chain processes is essential to guaranteeing that we are able to keep up with all the latest developments. As a global player, our supply chain now spans many legal jurisdictions, industries, markets and cultures and this is why ensuring the utmost transparency has become vital to risk management.

Having the ability to access, learn and act upon the information gained from visibility into the extended supply chain, positions ISL to more effectively manage potential risks for SONGWON. Furthermore, it is not only SONGWON that requires the most transparency. Our customers are also demanding higher levels of transparency and reporting within their own supply chains. ISL places great importance on supporting them achieve this and focuses its efforts accordingly.

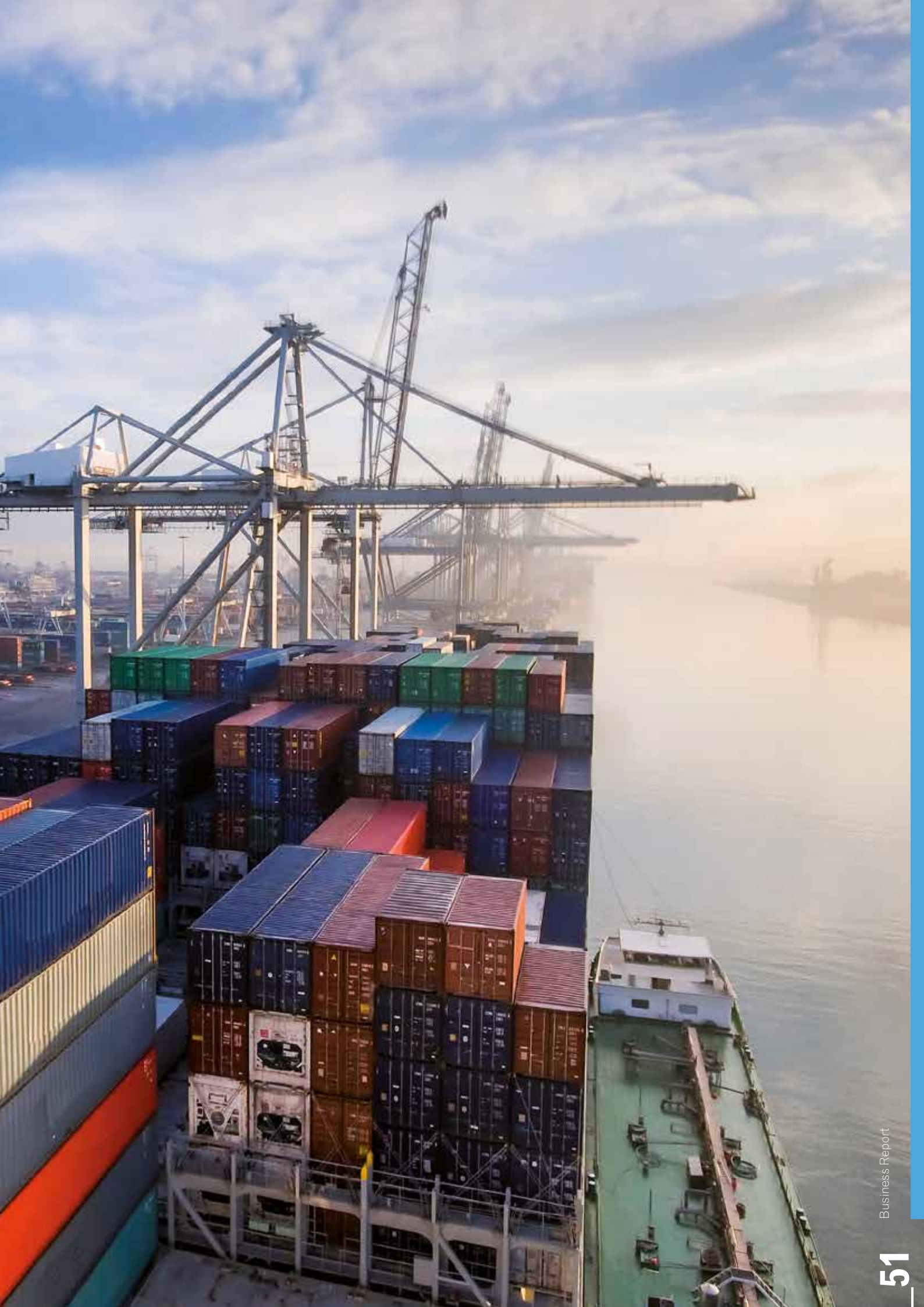
SONGWON's ability to reliably supply materials is a key contributor to customers' overall success, just as our global suppliers' ability to deliver what we require, is also directly connected to SONGWON's success. For this reason, ISL makes it a priority to build relationships with supply partners based on the principles of social responsibility.

We expect all of SONGWON's supply partners to abide by the same level of social, ethical and environmental performance, and the highest safety standards as we do. To make sure that this is the case, ISL makes a point of ensuring that SONGWON's suppliers are all aware of our sustainability targets and share our principles for encouraging the establishment of sustainable standards for business. For us it is very clear that only suppliers who can meet our high expectations can be a part of our supply chain network.

Once again in 2018, through productive internal and external collaboration, ISL focused on understanding and gaining a clear picture of the dynamics of the market. In this way, they minimized risk and secured the best advantages for SONGWON, in terms of strong, reliable suppliers, productive collaboration and the development of key sustainability positions relating to SONGWON's overall ecological footprint and that of our customers.

ISL ENABLES SONGWON TO:

- ensure that materials are efficiently supplied to every country and port in the world.
- adapt global logistic capacities to directly match order trends.
- develop better solutions through close-knit teamwork and effective communication with internal stakeholders, suppliers and logistic agents.
- respond swiftly and professionally to new policies, updates, regulations and structures.



Global Application Community (GAC)

Collaborative innovation

SONGWON's strong competitive advantage stems from our long history of technical innovation and collaborative customer-centered approach. Each of our state-of-the-art solutions was developed to meet industry demands and combines SONGWON's rich tradition of additives expertise with market insight.

At SONGWON, innovation has always been high on our agenda and SONGWON's management focuses on fostering a culture where entrepreneurship and innovation can thrive. By encouraging knowledge-sharing and providing the right tools and working environment, the management makes it possible for SONGWON to adapt to changing markets, respond swiftly to customers' requests and bring high quality sustainable solutions to the market.

SONGWON's GAC plays a central role in realizing the company's overall innovation strategy. Leveraging its extensive development expertise and decades of industry experience, GAC unites SONGWON's technical application know-how with customers' demands.

Working closely with customers, SONGWON's Sales teams and Technical Service collect valuable information for GAC on the latest market demands and the current industry challenges customers face. Using the information, GAC's experts develop new platform concepts to match the identified needs. After establishing suitable platform technology, the GAC proceeds to commercialize individual products.

In 2018, GAC:

- filed two PCT (world patent applications) for BU Polymer Stabilizers
 - completed the construction and startup of an application lab for BU Fuel & Lubricant Additives
 - planned the application lab for BU Coatings Additives and began construction
-

The GAC is a network comprising of SONGWON experts and more than 40 external laboratories, academic institutions and consultants.

Increasing competence

Adding to GAC's value and expanding its capability, a new lab technician and a project leader joined the team in 2018. GAC also benefitted from the fresh perspectives of 3 chemistry students who were invited to spend 3 months each working with the team. Furthermore, the addition of the new application lab for BU Fuel & Lubricant Additives this year and construction of a BU Coatings Additives lab, also well underway, will further GAC's innovation scope going forward.

In 2018, emphasis was placed on building the synergies within SONGWON to ensure that GAC continued to capture and follow-up the most valuable innovation opportunities. In line with this, GAC experts took part in trainings designed to further increase the team's overall competence, as well as strengthen the ties between members of the team. Improvements to BU Polymer Stabilizers' formal Stage and Gate process were successfully implemented and plans and new directions for the coming year were established.

Sustainable innovation

At SONGWON, innovation and sustainability go hand-in-hand. Today's customers seek customized, high-quality solutions that offer better performance but most importantly, they want products that support them to meet their own sustainability goals. GAC helps to ensure that all innovation at SONGWON is purposefully planned and carefully executed with sustainability in mind. In 2018, in line with SONGWON's ongoing efforts to reduce and avoid negative impacts on the environment, GAC began preparations for launching a general project focusing on plastics recycling and worked on a more specific project relating to the beneficial role that polymer stabilizers and polymer additives can play in recycling.






Technical Service

In-depth solution expertise

Our Technical Service experts are committed to developing close working relationships with customers so that they can provide better overall solutions and services. They are important facilitators between Business Management, Manufacturing, R&D, GAC, Sales and SONGWON's customers. Technical Service ensures that customers choose the most ideal SONGWON product for their area of application and apply their technical expertise to enable customers to unlock the most value from the products long after purchase.

SONGWON's goal is to build and create lasting relationships with customers. To achieve this, senior management ensures that SONGWON is positioned to maintain an outward focus on the market while providing high quality products and services that satisfy the needs of our customers and fulfill our sustainability aims. The management also makes it a priority to ensure that Technical Service has the expertise and resources it needs to help SONGWON's customers achieve a premium level of performance that returns the highest value.

SONGWON HAS 8 DEDICATED SUPPORT CENTERS WORLDWIDE

-  China, Qingdao
-  Germany, Greiz
-  India, Panoli
-  Japan, Tokyo
-  UAE, Dubai
-  Korea, Ulsan & Suwon
-  Switzerland, Frauenfeld
-  USA, Houston

Doing more for customers

Technical Service's value lies in doing more than just answering technical questions. Assuming the role of business developers, our Technical Service experts generate ideas, drive project efficiency and provide guidance for optimizing processes. In 2018, the team applied its know-how to supporting recycling customers in Europe with technical advice and project guidance which enabled them to gain the approvals of their own end customers. It also increased its focus on the automotive and electrical & electronic (E&E) sector.

Again this year, highly knowledgeable talent was added to the team, new strategies and aims were established and areas of improvement identified to make sure that Technical Service can continue to deliver support excellence. Furthermore, the addition of a new Technical Service expert in the USA and the establishment of a new lab for Fuel & Lubricant Additives in Korea widened the scope of Technical Service's activities and expertise. The team increased its level of technical know-how through various trainings and built on the synergies between all the teams working together in the Technical Innovation Center and across the business.

On-hand expertise

Strategically located throughout the world, our experts are well-positioned to engage with industry players and gather information about the latest trends in the market as well as the most current challenges facing our customers. At the same time, our customers benefit from receiving competent technical support wherever they are, whenever they need it. To facilitate this and proactively enhance engagement between SONGWON's experts and customers, "Ask the Expert" and our new interactive Product Finder were also created on the website. Both tools enable customers to reach the most suitable expert, find the products they seek and receive the information they need quickly.

Research & Development (R&D)

Shaping tomorrow with innovation today

Excellence in R&D is fundamental to maintaining SONGWON's leadership position in the industry and is the driving force behind our ability to offer such a broad portfolio of innovative solutions. It has always been SONGWON's aim to create value with products that are tailored to effectively meeting both the current and future needs of our customers and their markets.

Our R&D team's commitment and solution-oriented approach have helped SONGWON become a partner of choice for our customers. Throughout 2018, R&D continued its endeavors to expand SONGWON's offering by providing comprehensive expertise across the business and supporting the sustainable growth of the organization.

In 2018, R&D brought 9 products from lab process development to production. When successfully implemented, this business will drive SONGWON's competitiveness and create sustainable growth. Other new specialty chemical product developments and concepts are also well underway.

Strategic support

During the year, R&D focused on improving quality and profitability by developing more efficient processes while keeping the important aspects of environment and sustainability in mind. To drive business success, R&D implemented further processes which improved SONGWON's agility in complying to customer requests

but also accelerated product development time and prioritization.

The R&D team's close collaboration with the business functions provides our researchers with a clear picture of the market situation, the diverse requirements of our broad customer base and the wide range of industries we serve. This valuable communication with business and operations is a driver of continuous growth and key to SONGWON's development of superior products and innovative processes and technologies.

Knowing how vital it is to constantly adapt to the evolving needs of customers, investing in R&D is a top priority for SONGWON's management. It ensures that R&D has the necessary resources and conditions to continue providing essential strategic support, innovation and technology across the organization.

SONGWON's Technology Innovation Center in Maeam, Korea, which houses R&D, Global Application Community and Technical Service, was opened in 2017. During 2018, it has translated the needs of the market into innovative product solutions quickly and efficiently. With its investment in this state-of-the-art facility, SONGWON's management has increased the organization's ability to leverage the synergies between the various groups, consolidate SONGWON's technologies, and support the complete development of new products from the design phase to final customer applications. Improvements to the center are ongoing. This year, specific equipment and technology was installed to optimize the research environment for the teams and build up SONGWON's technology capability to achieve even better high quality technical results. The installation of analysis and measuring instruments

“Beyond just providing better solutions that match our customers’ needs, R&D is leading trends. By establishing a systematic business system and securing development agility, R&D will be the driving force behind SONGWON’s future success. Continuing their learning journeys, our R&D experts will lead and cultivate SONGWON’s culture of innovation.”

Dongkyung Park, Leader Research & Development



PATENTS

filed 3 patent applications

maintained 11 patents

enhanced R&D's expertise and enables us to work collaboratively with external research institutes.

Reinforcing R&D value

Throughout 2018, the R&D organization continued to expand its researchers' expertise and increase overall performance. By setting up a training curriculum and identifying suitable goals, R&D reinforced its core value and accelerated each employee's ability and talent. It also secured the development of best quality products by aligning its core value with Quality Assurance.

R&D & Sustainability

Committed to growing in a responsible way, R&D's technology methods and processes are designed to enable SONGWON to offer more efficient, high performing, sustainable products that create value for our customers and society. In line with this, and SONGWON's sustainability strategy overall, process improvement plays an intrinsic role in R&D's continuous efforts to lower manufacturing costs, reduce environmental impacts and prolong the life of end products.

Within SONGWON, R&D supports the business units through project management, improved processes and optimization that results in the development of new technologies and more innovative solutions. Outside SONGWON, R&D closely engages with customers and helps them to meet emerging market demands and performance requirements by providing the best product solutions possible.

Safety is an R&D priority. In 2018, risk assessment from the lab to final production was intensified, and a safety manager was assigned to monitor processes. This has contributed to a safer working environment and minimized risks. Safety trainings also regularly take place to keep the importance of safety at the forefront of all R&D's activities.

R&D ensures that it abides by all the relevant laws and regulations worldwide. In close collaboration with customers, R&D also develops products that fully comply with the latest standards and regulations in the countries or regions in which their products will be sold.

IN 2018, 10 NEW PRODUCTS WERE RELEASED

5 Functional monomers: BP-TMC(G), ERM-6095, ERM6140, ERM 6100, ERM 6105.

1 Triazine type UV absorber: SONGSORB® CS 400

1 Aminic antioxidant for plastics: SONGNOX® 5057

1 Aminic additive for lubricants: SONGNOX® L570

1 Phenolic antioxidant for polymer applications: SONGNOX® 1330

1 Photo acid generator: NIT

Manufacturing

Committed to high performance

As SONGWON moves forward, its strong outlook for growth is supported by the organization's commitment to first-rate performance and manufacturing excellence. Since SONGWON's foundation in 1965, manufacturing excellence has always been central to our operations together with our dedication to continuous improvement in sustainable manufacturing practices.

SONGWON's management encourages and lends its full support to creating an ongoing improvement culture that enhances the efficiency and long-term profitability of our manufacturing operations. By investing in, and implementing initiatives and technologies to reinforce optimization wherever possible, the management's approach places SONGWON in a position for manufacturing both efficiently and responsibly, while driving the highest levels of economic and environmental performance. In addition, by ensuring operational excellence is achievable, they help to reduce complexity; maximize transparency; shorten lead times, optimize the cost of operations and enhance SONGWON's ability to meet both the product and sustainability needs of our customers.

Every year, global industry requirements are becoming more demanding and our customers rely on us to deliver the SONGWON manufacturing quality they expect combined with the highest service standards. Now more than ever, sustaining SONGWON's excellence in manufacturing is essential for us to fulfill our aim of becoming and remaining the supplier of choice for our customers.

SONGWON has
9 world-class
manufacturing
facilities:



SOUTH KOREA



CHINA



GERMANY
UAE
USA
INDIA

SONGWON's manufacturing strategy is focused on:

- offering customers supply assurance
 - supplying the highest product quality according to customers' needs
 - achieving operational excellence through continuous improvement and efficiency
 - optimally utilizing and leveraging SONGWON's manufacturing know-how and assets to produce economies of scale
 - seeking sustainable solutions and ways to become more environmentally responsible
 - ensuring we maintain a clean and safe manufacturing environment
 - implementing automated systems to manage growing volumes more efficiently
-

Dedicated to sustainable production

SONGWON aims to constantly exceed environmental, health and safety standards and continually optimize operations. Implementing world-class manufacturing techniques and highly sustainable processes is how we achieve this. Also, to maximize SONGWON's profitability, we apply measures for reducing our utilities' consumption wherever possible but also focus our efforts on cost reduction by improving our chemical yields.

Close contact with customers is essential for us to identify trends both in the market and in demand. All our efforts are directed towards ensuring that SONGWON's high-performance solutions are always available when and where our customers need them. Investing in leading-edge technologies also enables us to manufacture superior, high quality products our customers specifically need in the most environmentally responsible way.

In 2018, we began operating two new types of drying equipment to reduce water content from waste disposal materials and successfully achieved a materials weight reduction of approx. 60% compared to the year before. In addition, to generate less waste disposal materials, we started work on the process of a key intermediate with a new, more efficient one.

One of Manufacturing's most significant achievements in 2018 was the successful separation of chemical manufacturing from physical form manufacturing (OPS). As the management systems of both are completely different from one another, by separating them, the production teams can now better focus their attention on the specific direction for each.

During the year, Manufacturing sought further ways of effectively apply more sustainable manufacturing practices. For example, the production team in Ulsan, South Korea, considered the possibilities for consolidating the production of Niche A/O products at the Ulsan site.

Plans are now underway and when consolidation is completed, it will lead to a solvent usage reduction and due to the more automated production schedule, it will also reduce cleaning, as well as improve overall quality while lowering production costs. The manufacturing team was also able to start taking steps toward achieving the full automation system of one of our key production lines in SONGWON's Maeam plant in South Korea.

Manufacturing matched to demand

To secure our technological competitiveness in the growth markets we serve, our investment in upgrades to our facilities supports our ability to increase capacity in line with our customers' demand and delivery requirements. Providing global capacity assurance and operational flexibility are key elements to SONGWON's success. Furthermore, our ever-increasing production capacity highlights SONGWON's ongoing commitment to supporting our broad customer base and creating value for them from our position at the forefront of the latest developments in manufacturing.

SONGWON operates 9 state-of-the-art manufacturing facilities worldwide which offer the same standard of leading-edge technology. Strategically placed across the globe, they ensure that we can offer reliable supply at the same levels of quality to our customers anywhere in the world. Our production process expertise, proprietary technology and backward integration are core strengths that provide us with a solid foundation for continued success and they support SONGWON's growth ambitions.

To continue our ongoing strategy to reliably supply SONGWON products to our diverse range of customers, Panoli is now fully equipped to produce

a wide range of chemicals for a broad spectrum of applications. This year, SONGWON began its production of SONGNOX® 5650 and this additional production capacity has subsequently made it possible for the organization to ensure the steady and reliable supply of SONGNOX® 5650 worldwide. Furthermore, we increased our offering to customers with the production in Korea of our SONGWON's new stabilizers SONGNOX® 1330, SONGNOX® 5057 and SONGNOX® L570 and our latest UV absorber, SONGSORB® CS 400.

At SONGWON's facility in Abu Dhabi, the plant has undergone a lot of development since its startup 2 years ago. As the production team has become more experienced, the facility is now able to produce more challenging OPS grades which are more difficult to manufacture. The result has been increased outputs that have, in some cases, nearly doubled, while SONGWON's high levels of safety and quality have still been maintained.

Securing the highest levels of safety

At SONGWON, safety is the first priority at all of our operations. Manufacturing the high performance products, while making sure that world-class operating standards, as well as our social and environmental responsibilities are met, is only possible when EH&S is at the center of everything we do.

For us, the first order of business every day is to focus on improving our safety performance and eliminating risks. We aim to ensure that all of our employees, or any contractors or visitors who spend time at our manufacturing sites stay safe, and we implement every precaution to ensure accidents are avoided. Anyone entering one of SONGWON's sites must comply with the same stringent EH&S guidelines we have in place for our employees.

Above all, manufacturing excellence, which secures the highest safety standards, lies in the hands of our dedicated team of people. We seek to hire the best and we are committed to further developing their competence. In 2018, we expanded the production team's expertise by adding new talent. We also implemented a new training program to improve our foremen's skills in leadership and management. To support maintaining our high level of safety, a risk management leader was also appointed in 2018, to conduct and audit each of SONGWON's sites. The audit findings will help us measure real improvements and identify where we can still achieve more.



Quality Assurance (QA)

A way of life

At SONGWON, quality is more than just certification or controls. For us, it means meeting the demands, expectations, and wishes of our customers, and surpassing them whenever possible.

By establishing the necessary environment and supporting synergy throughout the organization, SONGWON's management supports the drive to continually improve our products, services and processes.

Furthermore, the management makes it clear that quality isn't just something for our QA experts, but that it depends on the performance and dedication of each individual working for SONGWON. In this way, they ensure that quality is a "way of life" for every member of SONGWON's global team and at the forefront of everything we do.

Getting things right

SONGWON's main quality target is to do as much as we can to reduce the number of customer complaints we receive overall. In 2018, to contribute to achieving this target, QA focused on reducing the duration involved in processing the customer complaints SONGWON does receive. During the year, the QA team carried out various actions and initiatives to increase the overall speed of handling complaints from their registration to when investigation was completed, approved and ready for communication with customer.

By directly supporting the relevant departments with their tasks throughout this process, the team successfully achieved a 50% reduction in the process' duration to the point where they could inform the customer of the findings, root cause of the problem and the effective actionable solutions SONGWON had implemented to prevent an issue reoccurring. QA's complaint task force team also collects all internal, supplier and customer complaints and seeks ways of eradicating the root causes and resolving them as quickly as possible.

Maintaining the highest quality

We place the utmost importance on quality in all aspects of our business, from suppliers and product selection, through our supply chain, choice of logistics providers, packaging and labeling, to customer service and after sales customer care. Monitoring quality at SONGWON helps us to maintain, improve and develop our business.

This year, the QA team established new processes and well-established methods for quality management in product development. Implemented across the entire Group, it supports the Business Units successfully launch new products to the market. New leadership was introduced at the beginning of the year to the Global QA/QMS organization and this has already made an impact on QA's results and positively influenced its further initiatives. In addition, all SONGWON's QA processes are documented and evaluated through regular internal and external audits.

“It's the outstanding QA team spirit that helps us to achieve our targets and ensures that our quality standards meet all the requirements. We continually seek new and better ways to do things and improve our processes to ensure we can provide our customers with high-quality solutions that meet both their quality expectations and all the mandatory government standards and regulations.”

Doug Excell, Leader QA, Regulatory & Best Practices

In 2018, we reduced number of complaints by 4%

Our commitment to quality assurance also extends to our business partners. By performing a supplier audit for the business, we confirmed that our quality requirements are understood and executed according to the agreed standards. We also ensure that our suppliers can deliver to the agreed requirements SONGWON sets.

Furthermore, to ensure that SONGWON's rigorous quality assurance requirements are met, building a collaborative relationship with suppliers is as vital as the assessments and quality audits we carry out. We partner with our suppliers to reduce quality risks and improve their own quality levels. SONGWON also requests that all our suppliers practice legal compliance and promote social responsibility toward such issues as the environment, human rights, and occupational safety. SONGWON supports customer audits as well. These provide the QA team with a good opportunity to exchange and share quality aspects with various customers and allows us to gain a better understanding of their expectations.

Strengthening the team

We are proud of our strong reputation for providing the highest levels of quality assurance to our customers. Sustaining these levels is only possible with a diverse team of highly competent professionals. In our QA department, we have a motivated and well-trained team dedicated to carrying out their daily tasks with optimal efficiency and a readiness to take advantage of new opportunities for improvement.

To extend the level of support across the organization, new skills with more operational and commercial background were added to the QA organization in 2018, and management resources were also increased. Having QA well-embedded in the organization has led to better networking and improved communication between sites, plants and other departments.

Looking to the future, we aim to bring more efficiency into our QA data management and align it between the different sources and end users. To make this possible, SONGWON has plans to make further organizational changes to further optimize connectivity between the sites and our manufacturing facilities.

In 2018, SONGWON's Quality Management System (QMS) was upgraded to:

- ISO 9001:2015
- ISO 14001:2015 (in the Ulsan, Maeam and Panoli plants)

This upgrade:

- establishes a risk-based thinking approach for SONGWON's business processes
 - enables advanced identification of risks to our processes
 - makes it possible to take appropriate risk mitigation actions
 - ensures continual improvement in our quality standards
-

SONGWON's memberships

- 1** KSCIA
Korea Specialty Chemical Industry Association
www.kscia.or.kr
- 2** KITA
Korea International Trade Association
www.kita.net
- 3** KISA
Korea Industrial Safety Association
www.safety.or.kr
- 4** KFSI
Korea Fire Safety Institute
www.kfsi.or.kr
- 5** KCMA
Korea Chemicals Management Association
www.kcma.or.kr
- 6** KEEA
Korean Electric Engineers Association
www.keea.or.kr
- 7** KOEEA
Korea Energy Engineers Association
www.koeea.or.kr
- 8** KLCA
Korea Listed Companies Association
www.klca.or.kr
- 9** KMA
Korea Management Association
www.kma.or.kr
- 10** ELISANA
European Light Stabilisers and Anti-Oxydants
<http://www.cefic.org>
- 11** LiSAO – REACH Consortium
Light Stabilisers and Antioxidants
www.reachcentrum.eu
- 12** OrganoTin REACH Consortium
www.reachcentrum.eu
- 13** EPCA
European Petrochemical Association
www.epca.eu
- 14** GPCA
Gulf Petrochemicals and Chemicals Association
www.gpca.org.ae
- 15** AFPM
American Fuel and Petrochemical Manufacturers
www.afpm.org
- 16** JHPA
Japan Hygienic PVC Association
www.jhpa.jp
- 17** JHOSPA
Japan Hygienic Olefin and Styrene Plastics Association
www.jhospa.gr.jp
- 18** CEFIC
The European Chemical Industry Council
www.cefic.org
- 19** FCA
CEFIC Food Contact Additives Group
<http://fca.cefic.org/>
- 20** CEPAD
The European Alkylphenols and Derivatives Association
<http://cepad.cefic.org/>



168

EMPLOYEES HAVE
BEEN WORKING
AT SONGWON
FOR MORE THAN
20 YEARS

Our People

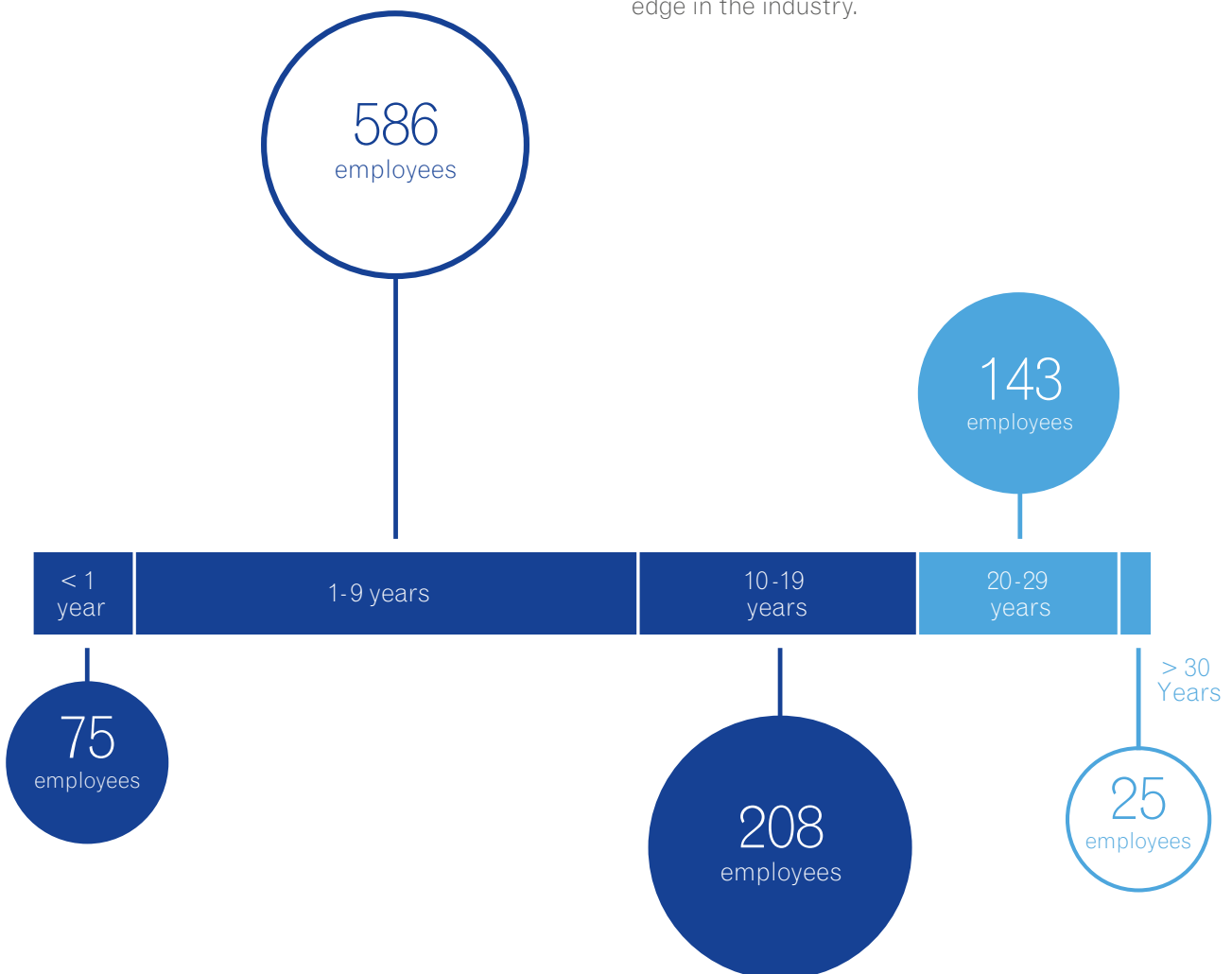
A committed global team

SONGWON's people define our success. With their excellence, entrepreneurship and exceptional teamwork, they are the drivers of SONGWON's leading industry position, sustainable operations and our long-term customer loyalty. Every individual working at SONGWON is passionate about what they do and committed to delivering their very best every day.

Apart from truly living SONGWON's core values, our employees are devoted to working together across the business to meet and exceed our customers' expectations. It is this level of sharing ideas and expertise worldwide that make it possible for SONGWON to achieve and sustain profitable growth. Although our people work across a number of sites and countries, they all share the same common goal: to create value that makes the world a little more sustainable every day.

Our global team is strongly multi-cultural and over the past several years, it has continued to grow. We now have a total of 1,037 committed employees on board and we are proud to have 29 different nationalities working for us. Their diverse perspectives are invaluable to helping SONGWON succeed in our highly competitive international environment, and they play an essential role in helping us to achieve the goals we set for the business.

A constructive mix of long-standing employees with years of experience and young, innovative new talents is what makes the atmosphere at SONGWON both unique and family-like. And whether they are new to the organization or long-serving members, each person is focused on playing their part and contributing to one united team. The combination of SONGWON's global reach, personalized approach, experience and local knowledge is what helps us to sustain our competitive edge in the industry.



Expanding competence levels

The complexity of today's business environment, combined with the challenges of our strategic plan, makes it essential for us to continue investing in development and learning. Committed to improving both our workforce's professional skills and the quality and accountability of our leaders, HR has worked to distinguish various development initiatives. They have also maintained a consistent approach to evaluating employee performance, potential and personal goals and apply the same consistent approach to succession planning.

SONGWON's management, together with HR, focus on driving high performance by developing the next generation of SONGWON leaders, valuing our employees' diversity; encouraging and rewarding entrepreneurial behavior and fostering an engaging, proactive culture where individuals and teams can deliver better business outcomes and achieve greater success. SONGWON's Core Values and Code of Conduct issued by the management also serves to emphasize the high level of importance SONGWON places on issues such as equality; diversity; corporate social responsibility and sustainability. Also fundamental to SONGWON's senior leadership is ensuring that all company activities are sustainable while providing a safe place to work, protecting employees' well-being and listening to their views and ideas.

In tune with this, HR aims to provide our people with the chance to continually learn and share knowledge and use their experience to make valuable contributions to SONGWON's overall growth. Creating a family-like, supportive environment founded on personal commitment and responsibility, as well as encouraging professional growth and helping people develop their full potential is our key to attracting, engaging and retaining the most experienced and diverse talent in the industry.

Fully understanding that personal development is an integral part of employee satisfaction, and of feeling personally successful, we have embedded it into our corporate culture. It is also an important part of our performance review system (PRS). Making it possible for our employees to take pride in what they do and by establishing the environment and conditions for them to contribute to fulfilling SONGWON's strategic aims, we can build a path to further success.

With our valuable PRS system in place we ensure that our people are fully aligned to realize SONGWON's strategy, targets and growth ambitions. Aligning the work to be done with SONGWON's organizational goals, and then assessing performance against a clear set of leadership expectations, targets and measures

HR's key areas of focus in 2018

- Enhancing the international mind-set and can-do attitudes within the SONGWON Group
 - Effectively using and leveraging of multi-national expertise worldwide within SONGWON (e.g. international assignments, exchange programs etc.)
 - Providing global assignment opportunities to strengthen cultural ties and understanding within the company and increase overall learning
 - Recruiting, developing and retaining highly talented people with functional expertise
 - Onboarding new experts
 - Embedding integrated succession planning for SONGWON's key leaders
 - Supporting SONGWON's management and business leaders to ensure long-term business continuity
 - Digitalizing HR workflows in the Swiss offices (global rollout planned for 2019)
 - Working with a strategic framework for SONGWON's future goals
 - Identifying essential positions for sustaining operations and advancing SONGWON's growth
 - Using the information from our effective performance assessments to add to our internal talent pool
 - Coaching business leaders in people management and providing internal and external trainings for dedicated teams
-

“The exchange program was a very good opportunity for me to improve my language skills and highly valuable for me to gain a direct, personal understanding of a different country and culture, as well as how others work. For SONGWON to become a truly, global and sustainably conscious company, I sincerely believe that it is very important for employees to have a chance to strengthen their own international mindset through such an experience.”

SangJe Lee, Deputy Manager /
General Affairs Division, Korea

is how we motivate and develop our global team or highly-talented individuals. Our HR philosophy is built around acknowledging the essential role each individual plays within our organization, and the ways they add value to everything SONGWON does. Most importantly, we make sure that whatever their function, our employees feel valued themselves.

SONGWON's PRS process provides both context and purpose for each employee's area of work, by enabling them to clearly understand the scope of their contribution to SONGWON's global team. It also includes an individual development plan for employees on the responsibilities of their line manager. The overall aim of SONGWON's PRS is that the results and discussions deliver reciprocally beneficial feedback for managers and employees which is fair, accurate and motivating for both.

As our most valuable resource, we are committed to ensuring that our global team members can realize their maximum potential by creating a platform for positive synergy, idea generation and self-expression. To support this, we promote a culture of open communication and flat hierarchies. Our employees' opinions are particularly important to us at SONGWON. By engaging in regular dialogue, holding two Town Hall meetings per year and conducting employee surveys, we gain important insight into employee concerns and receive inspiring ideas on how we can keep on improving as an organization. To maintain a sense of pride throughout the company, our quarterly employee newsletter, *SONGINSIDE* provides a nice overview of what's happening across the organization and helps us to celebrate our successes.

Investing in our people

In the business world today, the ability to stay flexible, adaptive and able to meet rapidly changing demands is crucial to both success and growth. SONGWON is also growing fast and expanding into new areas of business and new markets. For this reason, maintaining a culture of continuous learning and increasing the efficiency of HR workflows, as well as harmonizing HR standards and procedures, has become more important than ever.

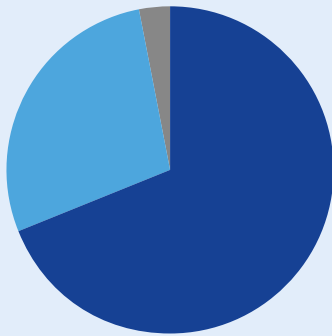
Leveraging the knowledge and creativity of our employees is how we continue improving our performance and remain relevant and competitive. At SONGWON, we empower employees to create fresh ideas that challenge conventions. Everywhere we operate, our people are inspired to develop new and efficient ways of raising the bar to meet the needs of our evolving industry and the ever-changing demands of our customers.

In 2018, HR continued its investment in continuous learning around structured, results-oriented training and development across the organization. As in previous years, as part of HR's strategy to support internationalization and the further development of SONGWON's global team spirit, employees also took part in SONGWON's international experience initiatives.

In 2018:

- International assignment – 4 employees
 - Employee Exchange Initiative – 1 employee
-

29 different nationalities at SONGWON



1037

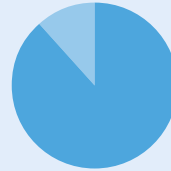
Employees in total



49

Americas

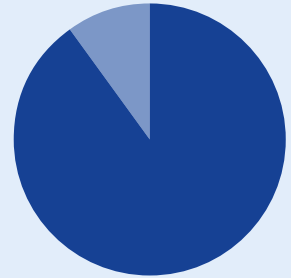
Women (13)
Men (36)



289

EMEA

Women (33)
Men (256)



699

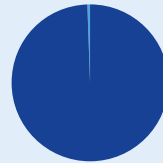
Asia

Women (69)
Men (630)

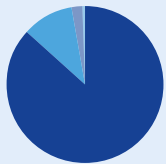
4 women took parental leave during 2018 and 2 of them have returned back to work.



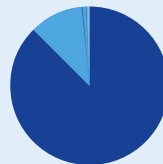
Women (115)
Men (922)



Permanent (1029)
Temporary (8)



Men, salaried (901)
Women, salaried (110)
Men, hourly (21)
Women, hourly (5)

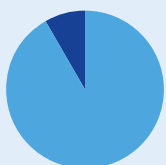


Full-time men (912)
Part-time men (3)
Temporary men (7)
Full-time women (109)
Part-time women (5)
Temporary women (1)

Executive Committee & BOD



Executive Committee men (6)
Executive Committee women (0)
BOD men (7)
BOD women (0)



30-50 years old (1)
over 50 years old (10)

Employees by gender

	Left	Hired
Total	53	96
Men	47	76
Women	6	20

Employees by age

	Left	Hired
Total	53	96
> 50 years	6	4
From 30 to 50 years	34	54
< 30 years	13	38

SONGWON's International Assignment Program

This program provides an opportunity for an employee to work alongside another SONGWON team in different country and culture for an extended period of time. It supports both cultural understanding and provides more insight into other processes and methods. Furthermore, it allows the employee a unique chance to strengthen their language and international business skills. By familiarizing themselves with different approaches, the employee builds stronger ties with global team colleagues which also benefits their local colleagues when they return to their SONGWON base location. Strengthening the communication between locations and promoting the sharing of best practices is valuable to SONGWON on many levels. Most importantly, the program helps us to cultivate a global mindset and build on our diversified culture.

SONGWON's Employee Exchange Initiative

Professional development and sharing experience are two important aspects which are embedded in SONGWON's HR strategy. Employee short-term exchange assignments enable our people to gain international experience through working at another SONGWON location and supports them to further expand their skill set. This initiative also serves to strengthen our global SONGWON team.

A range of opportunities

To support SONGWON's growth and success again, in addition to investing in and developing the talent already within SONGWON, HR continued to seek and hire exceptional people in 2018. Our HR strategy aims to attract and hire the best talent in the industry and provide them with an environment to grow and fulfill their potential. We achieve this by delivering excellent development opportunities, where people are supported by experienced, motivating managers in a global organization that cares deeply about the success of its people. It is this approach that has positioned SONGWON as an attractive employer in the industry.

For HR, seeking out the "best" means finding people with the right qualifications and experience, but also those who possess SONGWON's key values, can contribute to maintaining the rich diversity of our people and will add value to our multi-cultural environment.

Growing a global organization calls for hard work and requires more than just doing a job. To master their daily activities, the members of our global team must be multifaceted to meet the many challenges and enjoy the chance to develop positive, mutually beneficial relationships with customers in different countries around the world. As a global leader, SONGWON offers a dynamic working environment which allows our employees to expand their personal and professional horizons. As self-motivated, customer-focused and talented individuals, they have the chance to make a difference in all areas of our organization.

Across the company, we cultivate an attitude that embraces constant learning, growing and striving to do even better than yesterday. Excellent on-the-job training provides all of our people with the hands-on experience they require to advance their skills, as well as the knowledge they need to perform at the highest level possible.

We also know that no matter how exciting our employees' work is, they would find it unfulfilling without the support of our united, collaborative team. Successes at SONGWON are shared and celebrated, and we tackle our collective challenges together. Each member of our global team is linked together by a common thread: passion, a commitment to doing their best, respect for one another, dedication to fulfilling the needs of our customers and to shaping the future of SONGWON.

A comprehensive, fully compliant approach

In accordance with SONGWON's global HR policies, we always do our best to fill from within wherever possible. HR's first step to finding a qualified candidate for mid- to lower-level positions is to look locally. Only after being unable to find someone suitable locally, do we widen our search until we find the "right" person for the position.

Fully aware of the value of leveraging a local managers' inherent understanding of the culture of both their employees and customers, we apply a similar "looking local" approach for senior management roles. However, HR's top priority is always to fill a management position with the best person for the job. This person may or may not come from one of the communities where we have a local presence.

It is our priority to remain compliant with regional and local laws and regulations. SONGWON sees being a successful organization as more than just performance and achievements. For us, success means also acting in a responsible, ethical and law-abiding way. We make sure that every employee understands that they are not only personally responsible for complying with all SONGWON's principal company values and ethical principles provided in our Code of Conduct, but also with external laws, rules and regulations.

SONGWON's culture of responsibility towards each other and to all our stakeholders highlights the commitment among everyone in the organization to really living our values on a day-to-day basis. Acting honestly, fairly and in good faith with SONGWON's customers, suppliers, competitors, the public, as well as with our employees is one of our deepest commitments. We are also highly committed to providing a corporate environment which enables and encourages people of all backgrounds and beliefs to work well together with tolerance in the pursuit of excellence. An equal opportunities employer, treating all of our employees with fairness and respect is an absolute must.

At SONGWON, we seek to maintain our inclusive culture where our people feel like part of a big global family. In complete accordance with this, HR ensures that the focus of our policies and practices (such as maternity or sick leave) foster diversity, respect for human rights, offer equal opportunities and support non-discrimination. We train all of our employees, especially those who have just joined our team, to fully understand our values.

In 2018, there were no incidents to report, such as corruption that breached SONGWON's principles and we are proud that there were also no fines (of either monetary or non-monetary value) for non-compliance with laws and regulations. Employees based in some countries may, from time to time, be represented by works councils or unions or subject to collective bargaining agreements. The percentage of employees covered by such agreements is managed and monitored at a local level. SONGWON considers this percentage on a consolidated level not relevant.

How SONGWON values & supports employees at all levels



EMPOWER

Providing an environment for innovating, contributing & collaborating



SUPPORT

Inspiring innovative creativity & entrepreneurial team spirit



ENCOURAGE

Creating the "room" for expressing ideas and opinions



ENABLE

Granting the "space" for taking responsibility & decision-making



VALUE

Applauding diversity & unique perspectives



ENDORSE

Establishing an open atmosphere for honest 2-way communication & trust-building



CHALLENGE

Stimulating individual development, learning & realizing full potential



ACKNOWLEDGE

Commending efforts, hard work & achievements

Nationalities at SONGWON



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Corporate Social Responsibility (CSR)

Committed to being responsible

Being a leader in any industry today also means aiming to lead in corporate social responsibility (CSR) as well. SONGWON's goal has always been to strive to achieve meaningful economic, social and environmental value in everything we do. We have a long history of embracing CSR initiatives to help promote positive change in the wider community and of adhering to ethical business while operating our business sustainably. Our commitment to CSR has always been as equally strong as SONGWON's commitment to ethics and compliance.

SONGWON's goal is to be known as a strong, socially responsible and respected organization within our communities and across all the regions we operate in. At the heart of our approach is our commitment to growing partnerships which means working alongside local, regional and national partners to achieve mutually beneficial outcomes. We also aim to maximize the benefits to local communities, for example through employment opportunities while reducing any negative impacts whenever possible. In every respect, CSR is an integral part of how we operate and make business decisions.

At SONGWON, the management not only aligns the organization's resources but also makes business decisions and develops strategies while keeping in mind the short and long-term impact that these may have on SONGWON's stakeholders – from our employees, business partners and customers to our communities, the environment and society at large. Across the organization, SONGWON's management clearly communicates that, as a successful leading global organization, we must all ensure that our actions should always be guided by the principles of good corporate citizenship and our commitment to CSR.

In keeping with this, we have rooted CSR in our company values and are driven to achieve excellence in SONGWON's overall performance in alignment with international standards and best practices. Our main objective, which is overseen by SONGWON's CEO, is to generate sustainable prosperity through products that create value for future generations, and by conducting SONGWON's business with the highest sense of responsibility at all times.



Central to this is ensuring the health and safety of our employees and having the utmost respect for their human rights and for those of the people residing in our local communities, as well as doing as much as we can to protect the environment and preserve natural resources. Supporting the communities where we live and work to thrive is also important for the well-being of our business. Contributing to their success is what builds our success.

Our CSR strategy focuses on the people we work with and taking great care of the resources we use. With our deep commitment to responsible leadership, we continually seek opportunities to engage with direct stakeholders, as well as SONGWON's competitors, to gain an understanding of the most pressing issues facing our industry today. With a proactive approach we are able to concentrate our efforts on ensuring the most positive impacts possible – for our employees, our stakeholders, our business and for the world around us.

Doing the right things

Across SONGWON, we believe that CSR is about doing the right things and fostering a culture of responsibility that allows our outstanding people to work together across our global organization to support CSR initiatives and live our commitment to “giving back”. Over the years, our sense of CSR has taught us many valuable things. The most valuable perhaps, is that people are at the center of all of our efforts. It is their passion and commitment that drives all progress and ensures that we are able to achieve the most positive impacts. People help shape the future. They make a difference and they make things happen.

Giving something back to our local communities and addressing some of the wider issues that affect us as global citizens is deeply important to us at SONGWON. We reach beyond the positive contribution that SONGWON's products make to support various programs and initiatives around the world that focus on improving people's lives.

We have chosen to focus our support on 3 areas.

SONGWON supports:

Healthy lives

Although health is a human right, it is estimated that 400 million people around the world have no access to proper healthcare. For this reason, SONGWON supports a number of healthcare initiatives and human service efforts dedicated to helping people lead better, healthier lives.

Raising awareness

Focusing our CSR efforts on supporting projects dedicated to ensuring people's general well-being and providing information on relevant issues is also important to us. Positive change is possible on all levels and by offering support to initiatives which are not always highly profiled, we hope to play a part in making a difference to people's lives.

Local communities

Offering our support to help humanity in general has always been reflected in SONGWON's core values, and those of our employees. It is clear to everyone working in our organization that all of us have a responsibility to be active members of the communities in which we live and work. Although this obligation is a social responsibility, we see it also as a business imperative. For this reason, we are continually looking out for ways to offer SONGWON's support to local community projects.

“We believe that performance and responsibility are inseparable. For us they belong together, and this belief is a key part of SONGWON's culture. When everyone plays their part, we can achieve many positive things.”

SONGWON supported the following initiatives in 2018:

Dr. Jang Gi-ryeo Medical Clinic

Supports ill people that live in the local community in the Deungchon-Dong district of Seoul, South Korea. Volunteer doctors, nurses and members of the Blue Cross Medical Corps provide free medical to poor patients who cannot afford hospital care.

2018 Blue Cross Medical Camp in Laos

Serving the rural village of Vang Vieng in Laos, one of Southeast Asia's poorest countries, the medical camp run by the Korean Blue Cross Medical Corps, treated approx. 800 people in 2018, who would otherwise have no access to medical treatment. The Korean Blue Cross Medical Corps also launched a cardiopulmonary resuscitation (CPR) training program for children in Laos.

Korean Blue Cross Medical Corps Programs

The Corps has a service dedicated to providing free medical treatment including physiotherapy, first aid training, health awareness and hygiene trainings, CPR education, etc. for rural fishing and farming villages in South Korea.

Korean Blue Cross Club

An initiative which provides voluntary and creative educational activities to approx. 100 schools and universities, as well as encouraging students to become active volunteers. In 2018, around 2000 students were actively involved in Blue Cross activities.

Dr. Jang Surgery Camp in Cambodia

The camp is dedicated to providing essential and necessary surgery to cancer patients in 23 poor Cambodian rural villages who would otherwise have no access to medical treatment.

Fresh water project (یمہارف یک یناپ فاص) in Pakistan

An initiative to support the installation of a pump and the creation of a well to help a local community access the fresh water supply available underground. The newly built well now provides water to approx. 400 people on a daily basis.

Children's Miracle Network Hospitals

Since 1983, Children's Miracle Network (CMN) Hospitals has raised more than \$5 Billion USD for 170 children's hospitals across the United States and Canada to support research and training, purchase equipment, and pay for uncompensated care, to save and improve the lives of as many children as possible.

Al-Tareq Rehabilitation & Autism Center in UAE

The center is a nonprofit organization in UAE whose mission is to support children and individuals with autism and their families through therapeutic breakthroughs and the development of holistic approaches to education.

offered by Songwon Polysys Additives LLC in fr b ter
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Joy of gift thank Songwon Polysys
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Other charitable activities

Help for flood victims in Laos

Delivering dental hygiene supplies and household goods to the flood victims in Laos in cooperation with the Embassy of the Republic of Laos in Korea.

Promoting CPR in Seoul (South Korea)

Training on correct cardiopulmonary resuscitation (CPR) procedures was given to approx. 600 people visiting the 9th Korea Sharing Festival.

Shoes for all

There are a number of programs dedicated to providing underprivileged people with shoes. In 2018, more than 150 pairs of shoes were given to Korea's elderly people in need and children in developing countries were sent sneakers.



Corporate Responsibility



Regulatory Affairs

Committed to compliance

Regulatory Affairs is a fundamental part of our organization. To maintain the license to operate in our industry, it is crucial that SONGWON adheres to the various laws and regulations in each region. Implementing the effective management of regulatory affairs provides us with the baseline to meeting stakeholders' expectations while giving our customers confidence that SONGWON's products are fully compliant. Demonstrating strong regulatory affairs management also highlights our commitment to operating as a responsible organization.

To make product compliance and product stewardship activities as effective, sustainable and efficient as possible, they must be built into the company's core business processes. *At SONGWON, the organization has been structured to ensure that our regulatory professionals are a part of new product development from the beginning and involved in R&D's stage and gate process, the budgeting and strategic planning stages, as well as the Stock Keeping Unit (SKU) set up process. In this way, SONGWON's management ensures that the businesses are fully engaged and aware of how regulatory and stewardship issues have an impact on such things as revenue growth and profitability; product commercialization plans, etc.*

Strengthening internal & external collaboration

In 2018, we strengthened Regulatory Affairs and we linked product regulatory compliance more closely to our internal business processes. Now, for example, our Regulatory Affairs team must approve all product set ups in our ERP system (Dynamics AX) and with no approval, there can be no sales. Furthermore, to reduce unexpected expenses and make more accurate financial planning possible, the Regulatory Affairs team consults with SONGWON's business units during their budget planning and strategic planning process to make sure that adequate resources (time & money) are allocated to cover the cost of compliance in the regions where we are selling or intend to sell.

In 2018, SONGWON

- **issued 165 new SDSs**
- **updated 525 SDSs**
- **produced and updated 5400 different SDS translations**
- **created 13 new RDSs**
- **updated a total of 60 RDSs**

In addition to maintaining close relationships with our businesses and the R&D teams, Regulatory Affairs is building a network with peers in other companies. Doing this provides SONGWON with resources to help facilitate the introduction of new products as well as new raw materials to our production facilities.

Streamlining processes

During the year, the team focused its efforts on preparing for the new SDS management process which SONGWON plans to roll out in early 2019. When implemented, the new process will streamline the current process already in place for providing the SDSs on SONGWON's website for our customers and for our employees via the Global Information Portal (GIP). The time it takes to make the SDSs available through these channels will also be reduced and eliminate the need for Regulatory Affairs to frequently update them manually.

Sharing information

One of our priorities is making sure that our global customers can continue to meet their environmental, health and safety goals, secure in the knowledge that they are using products that meet regulations. Beyond this, we also see it as our responsibility to provide our customers with expert support on the complexities of compliance, registration and certification.

We want our customers to be able to proceed with their business, knowing that SONGWON's products will be 100% compliant within the required deadlines. For this reason, we aim to keep them informed and regularly provide them with updates on the substance registration processes. Anticipating future regulatory changes is another important aspect of how the Regulatory Affairs team creates value for customers and their businesses.

In 2018, as part of the effort to introduce new lube additives to additional markets, in a team effort with the business, the Regulatory Affairs team was able to register 6 lube additive products in the NSF White Book™ – where nonfood compounds and proprietary substances found compliant to food safety regulations are listed. Additionally, 4 lube additives were Kosher certified and 1 lube additive was granted Halal certification.

In 2018, SONGWON's Regulatory Affairs:

- **registered 22 new EU REACH substances – this makes a total of 56 substances registered by SONGWON to date**
- **submitted 50 new K-REACH substances – bringing SONGWON's substance submissions in the past few years to well over 100**

Providing our customers with the knowledge and information they need to use SONGWON's products in their applications safely and in accordance with relevant regulations and requirements is important to us.

In our industry, it has become general practice to provide customers with a range of important product information such as the specification (CoA), a technical data sheet (TDS) and a safety data sheet (SDS). At SONGWON, we have made it a point to provide our customers with an extra regulatory data sheet (RDS) which provides an overview of critical global product regulatory approval information.

K-REACH update

Operating as a global organization, we invest great care in the way we produce chemicals and ensure that they are used safely, so that both people and the environment are protected. For this reason, SONGWON fully supports regulations such as REACH. As an industry leader, we know that through REACH we can make a positive contribution to the future.

Throughout the year, in anticipation of the K-REACH pre-notification which will take place in 2019 (from January to June), Regulatory Affairs already identified the substances that SONGWON is required to report. We are ready with a team in place to do the actual reporting and they will track the project from its start to completion.

The K-REACH pre-notification is like the EU REACH pre-registration process. The registration grace period (June 2019 - December 2030), will allow us to acquire the raw materials we need to make and supply our products from SONGWON's operations in Ulsan, Maeam and Suwon in South Korea. SONGWON will not have any major expenses related to K-REACH in 2019, but will begin to see the cost of registration starting with high tonnage and high hazard substances beginning in 2020 and onwards.

“Every year, we are getting better and better at building compliance into the very fabric of our organization. Ongoing improvement will be emphasized going forward, and we will continue to seek new and better ways to manage and ensure compliance across all the regions.”

Bob Campbell, Director of Global Regulatory Affairs

The team also advises our businesses on the downstream uses of our products in food contact, drinking water and other highly regulated applications or uses which could present more opportunities to negatively impact the environment or directly affect humans through exposure. Regulatory Affairs' experts also provide customers with guidance on what testing or documentation is needed or appropriate for each area.

This year, the team also helped our businesses review their product literature to ensure that any claims matched the regulatory status of our products. This has been an especially important activity for our PU business as they expand their reach into the EU and North American regions.

Making sure the business fully understands what claims mean and what information is needed to back up such claims, is one of the ways Regulatory Affairs ensures that SONGWON remains compliant. Suwon is currently in the process of achieving Good Manufacturing Practice (GMP) status for its operations and Regulatory Affairs guidance has led to the facility improving their existing product literature.

Compliance-focused culture

SONGWON has a strong compliance culture. Each member of our global team takes compliance seriously and we are driven by our responsibility to ensure that all our business activities abide with global and regional standards, laws and regulations.

Our pool of knowledge facilitates the company's growth in responsible way. SONGWON's team of regulatory and product safety experts all have extensive experience in the specialty chemicals field. They are all highly trained to competently advise our businesses and customers on matters related to product safety, product compliance and environmental stewardship.

During 2018, we carried out several face-to-face trainings to raise awareness among our sales and customer service teams of the relationship between our employees' daily job responsibilities and their impact on SONGWON's product regulatory compliance program. The entire Americas sales and customer service team participated in “Regulatory Affairs 101” workshops and special job specific and general hazardous materials training was provided to Americas employees involved with the shipment of dangerous goods and hazardous materials.

In response to their requests for more in-depth information and to bring them up to speed on the latest regulatory developments impacting our products, we also carried out a training for our coatings product distributors in Europe this year in October.

SONGWON's Regulatory Affairs team also subscribes to the most relevant regulatory new services (e.g. ChemicalWatch) and receives frequent updates on key developments from our industry association panels (e.g. ELISANA, etc.). When developments are important to our businesses or those of our customers, we work with our stakeholders to communicate these in the most appropriate and efficient way.

In late 2017, we requested a voluntary 3rd party audit of our LaPorte, USA plant and discovered several compliance gaps related to environmental permitting and reporting. In line with our commitment to compliance and drive to improve, SONGWON voluntarily reported the deficiencies to the relevant US state and federal authorities. Throughout 2018, with assistance from external consultants and our highly diligent team in LaPorte, all the deficiencies were successfully addressed and we implemented a process to ensure that our facility continues to operate in full compliance.



EH&S & Sustainability

Strategy that adds value

For us, sustainability means conducting all our business responsibly to ensure SONGWON's long-term success, but more importantly achieving this success in harmony with the environment and society. We are moving forward in line with our goals by making sustainability an integral part of our operations, and by promoting a strong sense of responsibility for sustainable operations among all of our managers and employees throughout the Group.

Our management ensures that everyone at SONGWON clearly understands that how we conduct our business is as equally important as our results, and that our behavior must always be based on legality and integrity. To support this aim, SONGWON's management has aligned the company's structures, processes and systems toward sustainability and clearly communicates its importance as a top organizational priority.

Business partners are included in this process and we also seek dialogue about sustainability issues with our stakeholders. SONGWON's management drives the overall strategic objective to create lasting value by managing innovation, operations and business practices to meet the changing demands of our markets, our shareholders and society. As one of the forerunners in our industry, SONGWON also seeks to claim leadership in the field of sustainability.

A Group-wide strategy has been developed to enable us to meet the standards and requirements associated with sustainability, and we systematically pursue the sustainability goals we have set for ourselves. Embedded in SONGWON's overall corporate strategy, our sustainability strategy includes discipline, respect and integrity. Ensuring sustained profitability and achieving social acceptance of our business activities is only achievable if we take into account the impact all of our business processes have on the environment and society, and by aligning our business targets with environmental and social requirements.

Our global team is committed to sharing our expertise and working closely with our customers to develop products, applications and solutions that meet both SONGWON's and our customers' sustainability needs. SONGWON's product portfolio, combined with our technological expertise and innovation, give us the opportunity to develop sustainable products and solutions that can help our customers address a wide variety of environmental issues.

By developing more applications that bring savings in energy and resources, SONGWON is adding value – value for our customers, our people, our investors, as well as value for society and for future generations.

Total commitment to EH&S

As a sustainable organization, we understand that creating stakeholder value not only requires environmental stewardship but also the establishment of a safe, injury-free, healthy working environment. Safety, health and environmental protection lie at the center of our responsibility to our employees, customers and suppliers, and also to all the communities we serve.

In all of SONGWON's facilities worldwide, we have implemented EH&S policies, procedures and performance standards that extend beyond the minimum necessary to ensure that SONGWON complies with all the relevant laws and regulations. We take a proactive approach to making sure that our EH&S strategy is comprehensively implemented and adhered to at every level of the organization. This approach highlights our commitment to sustainability leadership to all of SONGWON's stakeholders.

Making constant progress in the areas of environmental protection, safety and health has always been a main target for us. Over the past several years, we are proud that we have made significant headway in these areas and are more determined than ever to continue to build on this – worldwide. Ongoing improvement is a vitally important part of our overall sustainability strategy.

Our continual dedication to the long-term health and safety of our people and protecting the environment, in which we operate, has resulted in tremendous improvement and increased the importance of EH&S awareness across our entire global organization. SONGWON's safety culture is not exclusively delivered via a top down approach. Instead, it relies on all of us working together in a culture where the protection of every individual is non-negotiable. All SONGWON employees are engaged and actively participating in identifying and managing risks, and always seek ways to protect the environment and improve the health and safety of our operations.

Aiming for zero accidents

Fulfilling our responsibility as a manufacturing leader, it is our key aim to monitor and continually optimize the safety standards of our facilities, while doing our utmost to drive accident-free operations. *For this reason, the management places a strong focus on anchoring safety in every aspect of our operations and in every facility worldwide. Inherently believing that all accidents are preventable and that by applying safe working practices, hazards can be safeguarded against or removed, the management does everything in its power to create the safest working environment possible.*

In addition to safe, healthy facilities, it is only possible to ensuring that manufacturing that is free from accidents when dedicated, safety-aware employees remain constantly alert and focused on identifying anything that might possibly be a threat to general safety and well-being. We are convinced that when our people have the right attitude, focus their efforts on eliminating or controlling risks and make the right decisions followed by the most appropriate actions, it is possible to achieve best-in-class, zero accident safety.

Throughout 2018, we continued our efforts to increase EH&S awareness among our workforce. In addition to extensive guidance for hazardous chemical management safety, monthly trainings were held and various online lectures were delivered that provided comprehensive information and best practices related to EH&S issues. Chemical accident videos and the EH&S materials created both by SONGWON and by official external authorities are used for these.

Investing in these intensive EH&S education and trainings supports our drive to instill a higher level of awareness of critical issues, to foster a sense of responsible care among all the levels of SONGWON's global organization and to cultivate a proactive safety attitude throughout SONGWON.

EH&S awareness and responsibility is also supported and stressed by SONGWON's top management, and constantly emphasized as a top priority by SONGWON's managers across our organization.

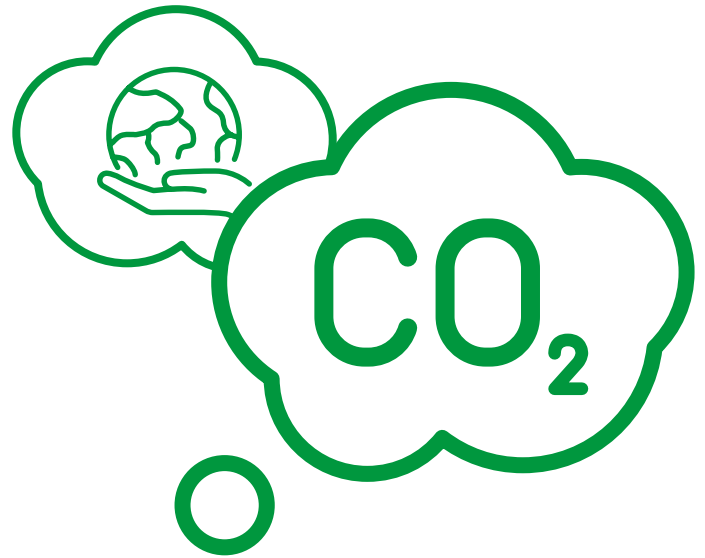
At SONGWON, we have always placed a high priority on addressing the root causes of workplace injuries, such as handling equipment incorrectly, and encouraging safer behaviors such as following appropriate safety procedures and best practices. In all of the SONGWON's manufacturing sites we had, 6 recordable accidents (incl. all the SONGWON personnel and contractors).

Any accidents occurring at SONGWON must be reported. We compile the accident report data in our global database and carefully classify any injuries that may have occurred according to the local laws and record-keeping criteria. Accident report data involves all SONGWON Industrial Co. Ltd., employees, as well as any contractors operating in our plants.

In 2018, we applied OCA (Offsite Consequence Analysis) and the RMP (Risk Management Plan) in accordance with the new Korean regulation (Chemical Control Act) and SONGWON was granted a permit from Korea Ministry of Environment. In order to enhance our efforts, we also cooperated with KISA (Korea Industrial Safety Association).

In 2017, the accredited engineering company (KFPA) carried out an extensive and thorough EHS audit of SONGWON's facilities in South Korea, and we were awarded an improved rating over the previous audit. Conducted every 3 years and then confirmed via an audit carried out by SONGWON's insurers, it provides the organization with valuable recommendations for improvement.

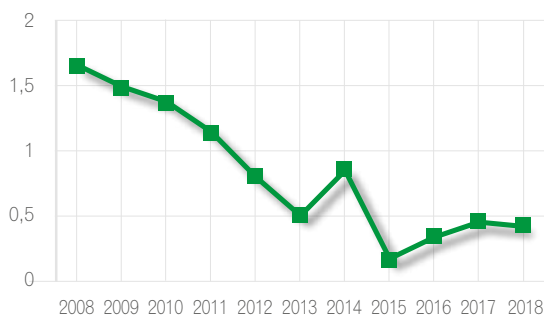
In line with SONGWON's continuous improvement strategy, we installed preventative measures in 2018, such as Gas & Leakage detectors, fire detectors, a gas extinguishing system, a remote control hydrant and anti-static bonding. In addition to these, and the introduction of more stringent procedures, SONGWON makes a point of carrying out ongoing investigations and assessments of all possible risks within the organization to improve our existing operating procedures. We also implemented safety walk inspections in Ulsan, Maeam and Suwon in South Korea, as well as Panoli in India which strengthened the process areas. Furthermore, we carried out a joint emergency drill training with local fire station and relevant government agency at our Ulsan, Maeam and Suwon sites.



In 2018, by implementing a Process Safety Review (K-PSR) with operators, we were able to identify and subsequently improve process risks. These reviews will also continue throughout 2019.

TRCR: Total Recordable Case Rate

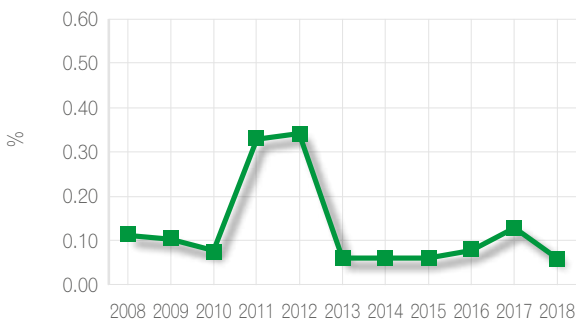
Recordable accidents *200,000 / total working hours



In 2018, the Total Recordable Case Rate (TRCR) reached 0.4 and SONGWON registered a 0.06% Total Lost Day Rate (LDR). For the 8th continuous year, there were no fatalities and the organization achieved a zero Occupational Diseases Rate (ODR) and zero Absentee Rate (AR).

LDR: Lost Day Rate

total lost days/total worked hours



Environmental awareness

We dedicate our efforts to continually reducing the environmental impact of SONGWON's business activities. SONGWON's management team fully backs the development of processes that save energy, lower emissions and reduce the company's overall carbon footprint to ensure that SONGWON is able to meet its long-standing commitment to contributing to a better world.

The organization has a well-established and rigorous program in place for optimizing processes and increasing SONGWON's general competitiveness by lowering costs, as well as significantly reducing energy consumption, waste production and CO₂ emissions. Throughout 2018, to reduce our manufacturing technologies' overall environmental impact, we directed our efforts on considerably reducing the organic content in our wastewater and solid salts.

One of SONGWON's most significant efforts this year, was the testing and development of a new technology for reducing the amount of wastewater at our Ulsan and Maeam plants in South Korea. This new technology will make it possible for SONGWON to achieve a reduction of 2% in total waste water volume.

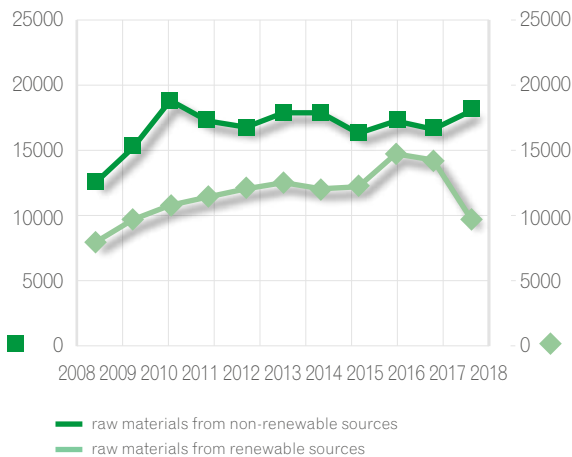
Materials

Raw Materials

At SONGWON, we have always sought to find opportunities to use raw materials from renewable sources wherever possible. However, the majority of the raw materials SONGWON requires are metals or oil derivatives, and this unfortunately means that there are actually very few key raw materials that we can obtain renewably. The only raw material available from renewable sources is stearyl alcohol which is derived from palm kernel oil and only represents circa 5% of the total raw materials SONGWON requires.

Raw Materials Used

in tons



Recycled materials

By applying a reverse reaction, SONGWON successfully consolidated the technology to recover raw materials that were previously disposed of as a final product in the organic wastes. Here, in the areas where the technology has been a success, we have seen the double benefit of reducing the environmental impact and recycling ca. 11% of the material. This amount corresponds to approximately 2250 t/y, of the raw material that was used in the production.

Energy

South Korea launched its national ETS (KETS, Korea Emission Trading System) – a cap-and-trade program back in January 2015. This type of ETS is mandatory (threshold: company > 125,000 tCO₂/year, installation > 25,000 tCO₂/year) for operating companies with voluntary opt in. For SONGWON participation is mandatory.

SONGWON's initiatives

At SONGWON, there are a range of initiatives underway that have enabled the organization to reduce its energy needs and resulted in providing us with energy-efficient or renewable energy-based products and services.

Once again this year, a program was applied involving the incineration of all the volatile organic compounds (VOC) produced in the plants which makes it possible for us to generate all the steam we require for our manufacturing process. In the Maeam plant, 3 incinerators have been in operation for 7 years, and an efficient steam generator based on the LNG has been used for the past 6 years.

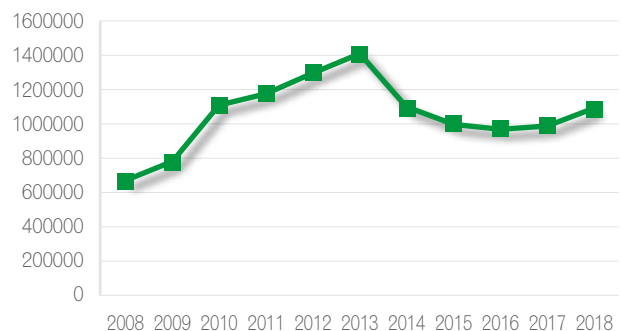
In addition to these, we also have implemented several energy consumption reduction initiatives to improve the long-term efficiency of SONGWON's operations and products. In 2018, SONGWON's total annual energy consumption for generating power increased by 10% compared to the previous year. This was the result of an increase in production volumes of almost 7% over 2017, the launch of ten new products, as well as the restart of an idle production line.

Direct energy consumption

Approximately 100% of SONGWON's direct energy consumption is in the form of natural gas. The majority is used for generating steam and heating oil. In 2018, the company consumed 1,082,630 GJ, which marked a consumption increase over 2017. Again, this was due to the almost 7% increase in production volumes previously mentioned, as well as the launch of ten new products and the idle production line being restarted.

Direct Energy Consumption

In GJ (gigajoules)



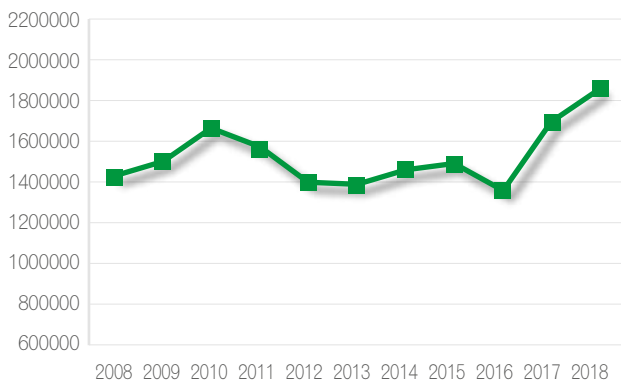


Indirect Energy Consumption

Almost 63% of SONGWON's electricity and steam for our plants is also purchased from the local utility companies who are using renewable energy sources.

Indirect Energy Consumption

In GJ (gigajoules)



Under South Korean law, actual emissions are measured according to the "Guideline for the Greenhouse Gas Target Management System" and "The Allocation and Trade of Emission Allowance of Greenhouse Gas Act".

This is applied as follows:

Emission = Fuel consumption × NCV × EF × GWP, where:

- NCV = Net Calorific Value
- EF = Emission Factor
- GWP = Global Warming Potential

Direct & indirect greenhouse gas emissions

Emissions

Individual energy reduction measuring activities are not calculated singly and separate from each other in South Korea, but as follows:

Emission reduction =

Emission allowance – Actual Emission

(Unit: tCO₂eq/year)

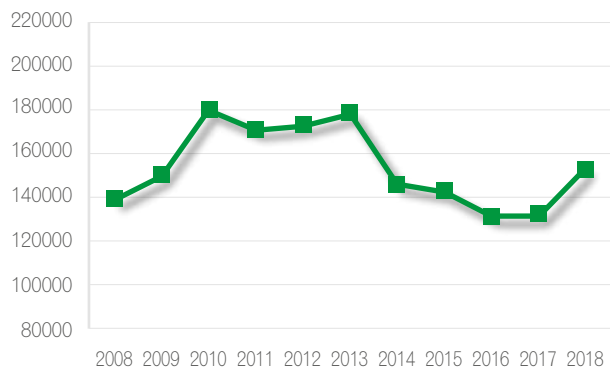
Working progressively towards a reduction in carbon emissions is SONGWON's main objective. We confirmed our commitment to a 7.5% reduction in general greenhouse gas emissions by 2020 compared to 2013 (GIR, Greenhouse Gas Inventory and Research Center). A reduction will be maintained even though production volumes will increase by about 22% in 2020 compared to the production volumes in 2013.

This positive achievement will be possible thanks to the purchase of steam, generated from renewable energy and waste heat via an exothermic chemical reaction.

The data reported here includes the direct and the indirect emissions from our electricity and steam purchases. This year SONGWON has no other indirect emissions to be recorded.

Total GHG Emissions

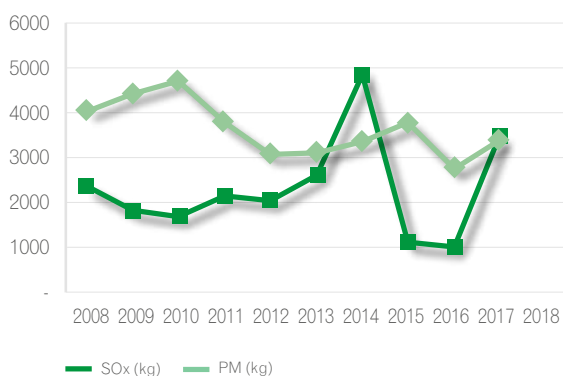
in tCO₂eq/year



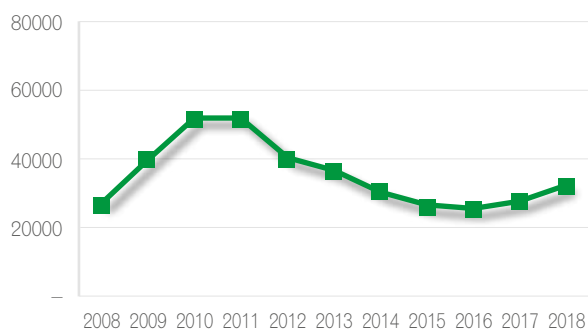
Significant air emissions

In SONGWON's manufacturing facilities, nitrogen oxide (NOx), sulfur oxide (SOx) and particulate matter (PM) emissions are automatically measured by in-line analyzers, and the values are sent in real-time to the relevant government agencies.

SOx and Particulate Matter in kg



NOx in kg



In 2018, SONGWON recorded a 6% average increase in air emissions compared to the year 2017. This was partially due to the increase in manufactured volumes and the greater steam demand generated by our incinerators, but also by the new analytical equipment installed at our sites. The new technology enables us to make more accurate assessments of very low SOx concentrations in the air emissions. Despite this, SONGWON has an ongoing action plan in place to continually improve situation in future.

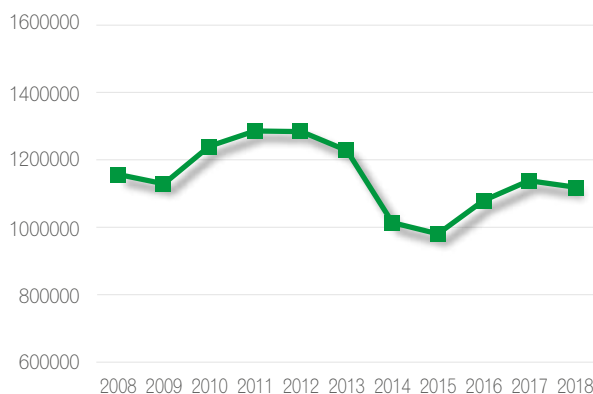
Water

Total withdrawal of water by source

In 2018, SONGWON's total water consumption decreased by 2% compared to 2017 according to the direct measurements made onsite.

SONGWON purchases the water it needs for its plants from the local municipality and suppliers. The water required by SONGWON's Suwon plant is directly sourced from underground.

Water Withdrawn



“For all of us at SONGWON, sustainability means thinking and acting responsibly for the long-term and conducting our business ethically to ensure successful, environmentally sound economic performance, safe operations and resource-efficient solutions that are in harmony with the world around us and add value to society.”

Seongjin Song, Leader of Manufacturing & EH&S



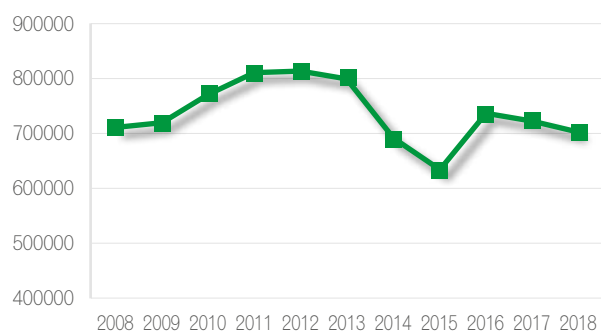
Effluents & Wastes

Total water discharged

All the water that SONGWON's manufacturing facilities discharge is internally treated and then conveyed to the central water treatment plants in the local municipalities. It is there that the organic content is reduced further and then the remaining water is released into the sea or discharged to a regional water treatment facility (e.g. as in Panoli, India).

Total Water Discharged

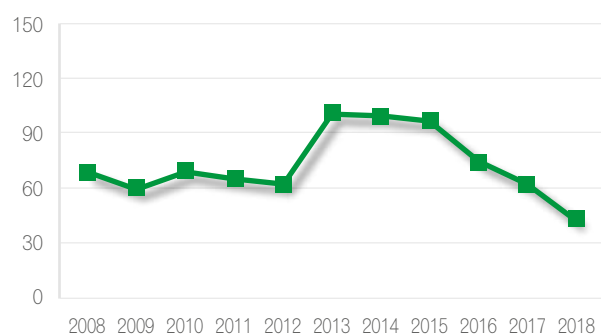
in m³



Throughout 2018, SONGWON continued to significantly improve the wastes it incinerated, the quality of the water discharged during the year, and the landfilled wastes. Subsequently, the average COD (chemical oxygen demand) of SONGWON's manufacturing sites was reduced from 62 to 42 ppm. The organization was able to achieve this overall decrease as a result of the outstanding additional improvement of the average water quality discharged from the Ulsan site in South Korea, where COD was reduced by 50% compared to 2017.

Discharged Water Quality

COD (ppm)

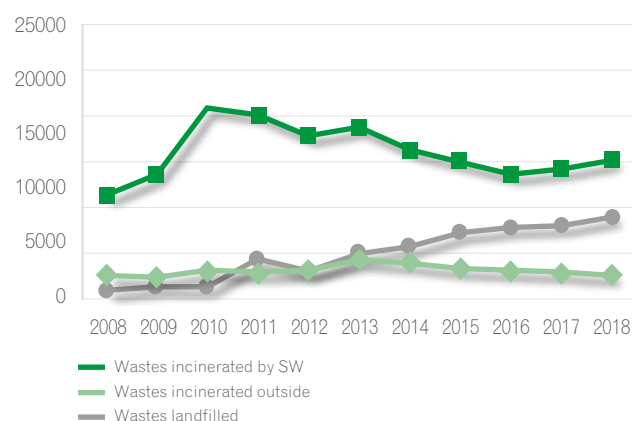


Other wastes

SONGWON'S operations generated 26,018 tons of hazardous wastes in 2018. The increase recorded over 2017 is the direct result of the 7% increase in manufacturing volumes. Approximately 86% of the liquid organic wastes are currently incinerated onsite and the remaining 14% is incinerated offsite. Solid wastes are all disposed of offsite via landfilling.

Wastes Disposed Outside of SONGWON

in tons



Significant spills

Since 2008, SONGWON has not had any spills to record or report. There were also none recorded or required to report in 2018.

Biodiversity

SONGWON does not own, lease or manage anything that is in, or near protected areas or areas of high biodiversity. Also, to the best of our knowledge, none of SONGWON's activities, products or services significantly impact biodiversity.

Non-compliance

Throughout 2018, SONGWON was in full compliance of all environmental rules and regulations and did not receive any fines.

GRI Standards

Our approach to GRI

This report was prepared in accordance with the GRI Standards: Core option.

It is aligned with the four GRI reporting principles:

- stakeholder inclusiveness
- sustainability context
- materiality
- completeness

These have been taken from the guidance in GRI 101: Foundation 2016.

The GRI principles have been consistently applied at varying degrees throughout this report.

Category: Content

Stakeholder Inclusiveness:

We have identified SONGWON's key stakeholder groups and have implemented the Stakeholder Inclusiveness principle to determine the context of this report. Through various stakeholder engagements and internal discussions amongst SONGWON's Management, we ascertained these stakeholder group's areas of interest and concern and matched this report to these. We have also explained how SONGWON has responded to its stakeholder's reasonable expectations and interests.

Sustainability Context:

This report outlines the wider context in which we operate and presents our sustainability performance with regard to both our corporate performance and global sustainable development goals. We are committed to monitoring SONGWON's performance relating to material sustainability issues and direct our efforts towards continuous improvement.

Materiality:

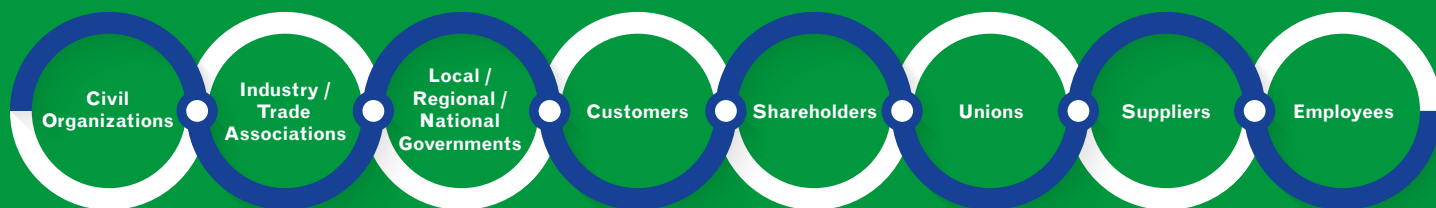
The material topics covered in this report have been determined by the Board and Executive Committee and are integrated into our strategy. They reflect the most relevant economic, environmental and social impacts and contributions which have the biggest potential impact on stakeholders and on SONGWON's ability to create long-term sustainable value.

Completeness:

This principle was implemented by examining specific and material topics to ensure all information relevant to assessing SONGWON's economic, environmental, and social performance has been reported. Furthermore, it facilitates determining the boundaries of topics and enables stakeholders to assess SONGWON's performance during the reporting period.



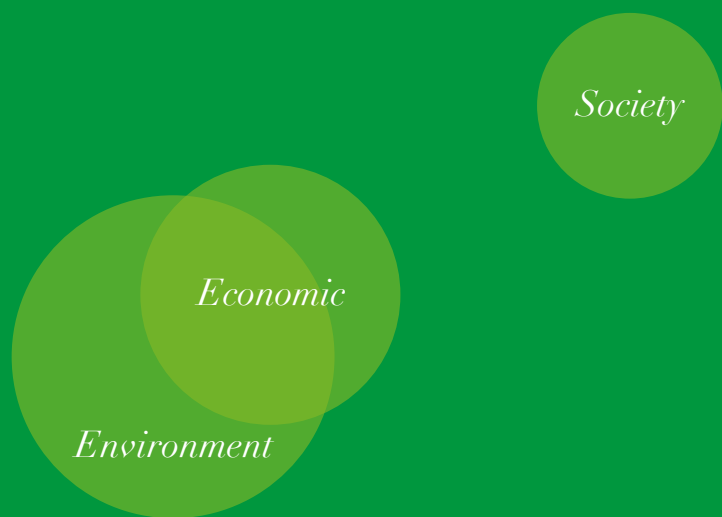
SONGWON's Stakeholders



SONGWON's categories:

Impact on the assessment performed by our stakeholders >

Materiality analysis



Significance for economical, environmental and social aspects >

Category: Quality

Accuracy

The information presented in the report follows the GRI guidelines and we have aimed to make the information traceable, accurate and reliable. Our financial results are also audited by the Group's auditor to confirm accuracy.

Balance

Throughout the report we identify both the challenges and the opportunities SONGWON faces and made references to those which occurred in the reporting year. We have also fully reported on the same KPIs as in the previous year, regardless of whether SONGWON's performance improved or declined.

Clarity

The content of the report is designed to be easily navigated and read. The language style is presented in a straightforward manner and as clearly as possible with visuals to highlight and support key data. In the interests of clarity, the use of complex technical references, industry jargon and excessive detail have been avoided. Furthermore, the report can also be downloaded or printed as required according to personal preference.

Comparability

SONGWON's report is more comprehensive and transparent through the application of the GRI guidelines. Due to the fact that the guidelines are also applied internationally, means SONGWON can be easily compared with other companies all over the world. Furthermore, our previous Annual Reports are all available for comparison on the SONGWON website (www.songwon.com).

Reliability

The information in this report has been reviewed by SONGWON's senior management, business leaders and the Group's auditor, Ernst & Young Han Young. We have also included the sources of all third party / external information provided in the text.

Timeliness

SONGWON is committed to report sustainability information at least once a year. The information presented in this report relates to FY2018. Additionally, our performance information is published in quarterly reports. All this information is available on the organization's website throughout the year and aligned with our annual financial reporting schedule.

GRI Topic Specific Standards

Environmental, Economic and Social are the relevant GRI topic-specific standards SONGWON has selected based on our material topics. As outlined in the GRI content index, we have provided information on the specific indicators relevant to our business for each topic-specific standard, as well as our management approach that best communicates the most material aspects of our sustainability performance at the level (global or local) that is most meaningful to report, including whether there were impacts within the organization or outside of it.

GRI 200: Economic

Through all of SONGWON's operations, we aim to secure the organization's financial success and thus long-term value creation for our stakeholders. We know this can be achieved through implementing our long-term strategy, recognizing and managing risks and opportunities, as well as providing transparent information to our stakeholders.

Our strategy has four key focus areas: business focus, growth, geographical focus, and innovation.

SONGWON provides expertise and high-quality products to different industries, for a myriad of important applications. We are dedicated to creating long-term value, providing sustainable solutions, and strengthening the competitive position of our customers.

At SONGWON, we are focused on building a balanced product portfolio in order to support targeted growth and we are continuing with our expansion strategy to strengthen our presence in emerging markets and consolidating our position in existing ones.

GRI 300: Environmental

Our sustainability strategy supports SONGWON's business goals and enables us to continuously reduce our environmental footprint. At the same time, we are working to ensure that we give something back to both our employees and society as a whole. Our global sustainability commitment is directly managed by our Executive Committee.

The Committee is also responsible for overseeing the execution of all activities relating to achieving our sustainability goals.

All of SONGWON's initiatives are designed to ensure that we focus on those areas where we, as a company, have the greatest impact. They also provide us with a clear direction that enables us to strive for a better performance.

GRI 400: Social

At SONGWON, we emphasize the importance of our people for the company's long-term success: they manage strong brands, develop innovative products and support our customers around the world. Building and sustaining long-term, trustful relationships with our employees and all those who work for or with SONGWON is essential to our organizational success.



SONGWON's GRI Content Index

This report has been prepared in accordance with the GRI Standards: Core option.



"For the GRI Content Index Service, GRI Services reviewed that the GRI content index is clearly presented and the references for all disclosures included align with the appropriate sections in the body of the report."

GRI Content Index

GRI Standard	Disclosure	Description	Page number(s)	Omissions / Direct Answers
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GRI 101: Foundation 2016 [GRI 101 does not include any disclosures]

GRI 102: General Disclosures 2016

Organizational Profile

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Material Topics

GRI Standard	Disclosure	Description	Page number(s)	Omissions / Direct Answers
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Approach 2016	103-3		81; 84-85	
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Energy 2016				

Social Standards: 400 Series

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Approach 2016	103-3		64; 68
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	66
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Corporate Governance





Corporate Governance

Committed to transparent, accountable management

SONGWON's philosophy of corporate governance goes beyond just compliance or simply a matter of law. For us, ensuring the highest levels of governance supports SONGWON's long-term value creation.

At SONGWON, we believe that exercising responsible corporate governance ensures that we remain a strong and accountable organization that is well-placed to effectively serve the needs of our stakeholders while delivering long-term value to our shareholders and meeting our targets. In other words: solid governance means solid business.

SONGWON's core values: passion, credibility, entrepreneurship, expertise and accessibility lie at the center of our approach to corporate governance. Our Board and management are guided by these values and most importantly by the value we place on sustainability. These form the core of how we operate our business, interact with our stakeholders and plan for the future.

Our approach is to adopt what we consider to be the best governance standards possible and focus on the behavior, practices and processes that define our organization and how we conduct business ethically. At SONGWON, we do not see governance as only a matter for our Board of Directors, the Executive Committee or something that lies solely in the hands of SONGWON's CEO.

Corporate governance is embedded throughout SONGWON and practiced by our dedicated team of talented individuals. Our people measure their contribution to SONGWON's overall success not just on the basis of business growth, but by how well we can meet the highest standards of accountability and create value for all of our stakeholders. Every person on the global team places the highest priority on responsible corporate governance in all of our day-to-day activities. Having a clear framework for decision making and accountability across our business also provides guidance on the standards of behaviour we expect of ourselves, each other and of our partners.

SONGWON's efficient and responsible decision-making and control processes are of central importance to our operations and are geared towards driving long-term corporate success. Everything we do each day is managed in the fairest and most transparent manner. We build and maintain valuable relationships with all of our customers, partners, investors, and stakeholders and seek to ensure that SONGWON's performance is always guided by the utmost integrity. Using sound judgement, SONGWON's Executive Committee and Board of Directors (BOD) effectively manage opportunities and risks.

Cooperating in a transparent and goal-oriented way also supports the sustainable increase in the Group's value, and takes into account the interests of all SONGWON's shareholders and employees. Most importantly, SONGWON's senior leadership always seeks to align their management and supervision with internationally recognized standards of good corporate governance.

As each year passes, our stakeholders are expecting increasingly more from us, not only in terms of what we do, but of how we do it. It is clear to us that SONGWON can only achieve long-term business success when we all adhere to SONGWON's internal policies, corporate values and rules of behaviour while remaining compliant with all the relevant external standards and regulations. By maintaining consistent standards and responsible business practices across the SONGWON Group, our goal is to mitigate risk.

SONGWON places great importance on building and maintaining valuable relationships with all of our customers, partners, investors and stakeholders and we seek to ensure that our performance is always guided by the utmost integrity. This responsible management approach has been a key factor in our sustained success and helped us to preserve and strengthen the trust that our employees, business partners and shareholders invest in us.

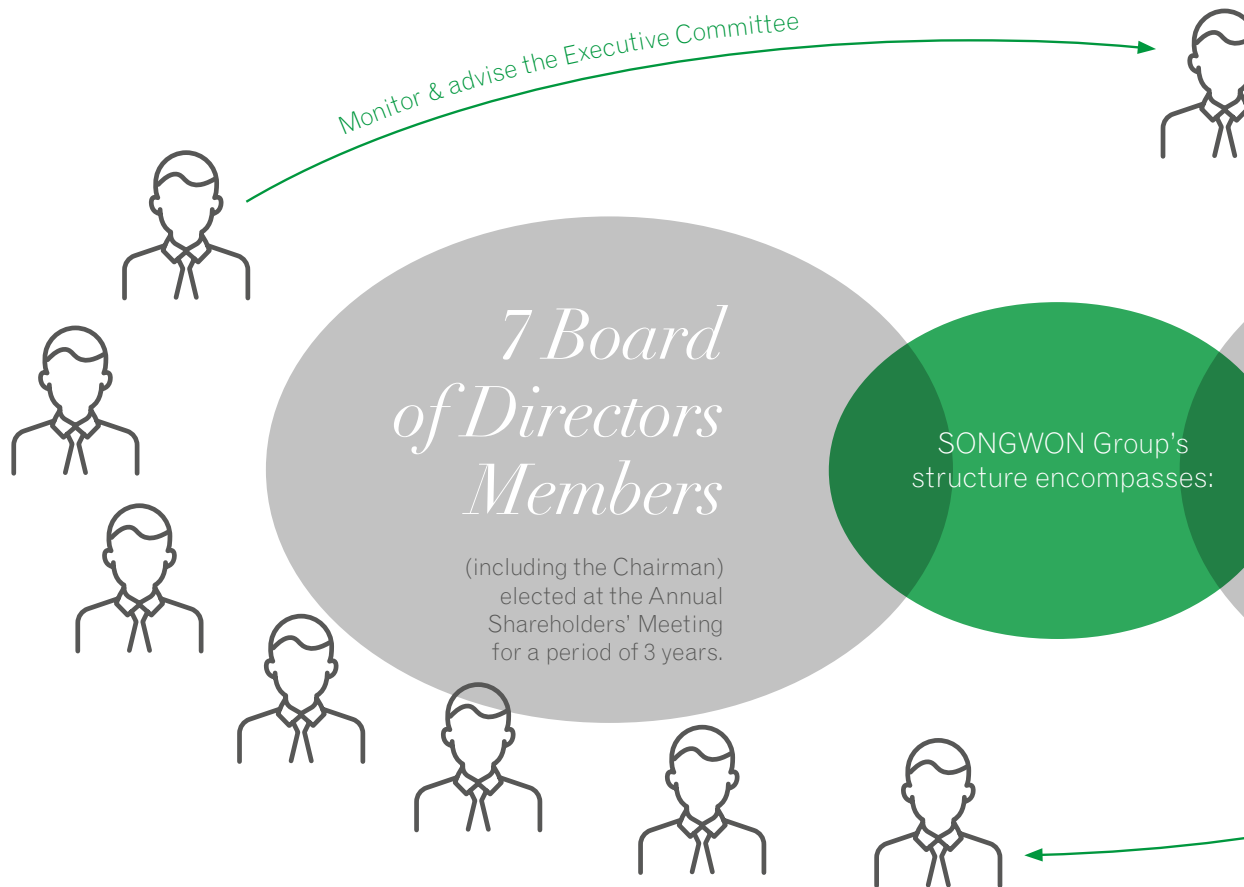


Annual Shareholders Meeting

Each year, all of SONGWON's shareholders are invited to attend the Annual Shareholders Meeting where decisions are made on matters concerning SONGWON Industrial Co., Ltd. and the Group. The meeting is traditionally centered on the annual report and financial accounts and shareholders are always given the opportunity to put forth any questions they may have relating to the agenda.

In addition to this, there are mechanisms for shareholders provided by Korean law that make it a requirement for company directors to organize a shareholders' meeting and to propose resolutions submitted by the shareholders.

SONGWON held its Annual General Meeting this year on March 22, 2018. In the course of the meeting, the Annual Report for the financial year 2017 was adopted, as well as the proposal for the distribution of profits.



The Board of Directors (BOD) & Executive Committee

SONGWON Group's structure encompasses:

- The Board of Directors consists of 3 executive members and 4 non-executive members, and as per Korean regulations, this is equivalent to 5 inside directors and 2 outside directors.

The members of the Board attend a face-to-face meeting 4 times a year. In addition, whenever it is required, ad hoc meetings in person or by phone are also organized.

- The Executive Committee, comprising 6 people who hold key managerial positions in the Group, comes together in person for a meeting once every quarter and also hold teleconferences at regular intervals, as well as communicating via email. Their responsibility is to manage all SONGWON's business, create policies and make key decisions relating to the organization's strategy, investments and employees, with the exception of specific decisions which are reserved for the BOD under the Korean Company Act.

In the case of such instances arising, the Executive Committee prepares its proposals and submits them to the BOD for final approval.

At SONGWON, the positions of Chairman of Board and of the CEO are separated. The clear separation between the responsibilities of the larger BOD and those of the Executive Committee further strengthen the Group's corporate governance by ensuring greater transparency, controls and accountability.

Overseeing the strategic direction of the Group and ensuring that good governance procedures are in place, the BOD supervises the decisions made by SONGWON's Executive Committee, the governing body that is responsible for making decisions relating to economic, environmental and social impacts and identifies and manages risks and opportunities. To support them to optimize the overseeing of the activities within these two important areas, the BOD has also established an Audit Committee* and an HR Committee.

The Directors (except for the executive members) proposed for election to the Shareholders' are chosen based on two specific criteria: independence and expertise, making sure that individuals have different backgrounds, and can contribute different views. The current Board of Directors is composed of individuals coming from diverse industries and represent 4 different nationalities.

Each year the Board of Directors goes through a process of self-evaluation.

* as per the IAA standard



6 Executive Committee Members

5 members appointed by the Board of Directors plus the CEO (who is elected at the Annual Shareholders' Meeting)

Report to the Board of Directors

Chairman of the Board, Chief Executive Officer (CEO) & Executive Management

The Chairman of the Board is a non-executive Director who is elected at SONGWON's Annual Shareholders' Meeting. The CEO is the Chair of the Executive Committee and exercises ongoing control of the Group. The CEO manages according to the BOD's instructions, and in line with the division of responsibilities between the CEO and BOD as approved by the BOD.

Remuneration for members of SONGWON's highest governance body, senior managers, and executives (which include departure arrangements) is in line with the overall performance of the company including the social, economic and environmental results.

External auditors

At the Annual Shareholders Meeting, the auditors for SONGWON are elected for a period of 3 years. SONGWON's current auditors are Ernst & Young Han Young. The BOD and the Executive Committee work closely with the auditors to ensure that they remain up-to-date and well-informed about relevant issues concerning the accounts, reporting procedures and management of the Group's assets.

Corporate governance framework

SONGWON's Vision and Mission statements are a reflection of our commitment to maintaining the highest level of integrity and ethical standards throughout our global operations.

At SONGWON, we believe that successfully establishing an open, fair and clean corporate culture requires encouraging open and fair communication at all levels. And we know that people's behavior within an organization is determined by their corporate culture, which in turn is derived from the approach to corporate governance. Therefore, ensuring that our employees are kept well-informed is very important to us.

We make a point of being sure that every person working at SONGWON is informed about the organization's operations, activities and strategic aims but more importantly that they clearly understand the guiding principles of ethical business conduct. SONGWON's Board and top management make it a priority to regularly communicate the importance of responsible behavior and to ensure that ethical business conduct remains at the forefront of our daily activities.

To support this, we have clearly communicated both SONGWON's Vision and Mission statements to all employees and released them publicly to all of our stakeholders worldwide. We also have a complete set of policies which relate to all aspects of SONGWON's business activities. Readily accessible to all employees, the policies outline our dedication to high ethical standards and our compliance with the applicable laws in the areas and regions we operate.

Every employee is given SONGWON's Code of Conduct when they are hired and we have also made it available on our website. The code provides employees with essential guidance on how to apply basic principles in line with the organization's core values and 'safe, honest, trustworthy, professional, customer focused' culture.

It also offers our people practical advice on how best to comply with laws and regulations and how to relate to SONGWON's customers, communities and colleagues. We have invested a great deal of effort in ensuring that our Code of Conduct is in line with internationally agreed standards, and we also apply, and strictly enforce, all of our policies across the organization in all the regions.

SONGWON is not a hierarchically run organization. Our leadership believes in fostering a collaborative approach to management where each individual, including top management is easily approachable, open to engaging in dialogue and ready to advise. Within SONGWON, questions and even discussions are both welcome and encouraged. With openness and clarity, we seek to create an environment where people are treated fairly and encouraged to contribute. Although SONGWON does not have a culture of punishment, everyone is very aware that any breach of standards or any improper, unethical behavior is not tolerated.

Although SONGWON has not established a formal process to communicate critical concerns to the highest governance body, the above-mentioned interaction and accessibility, coupled with the openness within the organization all facilitate and make communicating or reporting concerns straightforward. There were no critical concerns communicated to the highest governing body this year. However, should any occur, then the most appropriate form of communication and/or consultation method is selected based on the nature of the issue at hand.

In 2018, there were also no incidents which go against SONGWON's principles, such as corruption, anti-trust or discrimination. In addition, SONGWON has no significant monetary or non-monetary fines to report for non-compliance with laws and regulations.

Internal control

Internal control is fundamental to SONGWON's corporate culture. We continue to work to strengthen and improve our Internal Control Systems (ICS) to monitor all of the Group's activities. In this way, we can make sure that SONGWON's rules of business engagement are diligently adhered to with regards to external legislation and regulations, as well as our internal guidelines and control documentation.

Another important aspect of internal control is identifying risks and then ensuring that they are managed effectively. Our main goal is to minimize SONGWON's exposure to risk as far as possible, while making sure that we can capitalize on desired opportunities at the same time.

The Group is organized in such a way as to meet the requirements for effective internal control. SONGWON's working methods are characterized by

organizational transparency and a clear division of responsibilities. To enable us to achieve true and fair consolidated financial reporting, the Group also has the necessary financial and business reporting systems in place which are important control instruments.

Once a month, internal group reports are compiled using well-established procedures, and then presented in a document which includes extensive analysis. A number of people from various Group departments and company levels are involved in working on the quarterly and annual accounts. The management team, the Executive Committee and the Board of Directors review the summarized results and then approve them.

In the case of a conflict of interest arising, the member concerned will abstain from voting on the issues relating to the conflict of interest to make sure that the highest levels of corporate governance always prevail. SONGWON is not aware of any conflicts of interest arising in 2018, or of any which could have arisen during the year.

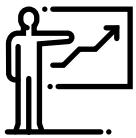
At SONGWON, we recognize that corruption can severely impact sustainable economic and social development and in particular, detrimentally affect poorer communities. As we expand our operations, we are well aware that it is very likely for SONGWON to be more exposed to regions and environments where known corruption exists. For this reason, we are continuously strengthening SONGWON's policies and processes while remaining open and responsive to improvements that stakeholders and authorities may consider necessary.

Identifying stakeholders

SONGWON stakeholders are identified by each individual site and business operation as part of the communication process. We also have clear channels of communication in place for all consultation and engagement activity with SONGWON's stakeholders. These may take place as face-to-face meetings, group meetings, team briefings, meetings with union representatives, announcements, emails, letters, memos, notices and telephone calls.

All the content within this document has been put together by taking into consideration the feedback and recommendations of all our stakeholders relating to the reported topics and their importance.

To optimize corporate governance, SONGWON:



has strengthened the interaction between middle management and the Board, as well as increased the Board's knowledge and understanding of the relevant economic, environmental and social impacts of SONGWON's activities. Each business and function was invited to present and discuss their strategies and actions with the Board on a rotational basis.



organizes two Town Hall meetings to improve engagement between employees at all levels and top management. The meetings provide an opportunity for the CEO to share information on SONGWON's financial results, business activities and strategy. Every employee is invited to attend and encouraged to ask questions. A survey is used to follow-up on the issues and concerns that employees would like to have addressed as well as to assess the quality of the meeting and identify areas for improvement. During these meetings, the CEO takes advantage of the opportunity to emphasize and reinforce SONGWON's expectations concerning ethical business conduct, our sustainability approach, EH&S, etc.



continued to focus on improving and strengthening the Internal Control Systems (ICS) at all levels and at each entity of the Group.



placed more emphasis on sustainability. The Board and SONGWON's management also committed to more active support of the circular economy development through membership in the relevant associations and relevant organizational changes in 2019.



continued to be actively involved in various associations and organizations. This served to increase its ability to monitor issues from an environmental, economic and social point of view, identify possible risks and opportunities and ensure that SONGWON was in a position to act accordingly at an early stage.

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Introduction to the consolidated financial statements

On the following pages (114 – 213), consolidated financial statements for the year 2018 are presented. The financial statements disclosed are prepared according to the Korean International Financial Reporting Standards (“K-IFRS”) and represent the statements submitted for approval to the Annual General Shareholders’ Meeting taking place on March 22, 2019 in Ulsan, Korea.

While the management of the Group is responsible for the preparation and presentation of the financial statements, the independent Group auditor is responsible for expressing an opinion on these financial statements. The report on the consolidated financial statements – issued by our Group auditor, Ernst & Young Han Young – can be found on pages 111 - 113.

Independent auditors' report



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Fax: +82 2 783 5890
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Independent auditor's report

**To the shareholders and board of directors
Songwon Industrial Co., Ltd.**

Opinion

We have audited the accompanying consolidated financial statements of Songwon Industrial Co., Ltd. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2018 and 2017, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2018 and 2017, and its consolidated financial performance and cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

Basis for opinion

We conducted our audit in accordance with Korean Auditing Standards (KGAAS). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Korean Auditing Standards (KGAAS) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Korean Auditing Standards (KGAAS) we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.



We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

The partner in charge of the audit resulting in this independent auditor's report is *Cho, Seong-Jin*.

Ernst & Young Han Young

February 25, 2019

This audit report is effective as of February 25, 2019, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the auditor's report date to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

Consolidated statements of financial position

as of December 31, 2018 and 2017

		2018	2017
Assets	Notes	Million KRW	Million KRW
Non-current assets		480,898	487,614
Property, plant and equipment	6.3, 7, 26, 27	439,322	441,721
Investment properties	6.3, 8, 26, 27	3,516	3,530
Intangible assets	6.3, 9, 10, 26	17,826	21,609
Investments accounted for using the equity method	1.2.3, 5, 11	4,760	7,035
Available-for-sale financial investments	12, 25.2	–	900
Other non-current assets	21	1,515	33
Other non-current financial assets	13, 25, 32	11,129	10,265
Deferred tax assets	29	2,830	2,521
Current assets		391,646	377,507
Inventories	14, 26	201,368	166,641
Trade and other receivables	15, 25.2, 32	115,969	130,894
Income tax receivables		610	518
Other current assets	16	4,387	3,502
Other current financial assets	13, 25, 32	6,006	20,548
Cash and cash equivalents	17, 25.2	63,306	55,404
Total assets		872,544	865,121
Equity and liabilities			
Equity		411,198	378,127
<i>Non-controlling interests</i>		-714	-2,733
<i>Equity attributable to owners of the parent</i>		411,912	380,860
Issued capital	18	12,000	12,000
Capital surplus	18	24,361	24,361
Reserves	18	27,591	27,255
Retained earnings	18	352,906	322,085
Accumulated other comprehensive income	18.4	-4,946	-4,841
Non-current liabilities		84,690	162,354
Interest-bearing loans and borrowings	19, 25, 26, 27	17,180	98,783
Pension liability	21	16,037	8,311
Other long-term employee-related liabilities	22	5,111	5,585
Other non-current financial liabilities	23, 25	3,361	4,625
Other non-current liabilities		41	40
Deferred tax liabilities	29	42,960	45,010
Current liabilities		376,656	324,640
Interest-bearing loans and borrowings	19, 25, 26, 27	267,930	208,754
Trade and other payables	24, 25, 32	100,529	109,538
Other current liabilities		1,883	1,801
Other current financial liabilities	23, 25	1,978	1,743
Income tax payable		4,336	2,804
Total liabilities		461,346	486,994
Total equity and liabilities		872,544	865,121

Consolidated statements of financial position

as of December 31, 2018 and 2017 (see note 2.3)

	2018	2017
	Thousand USD	Thousand USD
Assets		
Non-current assets	430,488	436,502
Property, plant and equipment	393,272	395,418
Investment properties	3,147	3,160
Intangible assets	15,957	19,344
Investments accounted for using the equity method	4,261	6,298
Available-for-sale financial investments	–	806
Other non-current assets	1,356	30
Other non-current financial assets	9,962	9,189
Deferred tax assets	2,533	2,257
Current assets	350,592	337,936
Inventories	180,260	149,174
Trade and other receivables	103,813	117,173
Income tax receivables	546	464
Other current assets	3,927	3,135
Other current financial assets	5,376	18,394
Cash and cash equivalents	56,670	49,596
Total assets	781,080	774,438
Equity and liabilities		
Equity	368,096	338,491
<i>Non-controlling interests</i>	-639	-2,447
<i>Equity attributable to owners of the parent</i>	368,735	340,938
Issued capital	10,742	10,742
Capital surplus	21,807	21,807
Reserves	24,699	24,398
Retained earnings	315,914	288,324
Accumulated other comprehensive income	-4,427	-4,333
Non-current liabilities	75,813	145,336
Interest-bearing loans and borrowings	15,379	88,428
Pension liability	14,356	7,440
Other long-term employee-related liabilities	4,575	5,000
Other non-current financial liabilities	3,009	4,140
Other non-current liabilities	37	36
Deferred tax liabilities	38,457	40,292
Current liabilities	337,171	290,611
Interest-bearing loans and borrowings	239,844	186,873
Trade and other payables	89,990	98,056
Other current liabilities	1,685	1,612
Other current financial liabilities	1,771	1,560
Income tax payable	3,881	2,510
Total liabilities	412,984	435,947
Total equity and liabilities	781,080	774,438

Consolidated statements of comprehensive income

for the years ended December 31, 2018 and 2017

	Notes	2018 Million KRW	2017 Million KRW
Sales*	6.1, 6.2, 32	788,738	724,853
Cost of sales*	28.5, 32	-632,582	-569,793
Gross profit*		156,156	155,060
Selling and administration costs*	28.2, 28.5, 32	-101,879	-100,594
Operating profit		54,277	54,466
Other income	28.3, 32	3,628	2,121
Other expenses	28.4, 32	-4,757	-2,102
Share of profit from investments accounted for using the equity method	11, 31	1,382	1,249
Finance income	28.7, 32	20,747	24,948
Finance expenses	28.6, 32	-28,944	-36,496
Profit before tax		46,333	44,186
Income tax expenses	29	-8,528	-9,480
Profit for the period		37,805	34,706
Other comprehensive income, net of taxes			
<i>Net other comprehensive income to be reclassified to profit or loss in subsequent periods</i>		-648	-7,251
(Losses) / gains on valuation of interest rate swaps	18.4	-118	355
Exchange differences on translation of foreign operations	18.4	-530	-7,606
<i>Net other comprehensive income not to be reclassified to profit or loss</i>		-3,217	-157
Gains on valuation of financial assets FVOCI	18.4	350	-
Re-measurement (losses) on defined benefit plans	18.4, 21	-3,567	-157
Total other comprehensive income, net of taxes		-3,865	-7,408
Total comprehensive income		33,940	27,298
Profit for the period attributable to:			
Owners of the parent	30	38,084	35,394
Non-controlling interests		-279	-688
Profit for the period		37,805	34,706
Total comprehensive income attributable to:			
Owners of the parent		34,412	27,794
Non-controlling interests		-472	-496
Total comprehensive income		33,940	27,298
Earnings per share		KRW	KRW
Basic / diluted, profit for the period attributable to ordinary equity holders of the parent	30	1,587	1,475

* refer to note 2.20. for further details

Consolidated statements of comprehensive income

for the years ended December 31, 2018 and 2017 (see note 2.3)

	2018	2017
	Thousand USD	Thousand USD
Sales*	706,061	648,873
Cost of sales*	-566,274	-510,067
Gross profit*	139,787	138,806
Selling and administration costs*	-91,200	-90,050
Operating profit	48,587	48,756
Other income	3,248	1,899
Other expenses	-4,258	-1,882
Share of profit from investments accounted for using the equity method	1,237	1,118
Finance income	18,572	22,333
Finance expenses	-25,910	-32,670
Profit before tax	41,476	39,554
Income tax expenses	-7,634	-8,486
Profit for the period	33,842	31,068
Other comprehensive income, net of taxes		
<i>Net other comprehensive income to be reclassified to profit or loss in subsequent periods</i>	-580	-6,491
(Losses) / gains on valuation of interest rate swaps	-106	318
Exchange differences on translation of foreign operations	-474	-6,809
<i>Net other comprehensive income not to be reclassified to profit or loss</i>	-2,880	-140
Gains on valuation of financial assets FVOCI	313	-
Re-measurement (losses) on defined benefit plans	-3,193	-140
Total other comprehensive income, net of taxes	-3,460	-6,631
Total comprehensive income	30,382	24,437
Profit for the period attributable to:		
Owners of the parent	34,092	31,684
Non-controlling interests	-250	-616
Profit for the period	33,842	31,068
Total comprehensive income attributable to:		
Owners of the parent	30,805	24,881
Non-controlling interests	-423	-444
Total comprehensive income	30,382	24,437
Earnings per share		
	USD	USD
Basic / diluted, profit for the period attributable to ordinary equity holders of the parent	1.42	1.32

* refer to note 2.20. for further details

Consolidated statements of changes in equity

for the years ended December 31, 2017 and 2018

	Attributable to owners of the parent						Non-controlling interests	Total equity
	Issued capital	Capital surplus	Reserves	Retained earnings	Accumulated OCI	Total		
	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
As of January 1, 2017	12,000	24,361	26,919	290,544	2,602	356,426	-2,237	354,189
Profit for the period	–	–	–	35,394	–	35,394	-688	34,706
Gains on valuation of interest rate swaps, net of tax	–	–	–	–	355	355	–	355
Exchange differences on translation of foreign operations, net of tax	–	–	–	–	-7,798	-7,798	192	-7,606
Re-measurement losses on defined benefit plans, net of tax	–	–	–	-157	–	-157	–	-157
Total comprehensive income	–	–	–	35,237	-7,443	27,794	-496	27,298
Dividends	–	–	–	-3,360	–	-3,360	–	-3,360
Appropriation to reserves	–	–	336	-336	–	–	–	–
As of December 31, 2017	12,000	24,361	27,255	322,085	-4,841	380,860	-2,733	378,127
As of January 1, 2018	12,000	24,361	27,255	322,085	-4,841	380,860	-2,733	378,127
Profit for the period	–	–	–	38,084	–	38,084	-279	37,805
Losses on valuation of interest rate swaps, net of tax	–	–	–	–	-118	-118	–	-118
Exchange differences on translation of foreign operations, net of tax	–	–	–	–	-337	-337	-193	-530
Gains on valuation of financial assets FVOCI, net of tax	–	–	–	–	350	350	–	350
Re-measurement losses on defined benefit plans, net of tax	–	–	–	-3,567	–	-3,567	–	-3,567
Total comprehensive income	–	–	–	34,517	-105	34,412	-472	33,940
Dividends	–	–	–	-3,360	–	-3,360	–	-3,360
Appropriation to reserves	–	–	336	-336	–	–	–	–
Non-controlling interest due to acquisition in stages	–	–	–	–	–	–	2,491	2,491
As of December 31, 2018	12,000	24,361	27,591	352,906	-4,946	411,912	-714	411,198

Consolidated statements of changes in equity

for the years ended December 31, 2017 and 2018 (see note 2.3)

	Attributable to owners of the parent						Non- controlling interests	Total equity
	Issued capital	Capital surplus	Reserves	Retained earnings	Accumu- lated OCI	Total		
	Thousand USD	Thousand USD	Thousand USD	Thousand USD	Thousand USD	Thousand USD	Thousand USD	Thousand USD
As of January 1, 2017	10,742	21,807	24,097	260,089	2,330	319,065	-2,003	317,062
Profit for the period	–	–	–	31,684	–	31,684	-616	31,068
Gains on valuation of interest rate swaps, net of tax	–	–	–	–	318	318	–	318
Exchange differences on translation of foreign operations, net of tax	–	–	–	–	-6,981	-6,981	172	-6,809
Re-measurement losses on defined benefit plans, net of tax	–	–	–	-140	–	-140	–	-140
Total comprehensive income	–	–	–	31,544	-6,663	24,881	-444	24,437
Dividends	–	–	–	-3,008	–	-3,008	–	-3,008
Appropriation to reserves	–	–	301	-301	–	–	–	–
As of December 31, 2017	10,742	21,807	24,398	288,324	-4,333	340,938	-2,447	338,491
As of January 1, 2018	10,742	21,807	24,398	288,324	-4,333	340,938	-2,447	338,491
Profit for the period	–	–	–	34,092	–	34,092	-250	33,842
Losses on valuation of interest rate swaps, net of tax	–	–	–	–	-106	-106	–	-106
Exchange differences on translation of foreign operations, net of tax	–	–	–	–	-301	-301	-173	-474
Gains on valuation of financial assets FVOCI, net of tax	–	–	–	–	313	313	–	313
Re-measurement losses on defined benefit plans, net of tax	–	–	–	-3,193	–	-3,193	–	-3,193
Total comprehensive income	–	–	–	30,899	-94	30,805	-423	30,382
Dividends	–	–	–	-3,008	–	-3,008	–	-3,008
Appropriation to reserves	–	–	301	-301	–	–	–	–
Non-controlling interest due to acquisition in stages	–	–	–	–	–	–	2,231	2,231
As of December 31, 2018	10,742	21,807	24,699	315,914	-4,427	368,735	-639	368,096

Consolidated statements of cash flows

for the years ended December 31, 2018 and 2017

	Notes	2018 Million KRW	2017 Million KRW
Profit for the period		37,805	34,706
Adjustments total	31	43,957	56,873
Changes in operating assets and liabilities	31	-15,930	-24,842
Interest received		854	1,144
Payments of income tax		-8,471	-12,826
Dividends received from third parties		-	7
Net cash flow from operating activities		58,215	55,062
Proceeds from sale of property, plant and equipment	7, 31	99	86
Proceeds from sale of intangible assets	9, 31	-	48
Proceeds from sale of available-for-sale financial investments		-	628
Purchases of property, plant and equipment	7	-28,929	-43,482
Purchases of intangible assets	9	-1,412	-624
Purchase of available-for-sale financial investments		-	-5
Dividends received from investments using equity method	11	534	-
Acquisition of a subsidiary, net of cash acquired	5	-2,137	-
Decrease / (increase) of other financial assets, net		17,056	-6,378
Net cash flow from investing activities		-14,789	-49,727
Proceeds from borrowings (current)	31	602,310	404,387
Repayments of borrowings (current)	31	-625,990	-403,340
Proceeds from interest-bearing borrowings (non-current)	31	-	10,570
(Decrease) / increase in other financial liabilities, net		-1,120	5,790
Interest paid		-9,724	-9,348
Dividends paid	18	-3,360	-3,360
Net cash flow from financing activities		-37,884	4,699
Increase in cash and cash equivalents		5,542	10,034
Net foreign exchange differences		2,360	-3,930
Cash and cash equivalents as of January 1	17	55,404	49,300
Cash and cash equivalents as of December 31	17	63,306	55,404

Consolidated statements of cash flows

for the years ended December 31, 2018 and 2017 (see note 2.3)

	2018	2017
	Thousand USD	Thousand USD
Profit for the period	33,842	31,068
Adjustments total	39,349	50,912
Changes in operating assets and liabilities	-14,260	-22,238
Interest received	764	1,024
Payment of income tax	-7,583	-11,482
Dividends received from third parties	–	6
Net cash flow from operating activities	52,112	49,290
Proceeds from sale of property, plant and equipment	89	77
Proceeds from sale of intangible assets	–	43
Proceeds from sale of available-for-sale financial investments	–	562
Purchase of property, plant and equipment	-25,896	-38,924
Purchase of intangible assets	-1,264	-559
Purchase of available-for-sale financial investments	–	-4
Dividends received from investments using equity method	478	–
Acquisition of a subsidiary, net of cash acquired	-1,913	–
Decrease / (increase) of other financial assets, net	15,268	-5,709
Net cash flow from investing activities	-13,238	-44,515
Proceeds from borrowings (current)	539,176	361,999
Repayments of borrowings (current)	-560,373	-361,062
Proceeds from interest-bearing borrowings (non-current)	–	9,462
(Decrease) / increase in other financial liabilities, net	-1,003	5,183
Interest paid	-8,705	-8,368
Dividends paid	-3,008	-3,008
Net cash flow from financing activities	-33,913	4,206
Increase in cash and cash equivalents	4,961	8,982
Net foreign exchange differences	2,113	-3,518
Cash and cash equivalents as of January 1	49,596	44,132
Cash and cash equivalents as of December 31	56,670	49,596

1. Corporate information

1.1 THE GROUP

SONGWON Industrial Group (the "Group") consists of the parent company Songwon Industrial Co., Ltd. (the "Company") and its consolidated subsidiaries as listed below. The Company was incorporated on December 15, 1965, under the law of the Republic of Korea to engage in the manufacture and commercial sale of antioxidants, stabilizers and polyurethanes. The Company's main manufacturing plants are located in Korea in Ulsan, Maeam and Suwon and in India in Ankleshwar. The address of the registered office (Songwon Industrial Co., Ltd.) can be found at the end of the annual report.

The Company has listed its common shares on the Korea Exchange since June 1977, pursuant to the Korean Securities and Exchange Act.

1.2 SCOPE OF CONSOLIDATION

1.2.1 CHANGE IN THE SCOPE OF CONSOLIDATION

As of December 31, 2018, the scope of consolidation for the consolidated financial statements encompasses 14 entities (2017: 10 entities). Additionally, one entity is classified as a joint venture (2017: 2 entities) and accounted for using the equity method.

In the course of 2018, the following changes in the legal structure of the Group and scope of consolidation took place:

- Establishment of Songwon Europe GmbH, Songwon Chemicals GmbH and Songwon Trading GmbH;
- Shareholding increase through an increase in capital equating to 22% additional shares of Qingdao Long Fortune Songwon Chemical Co., Ltd. (SWDM-CN). Therefore, the conditions for obtaining control were met and SWDM-CN became a subsidiary (formerly, a joint venture) from May 1, 2018 (refer to note 5 for further details).

The consolidated financial statements include the financial statements of the Company and of the subsidiaries listed in the following table. The table also includes joint ventures which are accounted for using the equity method.



Consolidated entities	Location	2018		2017	
		Status	Interest	Status	Interest
Songwon Industrial Co., Ltd.	Korea	Parent		Parent	
Songwon International-Japan K.K.	Japan	Subsidiary	100%	Subsidiary	100%
Songwon Specialty Chemicals-India Pvt. Ltd.	India	Subsidiary	100%	Subsidiary	100%
Songwon International-Americas Inc.	USA	Subsidiary	100%	Subsidiary	100%
Songwon International AG	Switzerland	Subsidiary	100%	Subsidiary	100%
Songwon Group Holding AG	Switzerland	Subsidiary	100%	Subsidiary	100%
Songwon Management AG	Switzerland	Subsidiary	100%	Subsidiary	100%
Songwon ATG GmbH	Germany	Subsidiary	100%	Subsidiary	100%
Songwon Europe GmbH	Germany	Subsidiary	100%	–	–
Songwon Chemicals GmbH	Germany	Subsidiary	100%	–	–
Songwon Trading GmbH	Germany	Subsidiary	100%	–	–
Qingdao Long Fortune Songwon Chemical Co., Ltd.*	China	Subsidiary	72%	–	–
Songwon International Middle East FZE	UAE	Subsidiary	100%	Subsidiary	100%
Songwon Polysys Additives LLC	UAE	Subsidiary	55.5%	Subsidiary	55.5%

Entities accounted for using the equity method (joint ventures)

Songwon Baifu Chemicals (Tangshan) Co., Ltd.	China	Joint venture	30%	Joint venture	30%
Qingdao Long Fortune Songwon Chemical Co., Ltd.*	China	–	–	Joint venture	50%

* refer to note 5. for further details

1.2.2 SUMMARIZED STATEMENTS OF FINANCIAL POSITION AND COMPREHENSIVE INCOME OF SUBSIDIARIES

The summarized statements of financial position and comprehensive income of subsidiaries are as follows:

	Total assets	Total liabilities	Total equity	Total revenue	Net income	Total comp. income
2018 as of December 31	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
Songwon Industrial Co., Ltd.	812,959	402,205	410,754	618,101	7,529	2,793
Songwon International-Japan K.K.	37,520	28,871	8,649	96,025	2,009	2,009
Songwon Specialty Chemicals-India Pvt. Ltd.	34,660	13,873	20,787	18,393	2,799	2,799
Songwon International-Americas Inc.	50,608	23,778	26,830	158,772	17,306	17,306
Songwon International AG	62,939	38,878	24,061	210,501	7,555	7,669
Songwon Group Holding AG	115,526	3,615	111,911	–	7,031	7,031
Songwon Management AG	19,379	19,071	308	–	-977	310
Songwon ATG GmbH	10,654	1,263	9,391	8,223	244	244
Songwon Europe GmbH	221	169	52	850	20	20
Songwon Chemicals GmbH	107	72	35	376	3	3
Songwon Trading GmbH	150	109	41	562	10	10
Qingdao Long Fortune Songwon Chemical Co., Ltd.*	16,389	6,367	10,022	17,731	1,125	1,125
Songwon International Middle East FZE	5,686	2,867	2,819	21,189	1,705	1,705
Songwon Polysys Additives LLC	22,466	28,037	-5,694	12,214	-1,335	-1,335
2017 as of December 31						
Songwon Industrial Co., Ltd.	845,204	433,883	411,321	581,987	28,117	28,335
Songwon International-Japan K.K.	35,438	29,267	6,171	88,733	1,886	1,886
Songwon China Ltd.	–	–	–	–	-910	-910
Songwon Specialty Chemicals-India Pvt. Ltd.	32,992	14,200	18,792	13,731	-228	-177
Songwon International-Americas Inc.	48,720	39,927	8,793	139,304	-1,806	-1,806
Songwon International AG	67,108	46,967	20,141	180,209	9,339	9,440
Songwon Group Holding AG	112,170	7,031	105,139	–	2,253	2,253
Songwon Management AG	18,381	18,389	-8	–	-229	-400
Songwon ATG GmbH	13,023	1,302	11,721	7,141	471	471
Songwon International Middle East FZE	9,002	7,967	1,035	24,654	727	727
Songwon Polysys Additives LLC	21,464	25,595	-4,131	12,891	-1,542	-1,542

* refer to note 5. for further details



1.2.3 INTEREST IN JOINT VENTURES

The Group has a 30% interest in Songwon Baifu Chemicals (Tangshan) Co., Ltd., classified as a jointly controlled entity which primarily engages in the production of thioesters. Determination was driven by the contractually agreed sharing of control with regard to relevant activities, requiring unanimous consent of the control-sharing parties. The established joint venture Qingdao Long Fortune Songwon Chemical Co., Ltd., which is involved in the production of One Pack System Blends, was fully consolidated as of May 1, 2018, due to the acquisition of additional shareholding (refer to note 5).

The summarized statements of financial position and summarized statements of comprehensive income of joint ventures (accounted for using the equity method) are as follows:

Statements of financial position	Cash and cash equivalents	Total current assets	Total non-current assets	Current financial liabilities	Total current liabilities	Non-current financial liabilities	Total non-current liabilities	Equity	Carrying amount
	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	2,365	9,584	7,108	2,164	2,590	–	–	14,102	4,231
Qingdao Long Fortune Songwon Chemical Co., Ltd.	2,488	12,917	3,085	6,760	7,066	3,328	3,328	5,608	2,804
December 31, 2017	4,853	22,501	10,193	8,924	9,656	3,328	3,328	19,710	7,035
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	1,964	9,317	8,326	1,461	1,777	–	–	15,866	4,760
December 31, 2018	1,964	9,317	8,326	1,461	1,777	–	–	15,866	4,760

Statements of comprehensive income	Revenue	Depreciation & Amortization	Interest income	Interest expense	Profit before tax	Income tax expenses	Profit for the period	Other comp. income	Total comp. income
	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	26,500	-83	13	-11	3,600	-915	2,685	-1,413	1,272
Qingdao Long Fortune Songwon Chemical Co., Ltd.	25,598	-235	17	-250	1,142	-256	886	-684	202
December 31, 2017	52,098	-318	30	-261	4,742	-1,171	3,571	-2,097	1,474
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	26,404	-128	14	–	4,943	-1,236	3,707	-163	3,544
Qingdao Long Fortune Songwon Chemical Co., Ltd.*	10,656	-84	11	-91	746	-207	539	160	699
December 31, 2018	37,060	-212	25	-91	5,689	-1,443	4,246	-3	4,243

The joint venture is measured using the equity method. All operations are continuing. The financial statements of the joint venture have the same reporting dates as the Group. In 2018, dividends of 534 Million KRW were received from Songwon Baifu Chemicals (Tangshan) Co., Ltd. (no dividends received in 2017), refer to note 11.

* refer to note 5. for further details

1.2.4 NON-CONTROLLING INTERESTS

1.2.4.1 NON-CONTROLLING INTERESTS

As of May 1, 2018, the conditions to fully consolidate Qingdao Long Fortune Songwon Chemical Co., Ltd. and disclose non-controlling interest were met. Refer to note 5 for further information regarding the step acquisition. No transactions with non-controlling interest related to acquisitions or disposals took place during the reporting period 2017.

1.2.4.2 INTEREST OF NON-CONTROLLING INTERESTS

The Group has two subsidiaries with non-controlling interests of 44.5% and 28% in: Songwon Polysys Additives LLC, United Arab Emirates (SWDM-AE) and Qingdao Long Fortune Songwon Chemical Co., Ltd., China (SWDM-CN) as of December 31, 2018. The net loss attributable to the non-controlling interests for the year 2018 amounted to -279 Million KRW (2017: net loss of -688 Million KRW). Summarized cash flow information of the partly owned subsidiaries is as follows:

	2018 Million KRW	2017 Million KRW
Operating cash flow	811	-1,583
Investing cash flow	21	-215
Financing cash flow	1,988	1,747
Net cash flow	2,820	-51

2. Summary of significant accounting policies

2.1 BASIS OF PREPARATION

The Group prepares statutory financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (K-IFRS) enacted by the *Act on External Audit of Stock Companies*.

The financial statements have been prepared on a historical cost basis, except for certain items, such as financial instruments, which are mentioned separately in the following accounting principles. The financial statements are presented in Korean won (KRW) and all values are rounded to the nearest million (000,000), except when otherwise indicated.

The Group maintains its official accounting records in Korean won. In the event of any differences in the interpretation of the financial statements or the independent auditor's report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

2.2 BASIS OF CONSOLIDATION

The consolidated financial statements comprise the financial statements of the Group and its subsidiaries as of December 31, 2018. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if, and only if, the Group has:

- Power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee)
- Exposure or rights to variable returns from its involvement with the investee
- The ability to use its power over the investee to affect its returns

Generally, there is a presumption that a majority of voting rights results in control. To support this presumption and when the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- The contractual arrangement with the other vote holders of the investee
- Rights arising from other contractual arrangements
- The Group's voting rights and potential voting rights

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when it loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the statements of comprehensive income from the date that the Group gains control until the date that it ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to align their accounting policies with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

2.3 CONVENIENCE TRANSLATION INTO UNITED STATES DOLLAR AMOUNTS

The parent company operates primarily in Korean won and its official accounting records are maintained in Korean won. The US dollar amounts provided in the financial statements represent supplementary information solely for the convenience of the reader. All won amounts are expressed in US dollars at the rate of 1,117.10 KRW to 1 USD, the exchange rate in effect on December 31, 2018. Such a presentation is not in accordance with generally accepted accounting principles and should not be construed as a representation that the Korean won amounts shown could be readily converted, realized or settled in US dollars at this or at any other rate.

2.4 BUSINESS COMBINATIONS AND GOODWILL

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and included in administrative expenses.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquiree.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the re-assessment still results in an excess of the fair value of net assets acquired over the aggregated consideration transferred, then the gain is recognized in profit or loss.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units (CGU) that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill has been allocated to a CGU and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the CGU retained.

2.5 INTEREST IN JOINT ARRANGEMENTS

Joint ventures

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control. The considerations made in determining joint control are similar to those necessary to determine control over subsidiaries.

The Group's investments in its joint ventures are accounted for using the equity method. Under the equity method, the investment in a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the joint venture since the acquisition date.

The statements of comprehensive income reflects the Group's share of the results of operations of the joint venture. Any change in OCI of those investees is presented as part of the Group's OCI. In addition, when there has been a change recognized directly in the equity of a joint venture, the Group recognizes its share of any changes, when applicable, in the statements of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the joint venture are eliminated to the extent of the interest in the joint venture.

The aggregate of the Group's share of profit or loss in a joint venture is shown on the face of the statements of profit or loss outside operating profit and represents profit or loss after tax and non-controlling interests in the subsidiaries of the joint venture.

The financial statements of the joint venture are prepared for the same reporting period as the Group. When necessary, adjustments are made to align the accounting policies with those of the Group.

At each reporting date, the Group determines whether there is objective evidence that the investment in the joint venture is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the joint venture and its carrying value, and then recognizes the loss as "Share of profit of a joint venture" in the statements of comprehensive income.

Upon loss of significant influence over the joint venture, the Group measures and recognizes any retained investment at its fair value. Any difference between the carrying amount of the joint venture – upon loss of significant influence or joint control – and the fair value of the retained investment and proceeds from disposal is recognized in profit or loss.

Joint operations

A joint operation is defined as an arrangement in which the parties with joint control have rights to the assets and obligations for the liabilities relating to that arrangement. In respect of its interest in a joint operation, a joint operator must recognize all of its assets, liabilities, revenues and expenses, including its relative share of jointly controlled assets, liabilities, revenue and expenses.

The considerations made in determining joint control are similar to those necessary to determine control over subsidiaries.

2.6 FOREIGN CURRENCY TRANSLATION

The financial statements are presented in Korean won, which is the parent company's functional currency. Each entity in the Group determines its own functional currency, and items included in the financial statements of each entity are measured using that functional currency.

Transactions in foreign currencies are initially recorded by the Group companies at their respective functional currency rates prevailing at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange ruling at the reporting date. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined.

The assets, including goodwill and liabilities of foreign subsidiaries, where the functional currency is other than the Korean won, are translated using the exchange rate at the end of the reporting period, while the statements of comprehensive income are translated using the average exchange rates during the period. Differences arising from such translations are recognized within equity and reclassified to net income when the gain or loss on disposal of the foreign subsidiary is recognized.

In determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which the Group initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Group determines the transaction date for each payment or receipt of advance consideration.

2.7 PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are valued at cost less accumulated depreciation and accumulated impairment losses. Such costs include the cost of replacing part of the property, plant and equipment and borrowing costs for long-term construction projects, if the recognition criteria are met. Other repair and maintenance costs are recognized in the statements of comprehensive income as incurred. If the costs of certain components of an item of property, plant and equipment are significant in relation to the total cost of the item, they are accounted for and depreciated separately.

Depreciation expense is recognized using the straight-line method. The following useful lives are assumed:

Land	No depreciation
Buildings	18-54 years
Structures	10-40 years
Machinery	10-20 years
Other	1-10 years

Residual values and useful lives are reviewed annually and, if expectations differ from previous estimates, adjusted accordingly.

The gain or loss arising from the derecognition of a property, plant or equipment shall be determined as the difference between the net disposal proceeds and the carrying amount of the asset. It shall be recognized in the income statement when the asset is derecognized.

2.8 INTANGIBLE ASSETS

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses.

Intangible assets with useful finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each reporting period. Changes in the expected useful life or the expected consumption pattern of future economic benefits embodied in the asset are accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates. The amortization expense on intangible assets with finite lives is recognized in the income statement under cost of sales and selling and administration costs in the expense category that is consistent with the function of the intangible assets.

Intangible assets with indefinite useful lives (such as goodwill and memberships) are not amortized, but are tested for impairment annually either individually, or at the cash-generating unit level. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

Gains or losses arising from derecognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset, and are recognized in the income statement when the asset is derecognized.

Intangible assets with finite useful lives are amortized using the straight-line method with the following useful lives:

Software	3 -10 years
Industrial rights	10 years
Useful lives of items recognized in business combinations	
Customer relationships	5 - 9 years
Non-compete contracts	6 years
Process technologies	5 - 6 years

2.9 INVESTMENT PROPERTY

The Group classifies the property to earn rentals or for capital appreciation, or both, as investment properties. As investment properties are accounted for using a cost model, the same accounting policies applied to property, plant and equipment are used for their accounting treatment, except for their classification and presentation.

2.10 LEASES

The determination of whether an arrangement is, or contains, a lease is based on the substance of the arrangement at inception date, whether fulfillment of the arrangement is dependent on the use of a specific asset or assets, and the arrangement conveys a right to use the asset, even if that right is not explicitly specified in an arrangement.

Group as a lessee

Finance leases, which transfer substantially to the Group all the risks and benefits incidental to ownership of the leased item, are capitalized at the commencement of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between finance charges and reduction of the lease liability, so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are recognized in finance costs in the income statement.

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of its estimated useful life and the lease term.

Operating lease payments are recognized as an operating expense in the income statement on a straight-line basis over the lease term.

Group as a lessor

Leases in which the Group does not transfer substantially all the risks and benefits of ownership of the asset are classified as operating leases. Initial direct costs incurred in negotiating an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned. The Group has not entered into finance lease agreements as a lessor.

2.11 IMPAIRMENT OF NON-FINANCIAL ASSETS

The Group reviews non-financial assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If any indication exists, or when annual impairment testing for assets, such as membership is required, the Group estimates the asset's recoverable amount. Recoverability of assets is measured by the comparison of the carrying amount of the asset to the recoverable amount, which is the higher of the asset's value in use and its fair value less costs to sell. If assets do not generate cash inflows that are largely independent of those from other assets or groups of assets, the impairment test is not performed at an individual asset level; instead, it is performed at the level of the cash-generating unit (CGU) that the asset belongs to.

Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, recent market transactions are taken into account, if available. If no such transactions can be identified, an appropriate valuation model is used.

For assets excluding goodwill, an assessment is made at each reporting date as to whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such an indication exists, the Group estimates the asset or cash-generating unit's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited, so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such a reversal is recognized in the income statement.

The following criteria are also applied in assessing impairment of specific assets:

Goodwill

Goodwill is tested for impairment annually as of December 31, as well as whenever there are events or changes in circumstances (triggering events), which suggest that the carrying amount may not be recoverable. Goodwill is carried at cost less accumulated impairment losses.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to the (groups of) cash-generating unit(s) that is expected to benefit from the synergies of the business combination. If the carrying amount of the cash-generating unit(s), to which the goodwill is allocated, exceeds its recoverable amount, an impairment loss on goodwill is recognized. The recoverable amount is the higher of the cash-generating unit(s) fair value less costs to sell and its value in use.

Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives

Intangible assets with indefinite useful lives are tested for impairment annually as of December 31, either individually, or at the cash-generating unit level, as appropriate and when circumstances indicate that the carrying value may be impaired.

2.12 BORROWING COSTS

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets.

2.13 INVENTORIES

Inventory is valued at the lower of the acquisition or production cost and net realizable value, cost being generally determined on the basis of a weighted average. Production costs comprise direct material and labor and applicable manufacturing overheads, including depreciation charges based on normal operating capacity. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses.

2.14 CASH AND CASH EQUIVALENTS

Cash and cash equivalents in the statements of financial position comprise cash at banks, as well as on hand and short-term deposits with a maturity of three months or less.

2.15 PROVISIONS

A provision is recognized when the Group has a present legal or constructive obligation as a result of a past event. It is probable that an outflow of economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. If the effect is material, provisions are recognized at present value by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money.

Greenhouse gas emissions

The Group receives free emission rights as a result of emission trading schemes. The rights are received on an annual basis and, in return, the Group is required to remit rights equal to its actual emissions. The Group has adopted the net liability approach to the emission rights granted. Therefore, a provision is recognized only when actual emissions exceed the emission rights granted and still held. The emission costs are recognized as other operating costs. Where emission rights are purchased from other parties, they are recorded at cost, and treated as a reimbursement right, whereby they are matched to the emission liabilities and remeasured to fair value. The changes in fair value are recognized in the statement of profit or loss and other comprehensive income.

2.16 PENSIONS AND OTHER LONG-TERM EMPLOYMENT BENEFITS

Pensions

The Group operates three defined benefit pension plans: one in Korea, one in Switzerland and one in India. The cost of providing benefits under the defined benefit plan is determined using the projected unit credit method.

Re-measurements, comprising actuarial gains and losses, the effect of the asset ceiling, excluding net interest and the return on plan assets (excluding net interest), are recognized immediately in the statements of financial position with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Re-measurements are not reclassified to profit or loss in subsequent periods.

Past service costs are recognized in profit or loss on the earlier of:

- The date of the plan amendment or curtailment
- The date that the Group recognizes restructuring-related costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The pension expenses are recognized in the income statement under cost of sales and selling and administration costs.

Other long-term employment benefits

The parent company also implements a bonus plan designed to present a prescribed quantity of gold and entitles compensated vacation to long-term service employees. Accounting policies of the bonus plan are mostly the same as the defined benefit plan, except that re-measurements are recognized immediately in profit or loss.



2.17 TAXES

Current income tax

Current income tax assets and liabilities for the current period are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted, or substantively enacted, at the reporting date in the countries where the Group operates and generates taxable income.

Deferred tax

Deferred tax is provided using the liability method on temporary differences at the reporting date between the tax basis of assets and liabilities, and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- Where the deferred tax liability arises from the initial recognition of goodwill, or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit, nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized, except:

- Where the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit, nor taxable profit or loss.
- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future, and taxable profit will be available against which the temporary differences can be utilized.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date, and recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transaction, either in other comprehensive income, or directly in equity.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

2.18 REVENUE FROM CONTRACTS WITH CUSTOMERS

The Group is in the business of the manufacture and commercial sale of antioxidants, stabilizers and polyurethane. Revenue from contracts with customers is recognized when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. The Group has generally concluded that it is the principal in its revenue arrangements, except for the agency services below, because it typically controls the goods or services before transferring them to the customer.

Sales of Goods

The Group has concluded that revenue from sale of goods should be recognized at the point in time when control of the asset is transferred to the customer, generally on delivery of the goods.

Sale of services

The Group provides transportation service in combination with the sales of goods. The services can be provided by others and are not significantly modified or customized. There are two performance obligations in a contract for bundled sales of goods and transportation services, because its promises to transfer goods and provide transportation services, are capable of being distinct and separately identifiable. The Group allocates the transaction price based on the relative stand-alone selling prices of goods and transportation services. The Group concluded that revenue for transportation services, will be recognized over time because the customer simultaneously receives and consumes the benefits provided by the Group.

Contract balances

(1) Contract assets

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If the Group performs by transferring goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognized for the earned consideration that is conditional.

(2) Trade receivables

A receivable represents the Group's right to an amount of consideration that is unconditional (i.e., only the passage of time is required before payment of the consideration is due). Refer to accounting policies of financial assets in the note 2.19.

(3) Contract liabilities

A contract liability is the obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Group transfers goods or services to the customer, a contract liability is recognized when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognized as revenue when the Group performs under the contract.

2.19 FINANCIAL INSTRUMENTS

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Financial assets are classified, at initial recognition, as subsequently measured at amortized cost, fair value through other comprehensive income (FVOCI), and fair value through profit or loss (FVtPL).

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them: With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs.

In order for a financial asset to be classified and measured at amortized cost or FVOCI, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

(1) Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:

- Financial assets at amortized cost (debt instruments);
- Financial assets at FVOCI with recycling of cumulative gains and losses (debt instruments);
- Financial assets designated at FVOCI with no recycling of cumulative gains and losses upon derecognition (equity instruments);
- Financial assets at FVtPL.

(2) Financial assets at amortized cost (debt instruments)

This category is the most relevant to the Group. The Group measures financial assets at amortized cost if both of the following conditions are met:

- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows; and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortized cost are subsequently measured using the effective interest (EIR) method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, modified or impaired.

(3) Financial assets at FVOCI (debt instruments)

The Group measures debt instruments at FVOCI if both of the following conditions are met:

- The financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling; and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

For debt instruments at FVOCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in the statement of profit or loss and computed in the same manner as for financial assets measured at amortized cost. The remaining fair value changes are recognized in OCI. Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss. The Group's debt instruments at FVOCI includes investments in quoted debt instruments included under other non-current financial assets.

(4) Financial assets designated at FVOCI (equity instruments)

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity instruments designated at FVOCI when they meet the definition of equity under K-IFRS 1032 and are not held for trading. The classification is determined on an instrument-by-instrument basis.

Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the statement of profit or loss when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at FVOCI are not subject to impairment assessment.

The Group elected to classify irrevocably its non-listed equity investments under this category.

(5) Financial assets at FVTPL

Financial assets at FVTPL include financial assets held for trading, financial assets designated upon initial recognition at FVTPL, or financial assets mandatorily required to be measured at fair value. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at FVTPL, irrespective of the business model. Notwithstanding the criteria for debt instruments to be classified at amortized cost or at FVOCI, as described above, debt instruments may be designated at FVTPL on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch.

Financial assets at FVTPL are carried in the statement of financial position at fair value with net changes in fair value recognized in the statement of profit or loss.

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if: the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at FVTPL. Embedded derivatives are measured at fair value with changes in fair value recognized in profit or loss. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the FVTPL category.

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at FVTPL.

(6) Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e., removed from the Group's consolidated statement of financial position) when:

- The rights to receive cash flows from the asset have expired; or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a pass-through arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Group continues to recognize the transferred asset to the extent of its continuing involvement. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

(7) Impairment of financial assets

Further disclosures relating to impairment of financial assets are also provided in the sections:

- Significant accounting judgments, estimates and assumptions
- Debt instruments at FVOCI
- Trade and other receivables

The Group recognizes an allowance for expected credit losses (ECLs) for all debt instruments not held at FVtPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognized in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors regional specific to the debtors and the economic environment.

For debt instruments at FVOCI, the Group applies the low credit risk simplification. At every reporting date, the Group evaluates whether the debt instrument is considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the internal credit rating of the debt instrument. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

The Group considers a financial asset in default when contractual payments are 180 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Financial liabilities

(1) Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at PVtPL, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Group's financial liabilities include mainly trade and other payables, interest-bearing loans and borrowings as well as derivative liabilities.

(2) Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

(3) Financial liabilities at FVtPL

Financial liabilities at FVtPL include financial liabilities held for trading and financial liabilities designated upon initial recognition as at PVtPL.

Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by K-IFRS 1109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit or loss.

Financial liabilities designated upon initial recognition at FVtPL are designated at the initial date of recognition, and only if the criteria in K-IFRS 1109 are satisfied.

(4) Loans and borrowings

This is the category most relevant to the Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included as finance costs in the statement of profit or loss.

This category generally applies to interest-bearing loans and borrowings. For more information, refer to Note 25.

(5) Derecognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit or loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the consolidated statement of financial position if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

Derivative financial instruments and hedge accounting

(1) Initial recognition and subsequent measurement

The Group uses derivative financial instruments, such as forward exchange contracts and interest rate swaps, to hedge its foreign currency risks, interest rate risks and commodity price risks. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

For the purpose of hedge accounting, hedges are classified as:

- Fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment;
- Cash flow hedges when hedging the exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability, or a highly probable forecast transaction or the foreign currency risk in an unrecognized firm commitment;
- Hedges of a net investment in a foreign operation.

At the inception of a hedge relationship, the Group formally designates and documents the hedge relationship to which it wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge.

Before January 1, 2018, the documentation includes identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged, and how the Group will assess the effectiveness of changes in the hedging instrument's fair value in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. Such hedges are expected to be highly effective in achieving offsetting changes in fair value or cash flows and are assessed on an ongoing basis to determine that they actually have been highly effective throughout the financial reporting periods for which they were designated.

Beginning January 1, 2018, the documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how the Group will assess whether the hedging relationship meets the hedge effectiveness requirements (including analysis of the sources of hedge ineffectiveness and how the hedge ratio is determined). A hedging relationship qualifies for hedge accounting if it meets all of the following effectiveness requirements:

- There is 'an economic relationship' between the hedged item and the hedging instrument.
- The effect of credit risk does not 'dominate the value changes' that result from that economic relationship.
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

Hedges that meet all the qualifying criteria for hedge accounting are accounted for, as described below:

(2) Fair value hedges

The change in the fair value of a hedging instrument is recognized in the statement of profit or loss as other expense. The change in the fair value of the hedged item attributable to the risk hedged is recorded as part of the carrying value of the hedged item and is also recognized in the statement of profit or loss as other expenses.

For fair value hedges relating to items carried at amortized cost, any adjustment to carrying value is amortized through profit or loss over the remaining term of the hedge using the EIR method. The EIR amortization may begin as soon as an adjustment exists and no later than when the hedged item ceases to be adjusted for changes in its fair value attributable to the risk being hedged.

If the hedged item is derecognized, the unamortized fair value is recognized immediately in profit or loss.

When an unrecognized firm commitment is designated as a hedged item, the subsequent cumulative change in the fair value of the firm commitment attributable to the hedged risk is recognized as an asset or liability with a corresponding gain or loss recognized in profit or loss. The Group had forward exchange contracts in order to hedge the risk of foreign exchange rate fluctuation of assets and liabilities denominated in foreign currencies. The Group applies fair value hedge accounting for forward exchange contracts (note 25.1.1).

(3) Cash flow hedges

The effective portion of the gain or loss on the hedging instrument is recognized in OCI in the cash flow hedge reserve, while any ineffective portion is recognized immediately in the statement of profit or loss. The cash flow hedge reserve is adjusted to the lower of the cumulative gain or loss on the hedging instrument and the cumulative change in fair value of the hedged item.

The amounts accumulated in OCI are accounted for, depending on the nature of the underlying hedged transaction. If the hedged transaction subsequently results in the recognition of a non-financial item, the amount accumulated in equity is removed from the separate component of equity and included in the initial cost or other carrying amount of the hedged asset or liability. This is not a reclassification adjustment and will not be recognized in OCI for the period. This also applies where the hedged forecast transaction of a non-financial asset or non-financial liability subsequently becomes a firm commitment for which fair value hedge accounting is applied.

For any other cash flow hedges, the amount accumulated in OCI is reclassified to profit or loss as a reclassification adjustment in the same period or periods during which the hedged cash flows affect profit or loss.

If cash flow hedge accounting is discontinued, the amount that has been accumulated in OCI must remain in accumulated OCI if the hedged future cash flows are still expected to occur. Otherwise, the amount will be immediately reclassified to profit or loss as a reclassification adjustment. After discontinuation, once the hedged cash flow occurs, any amount remaining in accumulated OCI must be accounted for depending on the nature of the underlying transaction as described above.

The Group had interest rate swap agreements about some borrowings. The Group applies cash flow hedge accounting for interest rate swap contracts (note 25.1.2).

(4) Hedges of a net investment

Hedges of a net investment in a foreign operation, including a hedge of a monetary item that is accounted for as part of the net investment, are accounted for in a way similar to cash flow hedges. Gains or losses on the hedging instrument relating to the effective portion of the hedge are recognized as OCI while any gains or losses relating to the ineffective portion are recognized in the statement of profit or loss. On disposal of the foreign operation, the cumulative value of any such gains or losses recorded in equity is transferred to the statement of profit or loss.

2.20 NEW AND AMENDED STANDARDS AND INTERPRETATIONS

The Group applied K-IFRS 1115 and K-IFRS 1109 for the first time using the modified retrospective approach. The nature and effect of the changes as a result of adoption of these new accounting standards are described below.

Several other amendments and interpretations apply for the first time in 2018, but do not have an impact on the consolidated financial statements of the Group. The Group has not early adopted any standards, interpretations or amendments that have been issued but are not yet effective.

K-IFRS 1115 from Contracts with Customers

K-IFRS 1115 supersedes K-IFRS 1011 *Construction Contracts*, K-IFRS 1018 *Revenue and related Interpretations* and it applies, with limited exceptions, to all revenue arising from contracts with its customers. K-IFRS 1115 establishes a five-step model to account for revenue arising from contracts with customers and requires that revenue be recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer.

K-IFRS 1115 requires entities to exercise judgement, taking into consideration all of the relevant facts and circumstances when applying each step of the model to contracts with their customers. The standard also specifies the accounting for the incremental costs of obtaining a contract and the costs directly related to fulfilling a contract. In addition, the standard requires extensive disclosures.

The comparative prior year numbers 2017 were not restated due to the implication of the modified retrospective approach. The Group applied K-IFRS 1115 retrospectively to only the most current period presented in the financial statements. To do so, the Group had to recognize the cumulative effect of initially applying K-IFRS 1115 as an adjustment to the opening balance of retained earnings at the date of initial application.

The effect of adopting K-IFRS 1115 is, as follows:

Impact on retained earnings as of January 1, 2018

	Before adoption amount	Adjustment	After adoption amount
Retained earnings	322,085	–	322,085

Impact on statement of profit or loss (increase | (decrease) in profit) for the financial year 2018

	Before adoption amount	Adjustment	After adoption amount
Revenue from contracts with customers (*1)	788,738	–	788,738
Cost of sales (*2)	-623,398	-9,184	-632,582
Selling and general administrative expenses (*1)	-111,063	9,184	-101,879

(*1) Contracts to provide transfer of goods and shipping services

(*2) Prior to the adoption of K-IFRS 1115, for contracts to provide transfer of goods and shipping services, the Group did not allocate the transaction price because it provides the transfer of goods with shipping services. In accordance with K-IFRS 1115, the Group determined that there are two performance obligations in such contracts and allocated the transaction price on their relative stand-alone selling prices basis. Expenses directly related to the shipping services are accounted for as cost of goods sold. As a result, selling and administrative expenses decreased by 9,184 Million KRW and other cost of sales increased by 9,184 Million KRW.

K-IFRS 1109 Financial Instruments

K-IFRS 1109 *Financial Instruments* replaces K-IFRS 1039 *Financial Instruments: Recognition and Measurement* for periods beginning on or after January 1, 2018, bringing together all three aspects of the accounting for financial instruments: classification and measurement; impairment; and hedge accounting.

On the date of initial application, January 1, 2018, the measurement categories and carrying amounts of financial assets in K-IFRS 1039 and K-IFRS 1109 are as follows.

	K-IFRS 1039 measurement category	K-IFRS 1039 measurement book value	K-IFRS 1109 measurement category	K-IFRS 1109 measurement book value
Cash and short-term deposits	Loans and receivables	55,404	Amortized cost	55,404
Trade receivables	Loans and receivables	126,698	Amortized cost	126,698
Other receivables	Loans and receivables	4,196	Amortized cost	4,196
Equity shares	Available for sale	900	FVOCI	900
Bank deposit	Loans and receivables	10,196	Amortized cost	2,642
			FVtPL	7,554
Loans	Loans and receivables	19,641	Amortized cost	19,641
Deposit	Loans and receivables	753	Amortized cost	753
Derivative instrument (interest rate swap)	Hedge accounting	223	Hedge accounting	223

The assessment of the Group's business model was made as of the date of initial application, January 1, 2018, and then applied retrospectively to those financial assets that were not derecognized before January 1, 2018. The assessment of whether contractual cash flows on debt instruments are solely comprised of principal and interest was made based on the facts and circumstances as of the initial recognition of the assets.

The classification and measurement requirements of K-IFRS 1109 did not have a significant impact on the Group. The Group continued measuring at fair value all financial assets previously held at fair value under K-IFRS 1039.

The following are the changes in the classification of the Group's financial assets:

(1) Trade receivables and other non-current financial assets

Trade receivables and other non-current financial assets (i.e., loan to an associate and loan to a director) previously classified as loans and receivables are held to collect contractual cash flows and give rise to cash flows representing solely payments of principal and interest. These are now classified and measured as debt instruments at amortized cost.

(2) Quoted debt instruments

Quoted debt instruments previously classified as available-for-sale (AFS) financial assets are now classified and measured as debt instruments at FVOCI. The Group expects not only to hold the assets to collect contractual cash flows, but also to sell a significant amount on a relatively frequent basis. The Group's quoted debt instruments are regular government and corporate bonds that passed the SPPI test.

(3) Equity investments

Equity investments in non-listed companies previously classified as AFS financial assets are now classified and measured as equity instruments designated at FVOCI. The Group elected to classify irrevocably its non-listed equity investments under this category as it intends to hold these investments for the foreseeable future. There were no impairment losses recognized in profit or loss for these investments in prior periods.

K-IFRS 1109 retained most of the existing requirements of K-IFRS 1039 for the classification and measurement of financial liabilities.

The application of K-IFRS 1109 did not have a significant impact to the Group's accounting policies related to financial liabilities.

K-IFRS 2122 Foreign Currency Transactions and Advance Considerations

The Interpretation clarifies that, in determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which an entity initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, then the entity must determine a date of the transactions for each payment or receipt of advance consideration. This Interpretation does not have any impact on the Group's consolidated financial statements.

K-IFRS 1040 Investment Property – Transfers of Investment Property

The amendments clarify when an entity should transfer property, including property under construction or development into, or out of investment property. The amendments state that a change in use occurs when the property meets, or ceases to meet, the definition of investment property and there is evidence of the change in use. A mere change in management's intentions for the use of a property does not provide evidence of a change in use. These amendments do not have any impact on the Group's consolidated financial statements.

K-IFRS 1102 Share-based Payment – Classification and Measurement of Share-based Payment Transactions

The KASB issued amendments to K-IFRS 1102 *Share-based Payment* that address three main areas: the effects of vesting conditions on the measurement of a cash-settled share-based payment transaction; the classification of a share-based payment transaction with net settlement features for withholding tax obligations; and accounting where a modification to the terms and conditions of a share-based payment transaction changes its classification from cash settled to equity settled. On adoption, entities are required to apply the amendments without restating prior periods, but retrospective application is permitted if elected for all three amendments and other criteria are met. The Group's accounting policy for cash-settled share-based payments is consistent with the approach clarified in the amendments. In addition, the Group has no share-based payment transaction with net settlement features for withholding tax obligations and had not made any modifications to the terms and conditions of its share-based payment transaction. Therefore, these amendments do not have any impact on the Group's consolidated financial statements.

3. Significant accounting judgments, estimates and assumptions

The preparation of the Group's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the end of the reporting period. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods. The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, which have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below.

Notes	Description	Nature of estimation
7, 8, 9, 10	Impairment of non-financial assets / goodwill	Impairment exists when the carrying value of an asset or cash-generating unit exceeds its recoverable amount, which is the higher of its fair value less costs to sell and its value in use. The determination of the recoverable amount of a cash-generating unit involves the use of estimates by management. The fair value less costs to sell calculation is based on available data from binding sales transactions in an arm's length transaction of similar assets or observable market prices less incremental costs for disposing of the asset. The value in use calculation is based on a discounted cash flow model. The cash flows are derived from the expectations for the next three to five years and do not include restructuring activities that the Group is not yet committed to or significant future investments that will enhance the asset's performance of the cash-generating unit being tested. The recoverable amount based on the value in use is most sensitive to the discount rate used for the discounted cash flow model (WACC), as well as the expected future cash-inflows and the growth rate used for extrapolation purposes. The recoverable amount based on the fair value less cost to sell is most sensitive to the market prices, premiums and the estimate of cost to sell. These estimates, including the methodologies used, can have a material impact on the fair value and ultimately, the amount of any goodwill impairment.
9	Customer relations	Customer relations are classified as finite lived intangible asset under note 2.8 and amortized over their estimated useful life. The estimated useful life is based on estimates of the time period during which this intangible asset generates cash flows, as well as historic empirical data concerning customer loyalty. Calculation of the present value of estimated future cash flows includes essential assumptions, especially of future sales. In addition, discounting is based on assumptions and estimations concerning business-specific capital costs, which are themselves dependent on national risks, and additional risks resulting from the volatility of the respective business.
21, 22	Pension and other employment benefits	The cost of defined benefit pension plans and other similar long-term employee benefits, and the present value of the pension obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions, which may differ from actual developments in the future. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases. Due to the complexity of the valuation, the underlying assumptions and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions.
29.2	Deferred tax assets	Deferred tax assets are recognized for all unused tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits together with future tax planning strategies.
25	Fair value of financial instruments	Where the fair value of financial assets and financial liabilities recorded in the statement of financial position cannot be derived from active markets, their fair value is determined using valuation techniques including the discounted cash flow model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. The judgments include considerations of inputs, such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

4. Standards issued but not yet effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below. The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

K-IFRS 1116 Leases

K-IFRS 1116 *Leases* replaces the existing standard on accounting for leases, K-IFRS 1017, K-IFRS 2104 *Determining whether an Arrangement contains a Lease*, K-IFRS 2015 *Operating Leases-Incentives*, and K-IFRS 2027 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*. The Group will apply the standard as at January 1, 2019. The Group will transition to K-IFRS 1116 in accordance with the modified retrospective approach; the prior-year figures will not be adjusted.

K-IFRS 1116 introduces a uniform lessee accounting model. Applying this model, a lessee is required to recognize a right-of-use asset representing the lessee's right to use the underlying asset and a financial liability representing the lessee's obligation to make future lease payments. There are exemptions for short-term leases and leases of low-value assets. The Group will make use of the relief options provided for leases of low-value assets and short-term leases.

For leases that have been classified to date as operating leases in accordance with K-IFRS 1017, the lease liability will be recognized at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate at the time the standard is first applied. In principle, right-of-use assets are initially recognized at the value of the corresponding liabilities. In some cases, the value of right-of-use assets may differ from the value of the liabilities due to offsetting against prepayments or provisions.

Lessees will be also required to remeasure the lease liability upon the occurrence of certain events (e.g., a change in the lease term, a change in future lease payments resulting from a change in an index or rate used to determine those payments). The lessee will generally recognize the amount of the remeasurement of the lease liability as an adjustment to the right-of-use asset.

Lessor accounting remains comparable to that provided by the existing Leasing standard – lessors continue to classify their leases as operating or finance leases. The previous determination pursuant to K-IFRS 1017 and K-IFRS 2104 of whether a contract is lease is maintained for existing contracts, in accordance with K-IFRS 1116.

The Group is assessing the potential effect of the amendments on its consolidated financial statements. The Group will apply these amendments on the required effective date.

Amendments to K-IFRS 1109: Prepayment Features with Negative Compensation

Under K-IFRS 1109, a debt instrument can be measured at amortized cost or at fair value through other comprehensive income, provided that the contractual cash flows are 'solely payments of principal and interest on the principal amount outstanding' (the SPPI criterion) and the instrument is held within the appropriate business model for that classification. The amendments to K-IFRS 1109 clarify that a financial asset passes the SPPI criterion regardless of the event or circumstance that causes the early termination of the contract and irrespective of which party pays or receives reasonable compensation for the early termination of the contract.

The amendments should be applied retrospectively and are effective from January 1, 2019, with earlier application permitted. These amendments have no impact on the consolidated financial statements of the Group.

Amendments to K-IFRS 1110 and K-IFRS 1028: Sale or Contribution of Assets between an Investor and its Associate or Joint Venture

The amendments address the conflict between K-IFRS 1110 and K-IFRS 1028 in dealing with the loss of control of a subsidiary that is sold or contributed to an associate or joint venture. The amendments clarify that the gain or loss resulting from the sale or contribution of assets that constitute a business, as defined in K-IFRS 1103, between an investor and its associate or joint venture, is recognized in full. Any gain or loss resulting from the sale or contribution of assets that do not constitute a business, however, is recognized only to the extent of unrelated investors' interests in the associate or joint venture. The KASB has deferred the effective date of these amendments indefinitely, but an entity that early adopts the amendments must apply them prospectively. The Group will apply these amendments when they become effective.

Amendments to K-IFRS 1019: Plan Amendment, Curtailment or Settlement

The amendments to K-IFRS 1019 address the accounting when a plan amendment, curtailment or settlement occurs during a reporting period. The amendments specify that when a plan amendment, curtailment or settlement occurs during the annual reporting period, an entity is required to:

- Determine current service cost for the remainder of the period after the plan amendment, curtailment or settlement, using the actuarial assumptions used to remeasure the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event;
- Determine net interest for the remainder of the period after the plan amendment, curtailment or settlement using: the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event; and the discount rate used to remeasure that net defined benefit liability (asset).

The amendments also clarify that an entity first determines any past service cost, or a gain or loss on settlement, without considering the effect of the asset ceiling. This amount is recognized in profit or loss. An entity then determines the effect of the asset ceiling after the plan amendment, curtailment or settlement. Any change in that effect, excluding amounts included in the net interest, is recognized in other comprehensive income.

The amendments apply to plan amendments, curtailments, or settlements occurring on or after the beginning of the first annual reporting period that begins on or after January 1, 2019, with early application permitted. These amendments will apply only to any future plan amendments, curtailments, or settlements of the Group.

Amendments to K-IFRS 1028: Long-term Interest in Associates and Joint Ventures

The amendments clarify that an entity applies K-IFRS 1109 to long-term interests in an associate or joint venture to which the equity method is not applied but that, in substance, form part of the net investment in the associate or joint venture (long-term interests). This clarification is relevant because it implies that the expected credit loss model in K-IFRS 1109 applies to such long-term interests.

The amendments also clarified that, in applying K-IFRS 1109, an entity does not take account of any losses of the associate or joint venture, or any impairment losses on the net investment, recognized as adjustments to the net investment in the associate or joint venture that arise from applying K-IFRS 1028 *Investments in Associates and Joint Ventures*.

The amendments should be applied retrospectively and are effective from January 1, 2019, with early application permitted. Since the Group does not have such long-term interests in its associate and joint venture, the amendments will not have an impact on its consolidated financial statements.

IFRIC Interpretation 23 Uncertainty over Income Tax Treatment

The Interpretation addresses the accounting for income taxes when tax treatments involve uncertainty that affects the application of K-IFRS 1012 and does not apply to taxes or levies outside the scope of K-IFRS 1012, nor does it specifically include requirements relating to interest and penalties associated with uncertain tax treatments. The Interpretation specifically addresses the following:

- Whether an entity considers uncertain tax treatments separately;
- The assumptions an entity makes about the examination of tax treatments by taxation authorities;
- How an entity determines taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates;
- How an entity considers changes in facts and circumstances.

The Group has to determine whether to consider each uncertain tax treatment separately or together with one or more other uncertain tax treatments. The approach that better predicts the resolution of the uncertainty should be followed. The interpretation is effective for annual reporting periods beginning on or after January 1, 2019, but certain transition reliefs are available. The Group will apply the interpretation from its effective date. Since the Group operates in a complex multinational tax environment, applying the Interpretation may affect its consolidated financial statements. In addition, the Group may need to establish processes and procedures to obtain information that is necessary to apply the Interpretation on a timely basis.

Annual Improvements 2015-2017 Cycle (issued in December 2017)

These improvements include:

(1) K-IFRS 1103 Business Combinations

The amendments clarify that, when an entity obtains control of a business that is a joint operation, it applies the requirements for a business combination achieved in stages, including remeasuring previously held interests in the assets and liabilities of the joint operation at fair value. In doing so, the acquirer remeasures its entire previously held interest in the joint operation.

An entity applies those amendments to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2019, with early application permitted. These amendments will apply on future business combinations of the Group.

(2) K-IFRS 1111 Joint Arrangements

A party that participates in, but does not have joint control of, a joint operation might obtain joint control of the joint operation in which the activity of the joint operation constitutes a business as defined in K-IFRS 1103. The amendments clarify that the previously held interests in that joint operation are not remeasured.

An entity applies those amendments to transactions in which it obtains joint control on or after the beginning of the first annual reporting period beginning on or after January 1, 2019, with early application permitted. These amendments are currently not applicable to the Group but may apply to future transactions.

(3) K-IFRS 1012 Income Taxes

The amendments clarify that the income tax consequences of dividends are linked more directly to past transactions or events that generated distributable profits than to distributions to owners. Therefore, an entity recognizes the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where the entity originally recognized those past transactions or events.

An entity applies those amendments for annual reporting periods beginning on or after January 1, 2019, with early application is permitted. When an entity first applies those amendments, it applies them to the income tax consequences of dividends recognized on or after the beginning of the earliest comparative period. Since the Group's current practice is in line with these amendments, the Group does not expect any effect on its consolidated financial statements.

(4) K-IFRS 1023 Borrowing Costs

The amendments clarify that an entity treats as part of general borrowings any borrowing originally made to develop a qualifying asset when substantially all of the activities necessary to prepare that asset for its intended use or sale are complete.

An entity applies those amendments to borrowing costs incurred on or after the beginning of the annual reporting period in which the entity first applies those amendments. An entity applies those amendments for annual reporting periods beginning on or after January 1, 2019, with early application permitted. Since the Group's current practice is in line with these amendments, the Group does not expect any effect on its consolidated financial statements.

5. Business combinations

5.1 BUSINESS COMBINATIONS IN 2018

Step acquisition of Qingdao Long Fortune Songwon Chemical Co., Ltd.

Since August 2015, Qingdao Long Fortune Songwon Chemical Co., Ltd. (SWDM-CN) is consolidated in the financial statements of the Group using the equity method. In April 2018, the Group acquired additional 22% of the shares through a capital increase. The conditions to fully consolidate and disclose non-controlling interest were met and SWDM-CN was fully consolidated as of May 1, 2018.

The assets, liabilities and contingent liabilities of SWDM-CN were measured at fair value on the date of acquisition. If the costs exceed the fair value of the acquired identifiable assets, liabilities and contingent liabilities, the balance is reported as goodwill. If the costs fall under the fair value of the acquired identifiable assets, liabilities and contingent liabilities, the bargain purchase gain is recorded in the consolidated statements of comprehensive income.

Assets acquired and liabilities assumed

The assessment of the fair values of the identifiable assets and liabilities of the acquired business at the date of acquisition were (figures represent a 100% interest):

	Million KRW
Assets	
Property, plant and equipment	1,483
Other non-current assets	1,554
Deferred tax assets	128
Inventories	6,012
Trade and other receivables	7,841
Other current assets	299
Cash and cash equivalents	2,103
Total assets	19,420
Liabilities	
Other non-current financial liabilities	34
Trade and other payables	7,208
Other current liabilities	33
Income tax payable	657
Total liabilities	7,932
Total identifiable net assets at fair value	11,488
Bargain purchase gain arising on acquisition	-2,258
Consideration satisfied by:	
Consideration transferred on acquisition of 22% shareholdings	4,240
Preliminary revaluation of previously held interest in SWDM-CN	2,499
Non-controlling interest measured at fair value	2,491
Total consideration	9,230

GAIN ARISING ON ACQUISITION (BARGAIN PURCHASE GAIN)

In 2017, SWDM-CN achieved a small positive net income. Under the consideration of the higher burden of environmental regulations as well as new competitors entering the market, the bargain purchase gain is reasonable. In addition, the Asian market remains to be volatile driven by spot business for SWDM-CN. The resulting gain of 2,258 Million KRW (bargain purchase gain) was recognized as other operating income in the consolidated statements of comprehensive income.

From the date of acquisition, May 1, 2018 through December 31, 2018, the acquired company has contributed 17,480 Million KRW of revenue and 894 Million KRW (gain) to the net profit before tax of the Group. If the business combination had taken place on January 1, 2018, revenue from continuing operations of the Group would have been 793,357 Million KRW and the net profit before tax from continuing operations for the Group would have been 46,497 Million KRW.

REVALUATION OF PREVIOUSLY HELD INTEREST

The Group held an equity interest of 50% before the increase and accounted for SWDM-CN as a joint venture using the equity method. In this business acquisition, which was achieved in stages, the Group re-measured its previously held interest. The resulting loss of 656 Million KRW is included in the consolidated statements of comprehensive income.

5.2 BUSINESS COMBINATIONS IN 2017

During the financial year 2017 there were no business combinations.



6. Segment information

For management purposes, SONGWON Industrial Group is organized into one main operating segment. All of the Group's activities are interrelated, and each activity is dependent on the others. Accordingly, all significant operating decisions are based upon analysis of the Group as one segment. The results from this operating segment are equivalent to the financial statements of the Group as a whole.

The Group is operating worldwide and therefore, discloses geographic segment information.

6.1 PRODUCT INFORMATION

	2018	2017
	Million KRW	Million KRW
Alkylphenols and Intermediates	2,343	1,670
Plasticizers	8,121	8,192
Polyester Diols	11,668	10,850
Polymer Stabilizers (AOX and UVs)	554,304	495,345
Polyurethanes	43,819	40,536
PVC Stabilizers	37,792	47,936
SAP and Flocculants	7,972	8,483
Tin Intermediates	82,351	84,117
Others	40,368	27,724
Total sales	788,738	724,853

	2018	2017
	Million KRW	Million KRW
Sales of goods	779,554	724,853
Sales of services*	9,184	-
Total sales	788,738	724,853

* Sales of services is a sale recognized over time in accordance with K-IFRS 1115, refer to note 2.18. for further details

6.2 GEOGRAPHIC INFORMATION

	2018	2017
	Million KRW	Million KRW
Korea	180,006	194,963
Rest of Asia	220,740	192,072
Europe	176,991	150,549
North and South America	162,894	138,717
Australia	2,431	2,764
Middle East and Africa	45,676	45,788
Total sales	788,738	724,853

The revenue information above is based on the location of the customer. Korea is disclosed separately due to the size of the material Korean home market whereas all other countries have been summarized to regions. Therefore, no country revenues are disclosed separately.

The Group did not have a single customer with more than 10% of the Group's total revenue during the current reporting periods.

6.3 NON-CURRENT ASSETS

	2018	2017
	Million KRW	Million KRW
Korea	405,051	407,183
Rest of Asia	21,402	22,509
Europe	13,249	16,033
North and South America	4,689	4,896
Middle East and Africa	16,273	16,239
Total	460,664	466,860

Non-current assets for this purpose consist of property, plant and equipment, investment properties and intangible assets.

7. Property, plant and equipment

Cost	Land	Buildings	Structures	Machinery	Other	Construction in progress	Total
	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
As of January 1, 2017	147,904	85,352	65,640	462,827	17,895	10,537	790,155
Additions	–	470	36	310	1,833	39,733	42,382
Disposals	–	–	-6	-1,843	-936	–	-2,785
Reclassifications	–	4,866	524	40,193	212	-45,795	–
Net exchange differences	–	-1,972	1	-1,617	-212	-160	-3,960
As of December 31, 2017	147,904	88,716	66,195	499,870	18,792	4,315	825,792
As of January 1, 2018	147,904	88,716	66,195	499,870	18,792	4,315	825,792
Additions	1,604	78	59	733	1,571	23,048	27,093
Disposals	–	–	-152	-9,374	-2,002	–	-11,528
Reclassifications	–	947	841	21,036	1,069	-23,893	–
Business acquisition	–	–	–	1,139	292	52	1,483
Net exchange differences	–	492	–	-147	4	-24	325
As of December 31, 2018	149,508	90,233	66,943	513,257	19,726	3,498	843,165

Depreciation

As of January 1, 2017	–	-20,132	-34,311	-292,056	-12,172	–	-358,671
Depreciation charge	–	-2,404	-3,101	-20,675	-1,544	–	-27,724
Disposals	–	–	5	1,152	903	–	2,060
Net exchange differences	–	97	–	141	26	–	264
As of December 31, 2017	–	-22,439	-37,407	-311,438	-12,787	–	-384,071
As of January 1, 2018	–	-22,439	-37,407	-311,438	-12,787	–	-384,071
Depreciation charge	–	-2,429	-3,137	-22,232	-1,693	–	-29,491
Disposals	–	–	151	7,691	1,984	–	9,826
Net exchange differences	–	-40	–	-13	-54	–	-107
As of December 31, 2018	–	-24,908	-40,393	-325,992	-12,550	–	-403,843

Net book value

As of December 31, 2018	149,508	65,325	26,550	187,265	7,176	3,498	439,322
As of December 31, 2017	147,904	66,277	28,788	188,432	6,005	4,315	441,721

No impairment of fixed assets has been recognized in 2018 as well as in 2017. Non-cash transactions amounting to 2,148 Million KRW (2017: 3,984 Million KRW) are included in the additions for year ending 2018.

Capitalized borrowing costs

Borrowing costs, which are directly attributable to the acquisition or production of a qualified asset, are capitalized as part of the cost of that asset. No borrowing costs have been capitalized during the 2018 and 2017 financial years.

Finance leases

There are no assets held under leasing agreements, which may be considered as an asset purchase in economic terms (finance lease), in the Group. Payment on leased assets defined as operating lease and having a rental character are expensed over the lease period.

Contractual commitments and pledged assets

A pledged asset is an asset that is transferred to a lender for the purpose of securing debt. The lender of the debt maintains possession of the pledged asset but does not have ownership unless a default occurs (refer to note 27). For contractual commitments to purchase property, plant and equipment, refer to note 26.3.

8. Investment properties

Cost	Land	Buildings	Structures	Total
	Million KRW	Million KRW	Million KRW	Million KRW
As of January 1, 2017	3,279	505	32	3,816
Net exchange differences	-1	-7	-	-8
As of December 31, 2017	3,278	498	32	3,808
Net exchange differences	1	6	-	7
As of December 31, 2018	3,279	504	32	3,815

Depreciation

As of January 1, 2017	-	-243	-24	-267
Depreciation charge	-	-16	-1	-17
Net exchange differences	-	6	-	6
As of December 31, 2017	-	-253	-25	-278
Depreciation charge	-	-18	-1	-19
Net exchange differences	-	-2	-	-2
As of December 31, 2018	-	-273	-26	-299

Net book value

As of December 31, 2018	3,279	231	6	3,516
As of December 31, 2017	3,278	245	7	3,530

Investment properties are stated at cost less any accumulated depreciation and impairment losses, if any. The same useful lives have been used as for property, plant and equipment.

	2018	2017
	Million KRW	Million KRW
Rental income	17	16
Operational expenses	35	40

Songwon Industrial Co., Ltd. owns an office building in Busan which is subleased and the fair value of the office building amounts to 5,000 Million KRW. Moreover, Songwon International-Japan K.K. owns an object which is subleased. The fair value of the building and land is 36 Million KRW.

Furthermore, no investment properties were disposed during 2018 and 2017.

Disclosure of pledged assets can be found in note 27.

9. Intangible assets

	Industrial rights	Software	Memberships	Customer relationships	Capitalization process technology	Goodwill	Construction in progress	Total
Cost	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
As of January 1, 2017	3,329	2,772	853	32,351	3,818	44,890	1,361	89,374
Additions	–	24	–	–	–	–	600	624
Disposals	–	-87	-20	–	–	–	-203	-310
Reclassifications	273	–	–	–	–	–	-273	–
Net exchange differences	-1	-108	-2	-4,724	-676	-4,099	–	-9,610
As of December 31, 2017	3,601	2,601	831	27,627	3,142	40,791	1,485	80,078
As of January 1, 2018	3,601	2,601	831	27,627	3,142	40,791	1,485	80,078
Additions	23	69	–	–	–	–	1,320	1,412
Impairment	–	–	–	–	–	–	-694	-694
Reclassifications	1,915	–	–	–	–	–	-1,915	–
Net exchange differences	–	39	–	1,058	152	1,138	–	2,387
As of December 31, 2018	5,539	2,709	831	28,685	3,294	41,929	196	83,183

Accumulated amortization

As of January 1, 2017	-1,365	-2,381	–	-21,760	-2,301	-34,315	–	-62,122
Amortization charge	-335	-173	–	-3,529	-506	–	–	-4,543
Disposals	–	45	–	–	–	–	–	45
Net exchange differences	–	78	–	3,860	553	3,660	–	8,151
As of December 31, 2017	-1,700	-2,431	–	-21,429	-2,254	-30,655	–	-58,469
As of January 1, 2018	-1,700	-2,431	–	-21,429	-2,254	-30,655	–	-58,469
Amortization charge	-403	-83	–	-3,314	-475	–	–	-4,275
Net exchange differences	–	-32	–	-1,139	-163	-1,279	–	-2,613
As of December 31, 2018	-2,103	-2,546	–	-25,882	-2,892	-31,934	–	-65,357

Net book value

As of December 31, 2018	3,436	163	831	2,803	402	9,995	196	17,826
As of December 31, 2017	1,901	170	831	6,198	888	10,136	1,485	21,609

Intangible assets with finite lives are amortized over the useful life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. In the financial year 2018, the Group impaired unregistered industrial rights of 694 Million KRW recognized under construction in progress (financial year 2017: no impairment).

The intangible assets with indefinite useful lives are tested for impairment on an annual basis. An impairment test was carried out for goodwill and membership items on the basis of calculated value in use. For further details of the impairment test, refer to note 10. The goodwill items consist of items acquired in a business combination. In the financial years 2018 and 2017, no business combination took place that led to a capitalization of intangible assets.

9.1 DETAILS OF INDIVIDUALLY SIGNIFICANT INTANGIBLE ASSETS

Description	Remark	2018	2017	Remaining life
		December 31 Million KRW	December 31 Million KRW	
Industrial rights	REACH	2,224	1,240	6.6
Industrial rights	1330 Technology	832	621	7
Membership	New Seoul Country	778	778	Indefinite
Goodwill	Acquisition of Songwon Group Holding AG (former: Songwon International AG)	1,836	1,836	Indefinite
Goodwill	Acquisition of ATG Additive Technology Greiz GmbH	4,735	4,739	Indefinite
Goodwill	Acquisition of Songwon Polysys Additives LLC	123	118	Indefinite
Goodwill	Acquisition of Business SeQuent Scientific Limited	3,301	3,443	Indefinite
Intangible assets acquired in a business combination	Customer relationships	2,803	6,198	1
Intangible assets acquired in a business combination	Capitalization process technologies	402	888	1
Construction-in-progress	REACH	196	1,485	n/a
Significant intangible assets total		17,230	21,346	

10. Impairment testing of goodwill and intangibles with indefinite useful life

10.1 IMPAIRMENT TEST ON GOODWILL AND INTANGIBLE ASSETS WITH INDEFINITE USEFUL LIFE

Goodwill acquired through business combinations and memberships with indefinite useful lives have been allocated to the cash-generating units (CGUs) according to their business activities. Goodwill acquired in a business combination is allocated to each cash-generating unit expected to benefit from the synergies of the business combination. The goodwill acquired during the acquisition of Songwon Group Holding AG (formerly: Songwon International AG), Songwon ATG GmbH, Songwon Polysys Additives LLC, as well as memberships are allocated to the CGU comprising the acquired entities and the parent company, which correspond almost to the entire Group. The goodwill resulting from the business acquisition of SeQuent Scientific Limited was allocated to the distinct CGU of Songwon Specialty Chemicals – India Pvt. Ltd., India (SWDM-IN).

The allocation of the goodwill and intangible assets with indefinite useful life to the cash generating unit is as follows:

Description	2018	2017
	December 31 Million KRW	December 31 Million KRW
Goodwill of Songwon Specialty Chemicals-India Pvt. Ltd., India (SWDM-IN)	3,301	3,443
Goodwill of the rest of the Group (main CGU)	6,694	6,693
Memberships with indefinite useful lives of the rest of the Group (main CGU)	778	778
Total tested goodwill and intangible assets with indefinite useful lives	10,773	10,914

The Group performed its annual impairment test in December 2018 and 2017. The recoverable amount of the CGUs – to which goodwill and intangible assets with indefinite lives are allocated – has been determined based on its value in use, calculated using the discounted cash flow (DCF) model.

As of December 31, 2018, the recoverable amount of the main CGU (rest of the Group) equals to 705,662 Million KRW (2017: 682,185 Million KRW). The recoverable amount of the CGU of Songwon Specialty Chemicals – India Pvt. Ltd., India amounts to 40,227 Million KRW or 2,502 Million INR (2017: 31,675 Million KRW or 1,889 Million INR).

There was no impairment loss recognized in the financial year 2018 and 2017, according to the impairment test on goodwill and memberships. As of the measurement date, the recoverable amount based on the value in use in 2018 and 2017, exceeded the carrying amount of the relevant CGUs.

10.2 KEY ASSUMPTIONS USED IN CALCULATION OF VALUE IN USE

The calculation of the CGU value in use reflects the future cash flows for the next three years for the main CGU and for the next five years for SWDM-IN discounted to the present value at the weighted average cost of capital (WACC) and an estimated residual value. The projected cash flows for the main and SWDM-IN CGUs are estimated on the basis of the Budget 2019 and the Business Plan 2019 - 2023 respectively, as approved by management, and mid-term assumptions. For the free cash flows extending beyond the detailed planning period, a terminal value was computed by capitalizing the normalized cash flows using a constant growth rate. The long-term growth rate is in line with blended long-term inflation expectations for relevant countries.

In addition, a market risk premium of 6.00% (2017: 6.00%) and a small cap premium of 3.48% (2017: 3.67%) were applied for the calculation of the WACC.

The key assumptions underlying the calculation are as follows:

Parameters for the determination of the recoverable amount of the CGU

Parameters for the determination of the recoverable amount of the CGU	Description
Average annual growth	Average annual growth is calculated on the basis of mid-term assumptions.
WACC	WACC is calculated using the Capital Asset Pricing Model (CAPM). The latter comprises the weighted cost of own equity and of external borrowing costs. The application of WACC pre-tax and WACC post-tax results in the same value in use.
Long-term growth rate	Long-term growth rate is calculated on the basis of expected inflation rates for currencies of relevant countries.

Parameters for the determination of the recoverable amount of the main CGU

	2018	2017
Average annual growth	4.45%	4.40%
Pre-tax WACC	12.23%	10.50%
Post-tax WACC	9.99%	10.40%
Long-term growth rate	2.21%	2.49%

Parameters for the determination of the recoverable amount of the CGU of SWDM-IN

	2018	2017
Average annual growth	12.20%	2.60%
Pre-tax WACC	15.31%	16.38%
Post-tax WACC	13.88%	15.89%
Long-term growth rate	4.09%	4.80%

The following changes in material assumptions led to a situation where the value in use equals the carrying amount:

Parameters for the determination of the recoverable amount of the CGU	Sensitivity analysis main CGU (rest of the Group)	Sensitivity analysis SWDM-IN
Average annual growth	0.00%	0.00%
Pre-tax WACC	12.62%	21.64%
Post-tax WACC	10.29%	18.74%
Long-term growth rate	1.89%	0.00%



11. Investment accounted for using the equity method

The changes in the interest in joint ventures are summarized as follows:

	As of January 1	Dividends	Share of result from equity method revaluation	Change in scope of consolidation	Exchange rate effects	As of December 31
	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
2017						
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	3,849	–	806	–	-424	4,231
Qingdao Long Fortune Songwon Chemical Co., Ltd.	2,703	–	443	–	-342	2,804
Total	6,552	–	1,249	–	-766	7,035
2018						
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	4,231	-534	1,112	–	-49	4,760
Qingdao Long Fortune Songwon Chemical Co., Ltd.*	2,804	–	270	-3,154	80	–
Total	7,035	-534	1,382	-3,154	31	4,760

* refer to note 5 for further details

12. Available-for-sale financial investments

Description	2018 December 31				2017 December 31			
	Number of shares	% to equity	Cost	Book value	Number of shares	% to equity	Cost	Book value
			Million KRW	Million KRW			Million KRW	Million KRW
Ulsan Broadcasting Corp.	–	–	–	–	180,000	3.00%	900	900
Total			–	–			900	900

Due to K-IFRS 1109, available-for sale financial investments have been reclassified to equity instruments at FVOCI (refer to note 13.2).

13. Other financial assets

Description	2018		2017	
	December 31		December 31	
	Non-current Million KRW	Current Million KRW	Non-current Million KRW	Current Million KRW
Financial instruments at amortized cost (bank deposit)	635	2,291	8,187	2,009
Financial instrument at FVtPL	8,863	1,710	–	–
Interest-bearing loans	–	1,346	1,641	18,000
Derivative assets at FVOCI	1	69	131	92
Derivative assets at FVtPL	–	4	–	–
Equity Instrument at FVOCI	1,354	–	–	–
Guarantee deposits	276	586	306	447
Total	11,129	6,006	10,265	20,548

13.1 LOANS

Details of loans as of December 31, 2018 and 2017 are as follows:

Description	Annual interest rate (%)	2018		2017	
		December 31		December 31	
		Million KRW	Annual interest rate (%)	Million KRW	Annual interest rate (%)
Loans to related party (note 32)	0.25	1,346	–	–	–
Loans to related party (note 32)	–	–	3.00	18,000	–
Loans to related party (note 32)	–	–	7.06	1,641	–
Total		1,346		19,641	

13.2 EQUITY INSTRUMENTS AT FVOCI

Details of equity instruments at FVOCI as of December 31, 2018 and 2017 are as follows:

Description	2018				2017			
	December 31				December 31			
	Number of shares	% to equity	Cost Million KRW	Fair value Million KRW	Number of shares	% to equity	Cost Million KRW	Fair value Million KRW
Ulsan Broadcasting Corp.	180,000	3.00%	900	1,354	–	–	–	–
Total			900	1,354			–	–

Investments in equity instruments that do not have a quoted market price in an active market are measured using appropriate valuation techniques.

14. Inventories

Description	2018	2017
	December 31 Million KRW	December 31 Million KRW
Raw materials and supplies	41,559	33,752
Work in progress	809	199
Finished goods	120,436	108,134
Goods in transit	37,057	24,438
Consignment stocks	1,507	118
Total inventories at the lower of cost and net realizable value	201,368	166,641

As of December 31, 2018, inventory write-off amounted to 3,804 Million KRW for raw material and finished goods (December 31, 2017: 3,480 Million KRW).



15. Trade and other receivables

Description	2018	2017
	December 31 Million KRW	December 31 Million KRW
Trade and notes receivables (net) – third parties	112,769	121,822
Trade and notes receivables (net) – related parties	–	4,876
Other receivables (net) – third parties	3,133	3,853
Other receivables (net) – related parties	–	268
Accrued income – third parties	65	35
Accrued income – related parties	2	40
Total	115,969	130,894

Other receivables third parties include customs, rental income receivables and others.

The movements of the allowance for doubtful receivables are as follows:

	Million KRW
January 1, 2017	-1,139
Charge for the period	-1,163
Unused amounts reversed	489
December 31, 2017	-1,813
January 1, 2018	-1,813
Charge for the period	-1,161
Utilized	178
Unused amounts reversed	608
December 31, 2018	-2,188

The ageing analysis of trade and other receivables is as follows:

	Total	Neither past due, nor impaired	Past due, but not impaired			
			≤ 90 days	91-120 days	121-180 days	> 180 days
	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
December 31, 2018	115,969	108,852	6,459	27	66	565
December 31, 2017	130,894	120,904	9,644	88	258	–

Refer to note 25.3.2 on credit risk of trade receivables, which discusses how the Group manages and measures credit quality of trade receivables that are neither past due, nor impaired.

16. Other current assets

Other current assets as of December 31, 2018 and 2017, consist of the following:

Description	2018	2017
	December 31	December 31
	Million KRW	Million KRW
Advance payments	429	185
Prepaid expenses	2,755	2,663
VAT refundable	1,203	654
Total	4,387	3,502

17. Cash and cash equivalents

Description	2018	2017
	December 31	December 31
	Million KRW	Million KRW
Cash on hand	72	95
Bank accounts	56,813	52,618
Time deposit (< 3 months)	6,421	2,691
Total	63,306	55,404

Cash at banks earns interest at floating rates based on daily bank deposit rates. Time deposits are made for varying periods of between one day and three months, depending on the Group's immediate cash requirements, and earn interest at the respective short-term deposit rates.

18. Issued capital and reserves

18.1 SHARE CAPITAL

In accordance with the Articles of Incorporation, the company is authorized to issue 100,000,000 shares of common stock with a par value of 500 KRW per share. As of December 31, 2018 and 2017, the company issued 24,000,000 shares of common stock with a carrying value of 12,000 Million KRW.

18.2 CAPITAL SURPLUS

As of December 31, 2018 and 2017, the company's capital surplus amounts to 24,361 Million KRW. It comprised paid-in capital in excess of par value of 20,065 Million KRW and gain on disposal of treasury stock of 4,296 Million KRW.

18.3 RESERVES

Description	2018	2017
	December 31	December 31
	Million KRW	Million KRW
Legal reserve	1,776	1,440
Asset revaluation surplus	25,815	25,815
Total	27,591	27,255

Legal reserves

In accordance with the Korean Commercial Code, an amount equal to at least 10% of cash dividends is required to be appropriated as a legal reserve until the reserve equals 50% of paid-in capital. The legal reserve may not be utilized for cash dividends, but may only be used to offset a deficit, if any, or be transferred to capital. Appropriation to the legal reserve from retained earnings, pursuant to the approval of the General Meeting of Shareholders during 2018 and 2017, amounted to 336 Million KRW in both years.

Asset revaluation reserve

The Group re-valued certain parts of its property, plant and equipment in accordance with the Korean Asset Revaluation Act on January 1, 1984, and January 1, 1999, resulting in a revaluation surplus of 2,884 Million KRW and 64,277 Million KRW, respectively. An asset revaluation surplus amounting to 62,343 Million KRW, net of related revaluation tax, was credited to capital surplus. As of December 31, 2018 and 2017, the asset revaluation surplus is 25,815 Million KRW. The asset revaluation surplus of 23,312 Million KRW and 13,216 Million KRW were utilized in disposition of accumulated deficit pursuant to the approval of the stockholders on March 6, 2008, and March 7, 2009, respectively. The asset revaluation surplus may not be utilized for cash dividends, but may only be used to offset a deficit, if any, or be transferred to capital.

Dividends

Dividends approved by the shareholders are as follows:

Description	2018	2017
	December 31	December 31
Subject to the year	2017	2016
Dividends on ordinary shares in KRW	3,360,000,000	3,360,000,000
Number of shares	24,000,000	24,000,000
Dividends per share in KRW	140	140

18.4 ACCUMULATED OTHER COMPREHENSIVE INCOME

Accumulated other comprehensive income, net of tax, as of December 31, 2018 and 2017, is composed of the following:

Description	2018	2017
	December 31	December 31
	Million KRW	Million KRW
Exchange differences on translation of foreign operations	-5,351	-5,014
Interest rate swaps	55	173
Financial assets FVOCI	350	-
Total	-4,946	-4,841

Details of other comprehensive income for the year ended December 31, 2018 and 2017, are as follows:

Description	2018	2017
	Million KRW	Million KRW
Pre-tax amounts		
(Losses) / gains on valuation of interest rate swaps	-153	460
Gains / (losses) on valuation of financial assets FVOCI	454	-
Exchange differences on translation of foreign operations	-530	-7,606
Re-measurement (losses) on defined benefit plans	-4,778	-190
Pre-tax amounts total	-5,007	-7,336
Tax effects		
Gains / (losses) on valuation of interest rate swaps	35	-105
Losses / (gains) on valuation of financial assets FVOCI	-104	-
Re-measurement losses on defined benefit plans	1,211	33
Tax effects total	1,142	-72
Net amounts		
(Losses) / gains on valuation of interest rate swaps	-118	355
Gains / (losses) on valuation of financial assets FVOCI	350	-
Exchange differences on translation of foreign operations	-530	-7,606
Re-measurement losses on defined benefit plans	-3,567	-157
Net amounts total	-3,865	-7,408

19. Interest-bearing loans and borrowings

Interest-bearing loans and borrowings as of December 31, 2018 and 2017, are as follows:

Description	2018	2017
	December 31 Million KRW	December 31 Million KRW
Long-term borrowings	17,180	98,783
Non-current interest-bearing loans and borrowings	17,180	98,783
Current portion of long-term borrowings	82,742	21,454
Short-term borrowings	185,188	187,300
Current interest-bearing loans and borrowings	267,930	208,754
Total	285,110	307,537

Details of long-term borrowings as of December 31, 2018 and 2017, are as follows:

Banks	Description	Maturity date	Annual interest rate (%)	2018	2017
				December 31 Million KRW	December 31 Million KRW
Woori Bank	General Loan	08.05.2019~ 03.07.2020	3MCD+1.02~1.57	43,833	55,167
Korea Development Bank	General Loan	15.09.2019~ 15.03.2020	1.75~3.00	2,209	4,331
Busan Bank	General Loan	08.05.2019	MOR+1.52	6,333	7,667
KEB Hana Bank	General Loan	08.05.2019	3MCD+1.90	26,667	32,000
Kyongnam Bank	General Loan	08.05.2019	MOR+1.90	6,333	7,665
KEB Abu Dhabi	General Loan	14.05.2019*	4.30	5,920	5,661
Polysys Industries LLC	General Loan	31.12.2019	6.50	5,133	4,608
Pan Gulf Holding Company W.L.L.	General Loan	31.12.2019	6.50	3,494	3,138
Subtotal				99,922	120,237
Less current portion				-82,742	-21,454
Non-current portion				17,180	98,783

* Maturity date will be extended by one year (roll over is at the discretion of the entity), therefore categorized as long-term borrowing.

Details of short-term borrowings as of December 31, 2018 and 2017, are as follows:

Banks	Description	Annual interest rate (%)	2018	2017
			December 31 Million KRW	December 31 Million KRW
Woori Bank	Trade loan	3.20~4.18	26,137	26,230
KEB Hana Bank	General & trade loan	1.07~3.43	17,527	15,102
Korea Development Bank	General & trade loan	0.43~3.81	96,322	93,563
Busan Bank	General & trade loan	1.51~3.61	20,231	14,083
Kyongnam Bank	General & trade loan	3.20~3.88	17,971	30,322
NH Bank	General loan	2.98	7,000	8,000
Subtotal			185,188	187,300

20. Emission rights and emission liabilities

Details of annual quantity of allocated emission allowances as of December 31, 2018, are as follows
(Unit: Korean Allowance Unit - KAU):

	2015	2016	2017	Total
Allocated emission allowance	161,630	153,985	204,928	520,543

	2018	2019	2020	Total
Allocated emission allowance	122,199	122,199	122,199	366,597

Changes in emission allowances during each planned period are as follows
(Units: KAU and Million KRW):

	2015		2016		2017		Total (1st planned period)	
	Quantity	Book value	Quantity	Book value	Quantity	Book value	Quantity	Book value
Beginning	-	-	32,769	-	-	-	-	-
Allocation	161,693	-	154,498	-	151,361	-	467,552	-
Allocation cancel	-63	-	-513	-	-	-	-576	-
Additional allocation	-	-	-	-	53,567	-	53,567	-
Purchase	-	-	22,000	453	-	-	22,000	453
Borrowed	-	-	24,319	-	-24,319	-	-	-
Disposal	-	-	-110,581	-	-22,000	-	-132,581	-
Delivery to government	-128,861	-	-122,492	-453	-131,427	-	-382,780	-453
Carryforward	-32,769	-	-	-	-27,182	-	-27,182	-
Ending	-	-	-	-	-	-	-	-

	2018		2019		2020	
	Quantity	Book value	Quantity	Book value	Quantity	Book value
Beginning	27,182	-	6,376	-	-	-
Allocation	122,199	-	122,199	-	122,199	-
Allocation cancel	-	-	-	-	-	-
Additional allocation	-	-	-	-	-	-
Purchase	-	-	-	-	-	-
Borrowed	-	-	-	-	-	-
Disposal	-	-	-	-	-	-
Delivery to government	-143,005	-	-	-	-	-
Carryforward	-	-	-	-	-	-
Ending	6,376	-	-	-	-	-

There are no emission rights provided as collateral as of December 31, 2018.

No emission liabilities are recognized as of the end of the reporting period.

Allocated greenhouse gas emissions free of charge in 2018 were 122,199 KAU.

Estimated greenhouse gas emissions in 2018 were 143,005 KAU.

21. Pension liability

Pension plan	2018 Million KRW	2017 Million KRW
Net defined benefit liability	16,037	8,311
Korean	7,955	902
Swiss	8,082	7,409
Indian	–	–
Net defined benefit asset	10	33
Korean	–	–
Swiss	–	–
Indian	10	33

The Group has three defined benefit pension plans: one pension plan in Korea, one in Switzerland and one in India.

The following tables summarize the components of net benefit expense recognized in the income statement and the funded status and amounts recognized in the statement of financial position for the respective plans.



21.1 DEFINED BENEFIT OBLIGATION

Changes in the defined benefit obligation:

	Korean plan Million KRW	Swiss plan Million KRW	Indian plan Million KRW	Total Million KRW
Defined benefit obligation as of January 1, 2017	53,877	31,444	218	85,539
Pension cost charged to profit or loss				
Service costs	4,373	1,397	27	5,797
Interest	1,841	200	17	2,058
Sub-total included in profit or loss	6,214	1,597	44	7,855
Benefits (paid) / received	-755	1,925	-4	1,166
Re-measurement gains / (losses) in OCI				
Actuarial changes arising from changes in demographic assumptions	–	–	–	–
Actuarial changes arising from changes in financial assumptions	-1,726	-194	-74	-1,994
Experience adjustments	1,614	361	-4	1,971
Sub-total included in OCI	-112	167	-78	-23
Employee contributions	–	778	-	778
Exchange differences	–	-2,641	-9	-2,650
Defined benefit obligation as of December 31, 2017	59,224	33,270	171	92,665
Pension cost charged to profit or loss				
Service costs	4,638	1,543	21	6,202
Interest	2,183	244	14	2,441
Sub-total included in profit or loss	6,821	1,787	35	8,643
Benefits (paid) / received	-2,088	1,021	–	-1,067
Re-measurement gains / (losses) in OCI				
Actuarial changes arising from changes in demographic assumptions	441	–	–	441
Actuarial changes arising from changes in financial assumptions	4,006	-676	1	3,331
Experience adjustments	231	365	-3	593
Sub-total included in OCI	4,678	-311	-2	4,365
Employee contributions	–	867	–	867
Plan amendment	–	1,558	–	1,558
Exchange differences	–	1,307	-7	1,300
Defined benefit obligation as of December 31, 2018	68,635	39,499	197	108,331
Weighted average duration 2017 (years)	9.54	18.28	8.76	
Weighted average duration 2018 (years)	10.40	17.30	8.34	

21.2 PLAN ASSETS

Changes in the fair value of plan assets:

	Korean plan Million KRW	Swiss plan Million KRW	Indian plan Million KRW	Total Million KRW
Plan assets as of January 1, 2017	48,562	23,936	193	72,691
Pension cost charged to profit or loss				
Interest	1,532	154	13	1,699
Administration expenses	–	-70	–	-70
Sub-total included in profit or loss	1,532	84	13	1,629
Benefits (paid) / received	-482	1,925	-4	1,439
Re-measurement gains / (losses) in OCI				
Return on plan assets (excluding amounts included in interest expenses)	-290	76	1	-213
Sub-total included in OCI	-290	76	1	-213
Employer contributions	9,000	1,104	13	10,117
Employee contributions	–	778	–	778
Exchange differences	–	-2,042	-12	-2,054
Plan assets as of December 31, 2017	58,322	25,861	204	84,387
Pension cost charged to profit or loss				
Interest	2,000	190	14	2,204
Administration expenses	–	-87	–	-87
Sub-total included in profit or loss	2,000	103	14	2,117
Benefits (paid) / received	-1,374	1,021	–	-353
Re-measurement gains / (losses) in OCI				
Return on plan assets (excluding amounts included in interest expense)	-1,768	1,357	-2	-413
Sub-total included in OCI	-1,768	1,357	-2	-413
Employer contributions	3,500	1,193	–	4,693
Employee contributions	–	867	–	867
Exchange differences	–	1,015	-9	1,006
Plan assets as of December 31, 2018	60,680	31,417	207	92,304

The Group expects to contribute comparable amounts (as in 2018) to its defined benefit pension plan in 2019.

21.3 NET PENSION LIABILITY

Changes in the net defined benefit liability are as follows:

	Korean plan Million KRW	Swiss plan Million KRW	Indian plan Million KRW	Total Million KRW
Net defined benefit liability as of January 1, 2017	-5,315	-7,508	-25	-12,848
Pension cost charged to profit or loss				
Service costs	-4,373	-1,397	-27	-5,797
Administration expenses	-	-70	-	-70
Net interests	-309	-46	-4	-359
Sub-total included in profit or loss	-4,682	-1,513	-31	-6,226
Benefits received	273	-	-	273
Re-measurement gains / (losses) in OCI				
Actuarial changes arising from changes in financial assumptions	1,726	194	74	1,994
Return on plan assets (excluding amounts included in interest expenses)	-290	76	1	-213
Experience adjustments	-1,614	-361	4	-1,971
Sub-total included in OCI	-178	-91	79	-190
Employer contributions	9,000	1,104	13	10,117
Employee contributions	-	-	-	-
Exchange differences	-	599	-3	596
Net defined benefit asset as of December 31, 2017	-	-	33	33
Net defined benefit liability as of December 31, 2017	-902	-7,409	-	-8,311
Pension cost charged to profit or loss				
Service costs	-4,638	-1,543	-21	-6,202
Administration expenses	-	-87	-	-87
Net interests	-183	-54	-	-237
Sub-total included in profit or loss	-4,821	-1,684	-21	-6,526
Benefits (paid)	714	-	-	714
Re-measurement gains / (losses) in OCI				
Actuarial changes arising from changes in demographic assumptions	-441	-	-	-441
Actuarial changes arising from changes in financial assumptions	-4,006	676	-1	-3,331
Return on plan assets (excluding amounts included in interest expenses)	-1,768	1,357	-2	-413
Experience adjustments	-231	-365	3	-593
Sub-total included in OCI	-6,446	1,668	-	-4,778
Employer contributions	3,500	1,193	-	4,693
Employee contributions	-	-	-	-
Plan amendment	-	-1,558	-	-1,558
Exchange differences	-	-292	-2	-294
Net defined benefit asset as of December 31, 2018	-	-	10	10
Net defined benefit liability as of December 31, 2018	-7,955	-8,082	-	-16,037



The re-measurement losses recognized in the statements of comprehensive income were losses of -3,567 Million KRW (2017: losses of -157 Million KRW), net of tax. The total amount at December 31, 2018, of accumulated loss included in retained earnings is -25,578 Million KRW (2017: accumulated loss of -22,011 Million KRW), net of tax.

The principal assumptions used in determining pension benefit obligations for the Group's plans are shown below:

	Determining net expense		Determining pension benefit obligation	
	2018	2017	2018 December 31	2017 December 31
Discount rate				
Korean plan	3.80%	3.50%	3.20%	3.80%
Swiss plan	0.85%	0.70%	0.85%	0.70%
Indian plan	7.50%	7.05%	7.50%	7.60%
Future salary increases				
Korean plan	5.00%	5.00%	5.00%	5.00%
Swiss plan	2.00%	2.00%	2.00%	2.00%
Indian plan	5.00%	10.00%	5.00%	5.00%

A quantitative sensitivity analysis for significant assumptions as of December 31, 2018, is as follows:

Discount rate	Sensitivity level		Impact on net defined benefit obligation
	Change		Million KRW
Korean plan	+1.00%		-6,535
	-1.00%		7,745
Swiss plan	+0.25%		-1,064
	-0.25%		1,128
Indian plan	+1.00%		-187
	-1.00%		209
Salary increase			
Korean plan	+1.00%		-7,522
	-1.00%		6,489
Swiss plan	+0.25%		153
	-0.25%		-150
Indian plan	+1.00%		209
	-1.00%		-187

The sensitivity analysis above has been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period.

22. Other long-term employee-related liabilities

Other long-term employee-related liabilities consist of the following:

Description	2018	2017
	December 31	December 31
	Million KRW	Million KRW
Other long-term employee benefits - Korea	2,450	2,252
Other long-term employee benefits - Others	393	260
Share-based payment-related liability	2,268	3,073
Total other long-term employee-related liabilities	5,111	5,585

22.1 OTHER LONG-TERM EMPLOYEE BENEFITS – KOREA

The parent company implements a bonus plan designed to present a prescribed quantity of gold and entitle compensated vacation to long-term service employees. Accounting policies of the bonus plan are mostly the same as that of the defined benefit plan, except that all the past service cost and actuarial variances are recognized immediately in profit or loss.

Description	Million KRW
As of January 1, 2017	2,053
Current service costs	231
Interest costs	62
Re-measurement gains	28
Total payment	-122
As of December 31, 2017	2,252
Current service costs	254
Interest costs	75
Re-measurement gains	59
Total payment	-190
As of December 31, 2018	2,450

Description	2018	2017
	December 31	December 31
Discount rate	3.20%	3.50%
Compensation increase	5.00%	5.00%
Compensation per day for vacation	KRW 100,160 - 195,840	KRW 77,360 - 185,440
Rate of increase in gold price	5.10%	6.20%
Gold price per 3.75 grams	KRW 181,000	KRW 175,000

22.2 OTHER LONG-TERM EMPLOYEE BENEFITS – OTHERS

The remaining other long-term employee benefits refer to legally established termination benefits of Group companies located in United Arab Emirates of 287 Million KRW (as of December 31, 2017: 178 Million KRW) and to expenses for the defined contribution plan of Songwon Specialty Chemicals India Pvt. Ltd. of 106 Million KRW (as of December 31, 2017: 82 Million KRW).

22.3 SHARE-BASED PAYMENT RELATED LIABILITY

On March 31, 2013, the Group granted virtual stock options to eligible employees of subsidiaries according to the Virtual Stock Option and Long-term Incentive Plan ("LTIP"). The virtual stock options granted are an entitlement in money, and are neither a stock, nor any other listed or unlisted security and do not grant any right to physically acquire stocks. Settlement of options exercised is in cash only. Upon exercise, SONGWON shall pay the receiver the greater of the difference between the fair market value at the exercise date (listed stock price of Songwon Industrial Co. Ltd.) minus the strike price or 0 (zero). The virtual stock options, granted under the LTIP, are subject to a vesting period of two to four years during which the receiver of the options must be continuously employed by the Group.

The fair value of options, granted as of December 31, 2018 and 2017, was estimated using the following assumptions:

	2018	2017
Dividend yield	0.60%	0.26%
Expected volatility	45.00%	45.00%
Risk-free interest rate	2.77%	2.15%
Weighted average expected life of share options (years)	4.5	3.6
Model used	Binomial tree	Binomial tree

The carrying amount of the liability relating to the LTIP on December 31, 2018, was 2,268 Million KRW (December 31, 2017: 3,073 Million KRW). 83,400 share options vested as of December 31, 2018, and 38,775 vested as of December 31, 2017.

The income for employee services received during the year 2018, recognized in the statements of comprehensive income, amounted to 262 Million KRW (2017: expenses of 1,424 Million KRW). There were no cancellations and modifications to the awards during the years 2018 and 2017.

Movements during the year

The following table illustrates the number and weighted average exercise prices (WAEP) of, and movements in, share options during the reporting period:

	2018		2017	
	Number	KRW	Number	KRW
Outstanding as of January 1	318,676	13,359	418,500	11,270
Granted during the year	110,250	27,000	100,751	17,100
Forfeited during the year	-12,375	19,054	-151,125	10,955
Exercised during the year	-28,150	10,253	-49,450	10,645
Outstanding as of December 31	388,401	17,275	318,676	13,359
Exercisable as of December 31	83,400	10,891	38,775	10,237

The weighted average remaining contractual life for the share options, outstanding as of December 31, 2018, was 6.9 years (December 31, 2017: 8.0 years). The weighted average fair value of options granted during the reporting period was 6,505 KRW (2017: 15,556 KRW).

The exercise price for options outstanding at the end of the reporting period was 8,120 KRW – 27,000 KRW (2017: 8,120 KRW – 17,100 KRW).

23. Other financial liabilities

Other financial liabilities as of December 31, 2018 and 2017, are as follows:

Description	2018 December 31		2017 December 31	
	Non-current Million KRW	Current Million KRW	Non-current Million KRW	Current Million KRW
Derivative liabilities (note 25)	–	45	–	–
Deposits	3,361	1,398	4,625	1,237
Accrued interest expenses	–	533	–	504
Unpaid dividends	–	2	–	2
Total	3,361	1,978	4,625	1,743

24. Trade and other payables

Description	2018 December 31		2017 December 31	
	Million KRW		Million KRW	
Trade payables	54,319		56,928	
Trade payables (related parties)	1,148		1,834	
Other accounts payables	17,855		26,026	
Other accounts payables (related parties)	5		4	
Withholdings	1,303		1,090	
Accrued expenses	25,887		23,607	
Guarantee deposits	12		49	
Total	100,529		109,538	

Trade and other payables do not bear interest and usually become due within 30-60 days.

25. Additional information on financial instruments

25.1 DERIVATIVES FINANCIAL INSTRUMENTS

Description	2018		2017	
	December 31		December 31	
	Assets	Liabilities	Assets	Liabilities
	Million KRW		Million KRW	
Forward exchange contracts (current portion)	4	45	–	–
Interest rate swaps (current portion)	69	–	92	–
Interest rate swaps (non-current portion)	1	–	131	–
Total	74	45	223	–

25.1.1 FORWARD EXCHANGE CONTRACTS

Forward exchange contracts which the Group entered into in order to hedge the risk of foreign exchange rate fluctuation of assets denominated in foreign currencies, as of December 31, 2018, are as follows:

Contractual party	Position	Contract amount	Maturity dates	Contractual exchange rate (KRW)
Citibank Korea	sell	EUR 3,300,000	31.01.2019~18.06.2019	1,317.00
Woori Bank	sell	EUR 2,400,000	31.01.2019~28.06.2019	1,318.00
Citibank Korea	sell	JPY 27,993,934	04.01.2019	10.2650
Woori Bank	sell	JPY 265,000,000	31.01.2019~31.05.2019	10.2500

As of December 31, 2017, there are no currency forward contracts, which the Group entered into in order to hedge the risk of foreign exchange rate fluctuation of assets denominated in foreign currencies.

25.1.2 INTEREST RATE SWAPS

As of December 31, 2018 and 2017, the Group has entered into the following interest rate swap contracts:

2018

December 31

Description	Bonds contract	Interest rate swap contract
Contract date	08.03.2016	08.03.2016
Maturity date	08.05.2019	08.05.2019
Contract amount	40,000 Million KRW	40,000 Million KRW
Fixed interest rate	n/a	3.48%
Floating interest rate	3MCD+1.90%	3MCD+1.90%

Contract date	08.03.2016	08.03.2016
Maturity date	08.05.2019	08.05.2019
Contract amount	60,000 Million KRW	60,000 Million KRW
Fixed interest rate	n/a	3.30%
Floating interest rate	3MCD+1.57%	3MCD+1.57%

Contract date	03.07.2017	03.07.2017
Maturity date	03.07.2020	03.07.2020
Contract amount	10,000 Million KRW	10,000 Million KRW
Fixed interest rate	n/a	2.73%
Floating interest rate	3MCD+1.02%	3MCD+1.02%

2017
December 31

Description	Bonds contract	Interest rate swap contract
Contract date	08.03.2016	08.03.2016
Maturity date	08.05.2019	08.05.2019
Contract amount	40,000 Million KRW	40,000 Million KRW
Fixed interest rate	n/a	3.48%
Floating interest rate	3MCD+1.90%	3MCD+1.90%

Contract date	08.03.2016	08.03.2016
Maturity date	08.05.2019	08.05.2019
Contract amount	60,000 Million KRW	60,000 Million KRW
Fixed interest rate	n/a	3.30%
Floating interest rate	3MCD+1.57%	3MCD+1.57%

Contract date	03.07.2017	03.07.2017
Maturity date	03.07.2020	03.07.2020
Contract amount	10,000 Million KRW	10,000 Million KRW
Fixed interest rate	n/a	2.73%
Floating interest rate	3MCD+1.02%	3MCD+1.02%

The Group applies cash flow hedge accounting on interest rate swaps; in the current reporting period and in 2017 there was an interest rate swap designated as cash flow hedge. The balances included in accumulated other comprehensive income are 55 Million KRW as of December 31, 2018, and 173 Million KRW as of December 31, 2017, respectively (refer to note 18.4), net of income tax.

25.2 FAIR VALUES

Set out below is a comparison by class of the carrying amounts and fair value of the Group's financial instruments that are carried in the financial statements.

2018 December 31		Carrying amount		Fair value	
		Non-current Million KRW	Current Million KRW	Non-current Million KRW	Current Million KRW
Description					
Financial assets	Financial assets at amortized cost				
	Other financial assets	911	4,223	911	4,223
	Trade and other receivables	–	115,969	–	115,969
	Cash and cash equivalents	–	63,306	–	63,306
	Total financial assets at amortized cost	911	183,498	911	183,498
	Financial assets at FVOCI				
	Other financial assets	1,354	–	1,354	–
	Interest rate swaps	1	69	1	69
	Total financial assets at FVOCI	1,355	69	1,355	69
	Financial assets at FVtPL				
Forward exchange contracts	–	4	–	4	
Other financial assets	8,863	1,710	8,863	1,710	
Total financial assets at FVtPL	8,863	1,714	8,863	1,714	
Total financial assets	11,129	185,281	11,129	185,281	
Financial liabilities	Financial liabilities at amortized cost				
	Other financial liabilities	3,361	1,933	3,361	1,933
	Trade and other payables	–	100,529	–	100,529
	Interest-bearing loans and borrowings	17,180	267,930	17,180	267,930
	Total financial liabilities at amortized cost	20,541	370,392	20,541	370,392
	Financial liabilities at FVtPL				
	Forward exchange contracts	–	45	–	45
Total financial liabilities at FVtPL	–	45	–	45	
Total financial liabilities	20,541	370,437	20,541	370,437	

2017 December 31		Carrying amount		Fair value	
		Non-current Million KRW	Current Million KRW	Non-current Million KRW	Current Million KRW
Description					
Financial assets	Loans and receivables				
	Other financial assets	10,134	20,456	10,134	20,456
	Trade and other receivables	–	130,894	–	130,894
	Cash and cash equivalents	–	55,404	–	55,404
	Total loans and receivables	10,134	206,754	10,134	206,754
	Financial assets at FVOCI				
	Other financial assets (Derivatives)	131	92	131	92
	Total financial assets at FVOCI	131	92	131	92
	Available-for-sale financial investments				
	Available-for-sale financial investments	900	–	900	–
Total available-for-sale financial investments	900	–	900	–	
Total financial assets	11,165	206,846	11,165	206,846	
Financial liabilities	Financial liabilities at amortized cost				
	Other financial liabilities	4,625	1,743	4,625	1,743
	Trade and other payables	–	109,538	–	109,538
	Interest-bearing loans and borrowings	98,783	208,754	98,783	208,754
	Total financial liabilities at amortized cost	103,408	320,035	103,408	320,035
	Total financial liabilities	103,408	320,035	103,408	320,035

The fair value of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The following methods and assumptions were used to estimate the fair values:

- Cash and cash equivalents, trade and other receivables, trade payables and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.
- Fair value of financial assets at FVOCI and financial assets at FVtPL are derived from quoted market prices in active markets, if available.
- Fair value of unquoted financial assets at FVOCI and financial assets at FVtPL are estimated using appropriate valuation techniques (refer to note 25.2.1).

25.2.1 FAIR VALUE HIERARCHY

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

Description	Valuation technique
Level 1	Quoted (unadjusted) prices in active markets for identical assets or liabilities
Level 2	Other techniques for which all inputs which have a significant effect on the recorded fair value are observable either directly or indirectly
Level 3	Techniques which use inputs that have a significant effect on the recorded fair value that are not based on observable market data

As of December 31, 2018 and 2017, the Group held the following financial instruments carried at fair value on the statements of financial position:

Description	December 31, 2018	Level 1	Level 2	Level 3
Financial assets	Million KRW	Million KRW	Million KRW	Million KRW
Derivatives				
Forward exchange contracts	4	–	4	–
Interest Rate Swaps	70	–	70	–
Total	74	–	74	–
Debt instruments				
Exchange traded fund at FVtPL	630	630	–	–
Total	630	630	–	–
Equity instruments				
Equity instruments at FVOCI	1,354	–	–	1,354
Total	1,354	–	–	1,354
Total	2,058	630	74	1,354
Financial liabilities				
Derivatives				
Forward exchange contracts	45	–	45	–
Total	45	–	45	–

Description	December 31, 2017	Level 1	Level 2	Level 3
Financial assets	Million KRW	Million KRW	Million KRW	Million KRW
Derivatives				
Interest Rate Swaps	223	–	223	–
Total	223	–	223	–

During the reporting periods ended December 31, 2018 and 2017, there were no transfers between Level 1 and

Level 2 fair value measurements. For the financial assets and financial liabilities for which the fair value is disclosed (refer to note 25.2) the carrying amount is a reasonable approximation of fair values and is measured using Level 3 measurement methods, except for cash and cash equivalents.

25.3 FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES

The Group's principal financial liabilities comprise loans and borrowings, trade and other payables, and other financial liabilities. The main purpose of these financial liabilities is to finance the Group's operations. The Group has trade accounts and other accounts receivables, cash and cash equivalents and other financial assets that arrive directly from its operations. The Group also holds available-for-sale investments and enters into derivative transactions and applies hedge accounting for cash flow hedges if applicable.

The Group is exposed to market, credit and liquidity risk. The Group's management oversees the management of these risks through appropriate risk assessment and monitoring activities to minimize their effects.

25.3.1 MARKET RISK

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market prices comprise two types of risk:

- Interest rate risk; and,
- Foreign currency risk.

Financial instruments affected by market risk include loans and borrowings, deposits, financial assets at FVOCI, financial assets at FVtPL and derivative financial instruments. The sensitivity analyses in the following sections relate to the position as of December 31, 2018 and 2017.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's interest-bearing loans and borrowings and bank deposits with floating interest rates.

The Group's exposure to the risk of changes in market interest rates relates substantially to the Group's interest-bearing loans and borrowings with floating interest rates, which makes the Group expose to cash flows risk. Responsively, the Group is minimizing the risk partially through interest rate swap contract or choosing the best favorable financing instruments by switching to the loans with more favorable conditions or improving the Group's credit rating.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's interest-bearing loans and borrowings as well as bank deposits with floating interest rates. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings as follows:

	Increase / (decrease) in %	Effect on profit before tax Million KRW
December 31, 2018	1.00	-1,094
	-1.00	1,094
December 31, 2017	1.00	-1,144
	-1.00	1,144

Foreign currency risk

The Group's exposure to the risk of changes in foreign exchange rates relates primarily to the Group's operating activities. The risk of foreign exchange primarily relates to US Dollars (USD), Euro (EUR), Japanese Yen (JPY), Chinese Yuan Renminbi (CNY), Swiss Francs (CHF), United Arab Emirates Dirham (AED) and to Indian Rupee (INR).

Foreign exchange risks arise when commercial transactions, recognized assets or liabilities are denominated in a currency that is not the entity's functional currency.

The objective of the management of foreign currency risk is to maximize the value of the firm through minimizing the fluctuation of net profit and uncertainty arising from the fluctuation in foreign currency. To accomplish this, the Group uses a strategy to accord the collection terms of receivables and payment terms of payables denominated in USD considering the similar volume of exports and imports. In regard to EUR, USD and JPY, the Group manages the risk through currency forward contracts.

Foreign currency sensitivity

The Group carries out a sensitivity analysis for the dominant foreign currencies: US Dollars (USD), Euro (EUR), Japanese Yen (JPY), Chinese Yuan Renminbi (CNY), Swiss Francs (CHF), United Arab Emirates Dirham (AED) and to Indian Rupee (INR). The assumed possible currency fluctuations are based on historical observations and future prognoses. Incorporated into calculations are the financial instruments. The following table demonstrates the sensitivity of consolidated net profit before tax to a reasonably possible shift in exchange rates related to financial instruments held in the balance sheet. Assuming that the other variables are constant but only the foreign exchange rate changes by 10%, the impacts on net profit for the years ended on December 31, 2018 and 2017, are as follows:

Currency	2018 December 31		2017 December 31	
	10% increase Million KRW	10% decrease Million KRW	10% increase Million KRW	10% decrease Million KRW
USD	1,472	-1,472	64	-64
EUR	516	-516	-1,056	1,056
JPY	-44	44	275	-275
CNY	-38	38	176	-176
CHF	235	-235	602	-602
AED	-79	79	-80	80
INR	986	-986	1,081	-1,081
Total	3,048	-3,048	1,062	-1,062

The Group's exposure to foreign currency changes for all other currencies is not material.

25.3.2 CREDIT RISK

Credit risk is the risk that the counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities (primarily for trade and other receivables) and investing activities.

The Group maintains a policy to keep trade relationship only with the customers with high credit rating assessed by credit assessment, considering their financial position, past experience of defaults and other indicators of default. If the credit rating of a customer worsens, the Group sets an individual credit limit on that customer and intensively manages its credit risk. In addition, the Group minimizes the credit risk by maintaining the exposure to the credit risk at insignificant level through ongoing management including periodical reviews of all the customers. The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial assets disclosed in note 13.

The Group is also exposed to the credit risk with regard to bank deposits, as well as cash and cash equivalents in which the maximum exposure to credit risk at the reporting date is the carrying value. The exposure to the related credit risk, however, is relatively restricted because the Group maintains relationships with the financial institutions with high credit ratings.

25.3.3 LIQUIDITY RISK

Liquidity risk is the risk that the Group will encounter difficulty in meeting obligations associated with financial liabilities due to the unfavorable economy of the industry or financial markets.

The Group manages its liquidity risk through its own strategy and plans which consider the maturity of financial instruments and expected operating cash flows and include the policy to map out the maturity of financial assets and liabilities.

In addition, the Group maintains credit facilities with the banks including overdraft to respond to unexpected shortage in liquidity. The Group manages funding schedules and ongoing review procedures, considering the appropriate mix of long-term and short-term loans and borrowings, to maintain the consistency and flexibility in obtaining liquidity and stable financing in response to expansion of the business.

The details of maturity profile of the Group's financial liabilities, excluding financial derivative instruments, based on contractual undiscounted payments as of December 31, 2018 and 2017, are as follows:

	Less than a month	1 to 3 months	3 to 12 months	1 to 5 years	> 5 years	Total
2018	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
December 31						
Interest-bearing loans and borrowings	24,177	53,213	190,540	17,180	–	285,110
Other financial liabilities	425	1,496	12	3,361	–	5,294
Trade and other payables	73,461	22,813	4,255	–	–	100,529
Total	98,063	77,522	194,807	20,541	–	390,933

	Less than a month	1 to 3 months	3 to 12 months	1 to 5 years	> 5 years	Total
2017	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
December 31						
Interest-bearing loans and borrowings	8,954	69,015	130,785	98,783	–	307,537
Other financial liabilities	429	1,252	62	4,625	–	6,368
Trade and other payables	77,555	25,485	6,498	–	–	109,538
Total	86,938	95,752	137,345	103,408	–	423,443

25.3.4 CAPITAL MANAGEMENT

The capital managed by the Group is identical to the total amount of equity presented in the consolidated statements of financial position. The primary objective of the Group's capital management is to ensure its continued ability to provide consistency for its equity shareholders through a combination of capital growth and distribution. In order to achieve this objective, the Group monitors its gearing to balance risk and returns at an acceptable level, and also maintains a sufficient funding base to enable the company to meet its working capital and strategic investment needs. To maintain or adjust the capital structure, the company may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares considering not only the short-term position, but also its long-term operational and strategic objectives. At Group level the debt ratio is reviewed regularly. The debt-equity ratio as of December 31, 2018 and 2017, is 112% and 129%, respectively.

On a monthly basis, all subsidiaries have to report key performance indicators, which also include capital management information.

26. Commitments and contingencies

26.1 CONTINGENT LIABILITY

There are no current proceedings of lawsuits, claims, investigations and negotiations due to product liability, mercantile law, environmental protection, health and safety etc., which could have significant influence on business operations and the Group's financial position or income.

26.2 OPERATING LEASE COMMITMENTS

The Group has entered into commercial leases on certain motor vehicles, items of machinery and offices. These leases have duration between 1 and 30 years with a renewal option included in some contracts. There are no restrictions placed upon the Group by entering into these leases. Future minimum rentals payable under non-cancellable operating leases as of December 31, 2018 and 2017, are as follows:

Description	2018	2017
	December 31	December 31
	Million KRW	Million KRW
Within one year	-2,670	-2,363
After one year but not more than five years	-7,638	-8,259
More than five years	-1,612	-2,049
Total	-11,920	-12,671

26.3 OTHER COMMITMENTS

As part of the ordinary business, the Group enters into various contractual commitments for the purchase of fixed assets and intangible assets as well as investment properties and promotion properties. As of December 31, 2018, the Group entered into commitments to purchase property, plant and equipment, as well as raw materials amounting to 2,815 Million KRW (December 31, 2017: 11,274 Million KRW).

The Group has provided one blank promissory note to Hanwha Chemical Co., Ltd. as security on the supply contracts.

One check and one promissory note which the Group received from KEB Hana Bank are outstanding as of December 31, 2018, due to bankruptcy declared by the issuers of the check.

Details of the Group's available short-term credit line facilities (excluding general loans) as of December 31, 2018, are as follows:

Description	Currency	Credit limit	Used	Unused
USANCE and L/C for import	Thousand USD	23,400	6,922	16,478
D/A and D/P	Thousand USD	111,500	48,778	62,722
	Million KRW	32,000	2,971	29,029
Trade loans	Million KRW	15,000	437	14,563
Secured loan of credit sales	Million KRW	9,000	3,182	5,818
Other foreign currency guarantees	Thousand USD	18,270	12,161	6,109
Total	Total Million KRW	56,000	6,590	49,410
Total	Total Thousand USD	153,170	67,861	85,309

27. Assets pledged as collateral and guarantees

Details of property, plant and equipment and investment properties pledged by the Group as collateral for interest-bearing loans and borrowings as of December 31, 2018 and 2017, presented in the maximum value registered to Korean court, are as follows:

Pledged to	Pledged assets		2018	2017
			December 31	December 31
Property, plant and equipment				
(Joint collateral in connection with long-term loan)				
Busan Bank	Land, buildings and machinery	MKRW	30,000	30,000
Kyongnam Bank	Land, buildings and machinery	MKRW	18,000	18,000
Property, plant and equipment				
(Collateral for other than syndicated or long-term loan)				
Busan Bank	Land, buildings and machinery	TUSD	24,000	24,000
Korea Development Bank	Land, buildings, investment properties and machinery	MKRW	57,000	57,000
Woori Bank	Land, buildings and machinery	MKRW	120,000	120,000
KEB Hana Bank	Land, buildings and machinery	MKRW	60,000	60,000
Total		MKRW	285,000	285,000
		TUSD	24,000	24,000

No other items of property, plant and equipment are pledged as collateral for interest-bearing loans and borrowings as of December 31, 2018 and 2017.

The Group has received payment guarantees amounting to 210,600 Million KRW and 32,076 Thousand USD provided by Jongho Park, the Chairman of the Board of Directors of the Group, in connection with the Group's borrowings from banks as of December 31, 2018.

The bank deposits pledged as collateral in connection with interest-bearing loans and borrowings as of December 31, 2018 and 2017, are as follows:

Description	2018	2017
	December 31	December 31
Bank deposits – current (in Thousand USD)	2,049	3,089
Bank deposits – non-current (in Thousand USD)	–	163

The Company is provided with a performance guarantee from Seoul Guarantee Insurance Co., Ltd. and the insured amount is 950 Million KRW.

28. Operating profit and other income / expenses

28.1 RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses of 4,811 Million KRW (2017: 4,303 Million KRW) are recorded in the income statement. Development expenses are not capitalized because the conditions for capitalization have not been met.

28.2 SELLING AND ADMINISTRATION EXPENSES

Description	2018	2017
	Million KRW	Million KRW
Sales-related costs	-25,752	-31,891
Personnel expenses	-48,018	-43,476
Travelling and entertainment	-6,546	-6,290
Depreciation and amortization	-4,625	-4,828
Administration expenses	-10,429	-8,388
Bad debt loss	-553	-674
Others	-5,956	-5,047
Total	-101,879	-100,594

28.3 OTHER INCOME

Description	2018	2017
	Million KRW	Million KRW
Fee income	121	95
Miscellaneous income	3,380	1,958
Gains on disposal of property, plant and equipment	57	25
Gains on disposal of intangible assets	–	27
R&D sales income	53	–
Rental income (third parties)	17	16
Total	3,628	2,121

28.4 OTHER EXPENSES

Description	2018	2017
	Million KRW	Million KRW
Miscellaneous expenses	-2,403	-1,194
Losses on disposal of property, plant and equipment	-1,660	-664
Losses on disposal of intangible assets	–	-244
Impairment of intangible assets	-694	–
Total	-4,757	-2,102

28.5 EXPENSES CLASSIFIED BY NATURE

Description	2018	2017
	Million KRW	Million KRW
Purchased material	-456,716	-407,242
Freight and logistic costs	-22,869	-27,813
Energy costs	-39,376	-37,322
Personnel expenses	-114,793	-103,896
Depreciation and amortization	-33,790	-32,281
Other expenses	-71,674	-63,935
Total	-739,218	-672,489
Thereof recorded in cost of sales	-632,582	-569,793
Thereof recorded in selling and administration costs	-101,879	-100,594
Thereof recorded in other expenses	-4,757	-2,102
Total	-739,218	-672,489

28.6 FINANCE EXPENSES

Description	2018	2017
	Million KRW	Million KRW
Interest on borrowings	-10,028	-9,902
Total interest expenses	-10,028	-9,902
Losses on foreign exchange	-18,172	-25,031
Losses on derivative transactions	-2	-1,357
Losses on valuation of derivatives	-45	–
Losses on valuation of financial assets FVtPL	-358	–
Bank charges	-339	-206
Total finance expenses	-28,944	-36,496

28.7 FINANCE INCOME

Description	2018	2017
	Million KRW	Million KRW
Gains on foreign exchange	17,182	22,890
Gains on derivative transactions	2,662	801
Gains on valuation of derivatives	4	–
Gains on disposal of available-for-sale financial investments	–	50
Interest on loans and receivables (third parties)	292	265
Interest on loan and receivables (related parties)	607	935
Dividends received from third parties	–	7
Total finance income	20,747	24,948

28.8 NET GAINS AND LOSSES OF THE CLASSES OF FINANCIAL INSTRUMENTS

Description	2018	2017
	Million KRW	Million KRW
Financial assets at amortized cost	4,924	–
Loans and receivables	–	24
Financial assets at FVOCI	232	–
Financial assets at FVtPL	2,306	-555
Available-for-sale financial assets	–	57
Financial liabilities at amortized cost	-15,043	-10,868
Financial liabilities at FVtPL	-45	–
Total net gains and losses of the classes of financial instruments	-7,626	-11,342

Net gains and losses of financial instruments recognized in the consolidated statements of comprehensive income

Finance expense*	-28,605	-36,290
Finance income	20,747	24,948
Total	-7,858	-11,342

Net gains and losses of financial instruments recognized in the consolidated statements of other comprehensive income

Financial assets at FVOCI	232	–
Total	232	–
Total	-7,626	-11,342

* excluding bank charges

29. Income tax expenses

The major components of income tax expense in the statements of comprehensive income are as follows:

29.1 CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Description	2018	2017
	Million KRW	Million KRW
Current income tax charge	-8,994	-8,077
Adjustments in respect of current income tax of previous year	-497	105
Deferred income taxes relating to changes of temporary differences, net	914	-2,357
Deferred income taxes relating to tax loss carry forwards	-1,177	921
Deferred income taxes related to changes in tax rate	84	-
Deferred income taxes recognized directly in other comprehensive income	1,142	-72
Income tax expenses	-8,528	-9,480

Description	2018	2017
	Million KRW	Million KRW
Accounting profit before income taxes	46,333	44,186
At parent company's statutory income tax rate of 21.79% (2017: 22.85%)	-10,094	-10,097

Increase / (decrease) in income taxes resulting from:

Adjustments in respect of current income tax of previous years	-497	105
Non-temporary differences	127	-593
Tax credits	1,023	835
Non-deductible expenses / (non-taxable income)	511	-192
Tax audit	-33	399
Effect of different tax rates in tax jurisdiction	-42	295
Others	477	-232
At the effective income tax rate 18.41% (2017: 21.45%)	-8,528	-9,480

29.2 DEFERRED TAX

Deferred tax relates to the following:

Description	Consolidated statements of financial position		Consolidated statements of comprehensive income	
	2018	2017	2018	2017
	December 31 Million KRW	December 31 Million KRW	December 31 Million KRW	December 31 Million KRW
Pension obligation	1,884	1,229	-556	406
Other long-term employment benefits	809	784	25	217
Trade receivables	52	-68	120	-104
Inventories	626	492	134	-2,380
Fixed assets	-11,442	-12,758	1,316	796
(Loss) on revaluation of land	-27,786	-27,688	-98	-405
Other non-current financial assets	-104	-	-	-
Other current financial assets	64	-1,281	1,345	-1,281
Other current assets	-17	-	-17	-16
Accrued income	-3	-12	9	5
Other current financial liabilities	285	387	-102	40
Other current liabilities	243	141	102	93
Intangible assets	-76	-	-76	-
Gain / (loss) on interest swaps	-16	-263	212	379
Loss available for offsetting against future taxable income	-	1,177	-1,177	921
Investments in subsidiaries	-4,649	-4,629	-20	-
Translation difference	-	-	-254	-74
Deferred tax (expenses) / income			963	-1,403
Net deferred tax liabilities	-40,130	-42,489		

Reflected in the statements of financial positions as follows:

Deferred tax assets	2,830	2,521
Deferred tax liabilities	-42,960	-45,010

The Group offsets tax assets and liabilities if, and only if, it has a legally enforceable right to do so, and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same tax authority.

Reconciliation of deferred tax liabilities, net:

Description	2018	2017
	Million KRW	Million KRW
Opening balance as of January 1	-42,489	-41,088
Deferred tax recognized in statements of comprehensive income	963	-1,403
Deferred tax recognized in other comprehensive income (note 18.4)	1,142	-72
Translation differences	254	74
Closing balance as of December 31	-40,130	-42,489

Expecting sufficient taxable income, the Group recognized deferred income tax assets to the extent of future taxable income. For the following deductible temporary differences, no deferred tax assets as of December 31, 2018 and 2017, were recognized.

Description	2018	2017
	Million KRW	Million KRW
Temporary differences related to investments in subsidiaries	1,758	2,360
Total	1,758	2,360

As of December 31, 2018, there are no unused recognized tax loss carry forwards and tax credit carry forwards available. Expected timing of expiration of recognized tax loss carry forwards and tax credit carry forwards, as of December 31, 2017, are as follows:

2017 December 31	Recognized deferred tax assets	
	Tax loss carry forwards Million KRW	Tax credit carry forwards Million KRW
less 1 year	-	-
1-5 years	-	-
5 years and later	1,177	-
Total	1,177	-

30. Earnings per share

Basic earnings per share amounts are calculated by dividing net profit for the year attributable to ordinary equity holders of the parent company by the average number of ordinary shares outstanding during the year. There is no difference between basic and diluted earnings per share in 2018 and 2017.

The following reflects the income and share data used in the basic per share computations:

Description	2018	2017
	KRW	KRW
Net profit attributable to ordinary equity holders of the parent	38,083,876,612	35,393,839,500
Weighted average number of ordinary shares	24,000,000	24,000,000
Earnings per share (basic / diluted)	1,587	1,475



31. Cash flow statement

Cash and cash equivalents in the statement of cash flow are equal to those in the statement of financial position.

The Group's statement of cash flow is prepared using the indirect method. The adjustments to the net profit for the period of the non-cash and non-operating items and changes in operating assets and liabilities for the years ended December 31, 2018 and 2017, are as follows:

Description	Notes	2018	2017
		Million KRW	Million KRW
Adjustments			
Depreciation of property, plant and equipment	7	29,491	27,724
Depreciation of investment properties	8	19	17
Amortization of intangible assets	9	4,275	4,543
Impairment of non-current financial assets		5	–
Losses on disposals of property, plant and equipment, net	7	1,603	639
Gain on disposal of available-for-sale financial investments		–	-50
Losses on disposal of intangible assets, net	9	–	217
Impairment of intangible assets, net	9	694	–
Share of result from investments accounted using the equity method	11	-1,382	-1,249
Financial income		-9,023	-7,303
Financial expenses		9,747	22,855
Income tax expenses	29	8,528	9,480
Total		43,957	56,873

Description	2018	2017
	Million KRW	Million KRW
Changes in operating assets and liabilities		
Trade receivables	16,653	-16,294
Other receivables	2,818	-818
Other current assets	-751	-764
Other current financial assets	-104	38
Inventories	-28,316	-18,393
Trade payables	-4,258	10,526
Other payables	-4,502	4,529
Other current financial liabilities	235	226
Other current liabilities	-21	-1,579
Pension liabilities	2,855	-3,750
Other long-term employment benefits	-539	1,437
Total	-15,930	-24,842

Changes in liabilities arising from financing activities for the years ended December 31, 2018 and 2017, are as follows:

	Short-term liabilities	Long-term liabilities	Other financial liabilities
	Million KRW	Million KRW	Million KRW
As of January 1, 2017	188,907	112,220	748
Cash flows	1,047	10,570	5,790
Foreign exchange movement	-3,487	-1,720	-170
Reclassification	22,287	-22,287	-
As of December 31, 2017	208,754	98,783	6,368
Cash flows	-23,680	-	-1,120
Foreign exchange movement	114	638	91
Reclassification	82,742	-82,241	-
As of December 31, 2018	267,930	17,180	5,339

32. Related party disclosures

The following table provides the total amount of transactions that have been entered into with related parties for the relevant financial years and balances as per year-end:

Related party	Description	2018	2017
		Million KRW	Million KRW
Jongho Park, Chairman of the Board of Directors	Finance income	562	817
Maurizio Butti, Chief Executive Officer	Finance income	2	–
Songwon Moolsan Co., Ltd.	Selling and administration costs	-58	-52
Songwon Baifu Chemicals (Tangshan) Co., Ltd. (Joint venture)	Sales	62	–
	Cost of sales	-15,138	-16,235
Qingdao Long Fortune Songwon Chemical Co., Ltd.*	Sales	5,761	15,711
	Cost of sales	-138	–
	Selling and administration costs	-332	-562
	Other income	11	147
	Finance income	43	118
Total	Sales	5,823	15,711
	Cost of sales	-15,276	-16,235
	Selling and administration costs	-390	-614
	Other income	11	147
	Finance income	607	935

Related party	Description	2018	2017
		December 31 Million KRW	December 31 Million KRW
Jongho Park, Chairman of the Board of Directors	Trade and other receivables	–	40
	Other current financial assets	–	18,000
Maurizio Butti, Chief Executive Officer	Trade and other receivables	2	–
	Other current financial assets	1,346	–
Songwon Moolsan Co., Ltd.	Other non-current financial assets	24	24
	Trade and other payables	5	4
Songwon Baifu Chemicals (Tangshan) Co., Ltd. (Joint venture)	Trade and other payables	1,148	1,834
Qingdao Long Fortune Songwon Chemical Co., Ltd.*	Other non-current financial assets	–	1,641
	Trade and other receivables	–	5,144
Total	Other non-current financial assets	24	1,665
	Trade and other receivables	2	5,184
	Other current financial assets	1,346	18,000
	Trade and other payables	1,153	1,838

* refer to note 5. for further details.

32.1 THE ULTIMATE PARENT

Songwon Industrial Co., Ltd. is the ultimate parent based and listed in Korea.

32.2 TERMS AND CONDITIONS OF TRANSACTIONS WITH RELATED PARTIES

The sales to and purchases from related parties are made at terms equivalent to those that prevail in arm's length transactions. Outstanding balances at the year-end are unsecured, interest free and settlement occurs in cash. There have been no guarantees provided or received for any related party receivables or payables. For the year ended December 31, 2018, the Group has not recorded any impairment of receivables relating to amounts owed by related parties (December 31, 2017: none). This assessment is undertaken periodically through examining the financial position of the related party and the market in which the related party operates.

32.3 TRANSACTIONS WITH KEY MANAGEMENT PERSONNEL

In the financial year 2018, the Group granted a loan of 10,000 Million KRW to the Chairman of the Board of Directors of the Group, Jongho Park at usual market conditions. In the financial year 2018, the Chairman of the Board of Directors fully repaid his loan of in total 28,000 Million KRW (outstanding loans as of December 31, 2017: 18,000 Million KRW). Additionally, the Group granted a loan of 1,346 Million KRW to the Chief Executive Officer, Maurizio Butti at usual market conditions in the financial year 2018 (2017: none).

32.4 COMPENSATION OF KEY MANAGEMENT PERSONNEL OF THE GROUP

Description	2018	2017
	Million KRW	Million KRW
Short-term employee benefits	13,269	15,586
Post-employment benefits	779	799
Other long-term benefits	1,467	1,497
Share based payments	-248	239
Total compensation paid to key management personnel	15,267	18,121

The amounts disclosed in the table are the amounts recognized as an expense during the reporting period related to key management personnel. Key management personnel are those persons with authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity.

32.5 OTHER RELATED PARTIES

Other related parties are Songwon Moolsan Co., Ltd. (Korea) which has significant influence on the Group due to the interest held in the share capital of the parent company of 23.88%. Further, the subsidiary of Songwon Moolsan Co., Ltd., Kyungshin Industrial Co., Ltd., which holds interest in the share capital of the parent company of 9.15%, is identified as a related party of the Group.

33. Events after the reporting period

On January 29, 2019, the Group acquired an additional 26% interest in Songwon Polysys Additives LLC with the effective date as of January 1, 2019. Therefore, the Group's participation in Songwon Polysys Additives LLC increased from 55.5% to 81.5%.

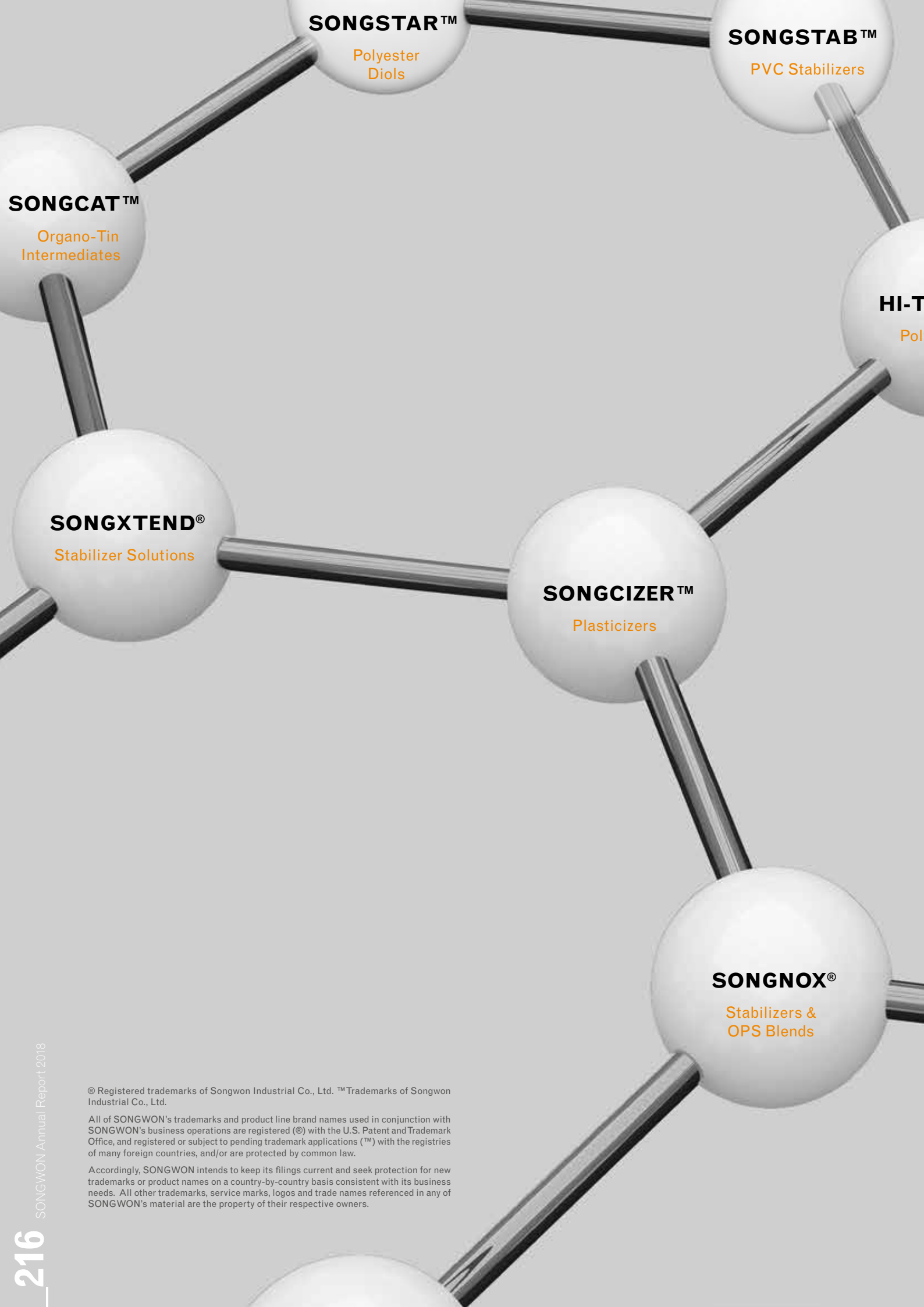
The consolidated financial statements for the year ended December 31, 2018, were approved by the Board of Directors of the parent company on January 31, 2019.

Final Overview

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SONGSTAR™

Polyester
Diols

SONGSTAB™

PVC Stabilizers

SONGCAT™

Organo-Tin
Intermediates

HI-T™

Pol...

SONGXTEND®

Stabilizer Solutions

SONGCIZER™

Plasticizers

SONGNOX®

Stabilizers &
OPS Blends

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All of SONGWON's trademarks and product line brand names used in conjunction with SONGWON's business operations are registered (©) with the U.S. Patent and Trademark Office, and registered or subject to pending trademark applications (™) with the registries of many foreign countries, and/or are protected by common law.

Accordingly, SONGWON intends to keep its filings current and seek protection for new trademarks or product names on a country-by-country basis consistent with its business needs. All other trademarks, service marks, logos and trade names referenced in any of SONGWON's material are the property of their respective owners.



SONGCURE®

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Urethanes

SONGSTOMER™

TPU Grades

SONGWON Brands
stand for excellence,
innovation & quality.

HI-SWELL™

Super Absorbent
Polymers

SONGSORB®

Light Stabilizers



About this report

Each year, we provide a transparent, comprehensive account of our performance to all our stakeholders relating to the social, environmental and economic challenges and opportunities facing our business, our industry, as well as the regions and the communities in which SONGWON operates.

This is SONGWON Industrial Group's 8th Annual Report. It contains details of our economic, environmental and social performance in FY 2018 (January 1st to December 31st) and replaces the SONGWON Annual Report 2017, which was published in March 2017. The latest report includes updates to the previous report that reflect data through end-of-year 2018 unless otherwise specified.

Reporting Scope

In the Annual Report, we share information on SONGWON management's approach, strategy, performance and the progress made in 2018 related to the Group's material topics. The material topics covered focus on the key areas of corporate governance, economic, environment, labor practices, human rights, society and product responsibility.

We identified the topics using a review process and they reflect the concerns and views that were collected through our engagement with all of SONGWON Industrial Group's stakeholders. More information on the Group's materiality topics, the review and stakeholder engagement processes can be found on pages 90-93 of this year's report.

All the data compiled for this report has been carefully measured according to industry standard measurement methods unless stated otherwise. In 2018, there were no significant changes in the reporting period, scope, boundary or measurement methods which have been applied or included in the report.

Also, unless otherwise specifically stated, the boundary for this report is defined by the structure of the SONGWON Industrial Group and the countries in which it operates. Any restatements regarding the content of previous reports have been disclosed separately.

Reporting Standards

This report has been prepared in accordance with the GRI Standards: Core option. The GRI Standards are the world's most widely used sustainability reporting standard and represent global reporting best practices for a range of economic, environmental, social and corporate governance topics.

SONGWON Industrial Group does not currently engage an external agency or organization to audit its GRI responses.

For more information on the indicators that are relevant to SONGWON's business operations, see the GRI Content Index on pages 94-97.

Forward-looking Statements

SONGWON's Annual Report 2018 contains forward-looking statements concerning the future plans, strategies and performance of the SONGWON Group. Some of the statements contained in this report that are not historical facts, are statements of future expectations and other forward-looking statements reflecting SONGWON Group management's views, assumptions and expectations available at the date of publication. Please be advised that these involve known and unknown risks and uncertainties that could cause actual results, financial situation, performance

or events to differ materially from those expressed in such statements within this report.

These statements may be identified by words such as 'expect', 'anticipate', 'should', 'could', 'shall' and other similar expressions. SONGWON does not intend and does not assume any obligation to update or amend any industry information or forward-looking statements or forecasts presented in this report to reflect new information, subsequent events and developments or otherwise.

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