

Hanwha Profile 2018



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“We engage and listen to our end users to envision the solutions our customers trust us to build.”

SEUNG YOUN KIM



For more than 60 years, Hanwha has grown steadily and evolved by anticipating changes and embracing challenges.

In times when others have sought cost reductions, we looked for opportunities and innovated. In so doing, we did more than stay afloat, we stood out and excelled. At the heart of our success was our belief that we were doing the right thing—improving the life for everyone whose lives we touched. We continue believing in this mission and it's what inspires us to build for all, including the generations today and the generations to come. It's why we're continuing to foster trust and loyalty. But after 60 years, we're facing a landscape that has also evolved and where competition is fierce and change is rapid. The Fourth Industrial Revolution is upon us; uncertainty looms ahead. But for us, we remain steadfast to what we've always done and what we must do. We must find opportunities in the midst of change and in spite of challenges.

Hanwha's key affiliates anticipate changes in the traditional value chain in all business areas. In preparation, we've been innovating and adapting our business models to match the needs of customers and that align to the trends in the industry. We've expanded our businesses and improved our infrastructure to support our growth. And we've been very successful. In 2017, we achieved a revenue of USD 56.9 billion, a sales record for our company.

Embracing innovations and pursuing opportunities to build a better future

This past year, Hanwha's chemical business was highly responsive to the increase in global demand. The results of its efforts drove the Group's overall performance to unprecedented levels. This achievement was due, in part, to the successful execution of a strategy to diversify our product portfolios while also focusing on developing high-value-added products. Our general-purpose products have also been highly competitive in the market, furthering our success. Our high-value-added basic products, segue into specialized products, and diversification of our supply of raw materials have been key to our steady growth.

Hanwha Advanced Materials has contributed to the Group's overall performance. Last year in 2017, the company's lightweight composite materials for automobiles captured and held 70 percent of the global market. This can be attributed to the importance we've been placing on investing for the future. For the last 10 years, we've been securing proprietary technologies and increasing our investments in R&D to continue improving our capabilities.

In aerospace, we are concentrating efforts in the international markets with our world-class advanced aircraft engine technology. To strengthen our competitiveness in the advanced aircraft engine business, we reorganized our business structure in 2018. We also changed the company name to Hanwha Aerospace. Back in 2017, we signed an agreement with GE, a global manufacturer of aircraft engines, to supply engine parts worth USD 229 million. And for the last three years, we have secured contracts valued at USD 6.3 billion.

In mechatronics, we are partnering with manufacturing companies in Asia and Europe. Our laser focus is on innovations. Like our joint venture in Singapore, it is a local partnership that leverages our unmanned industrial robot technology that we first commercialized in South Korea.

Our vertically integrated solar energy business is leading the change in the energy paradigm for the future. Our steel frame modules that utilize Hənwhə Q CELLS core technology were recognized by EuPD Research for its innovation for the fifth time in a row in Europe as the Top Brand PV Seal 2018. In 2016, we led the markets in the US, South Korea, Turkey, and Australia. Last year, in 2017, we held the No.1 market share in the US and South Korea. We're continuing to increase sales in the US and Japan and in emerging markets, such as India and Turkey. And with a production capacity of 8GW, we are already the largest manufacturer of solar cells and one of the biggest module manufacturers in the world. By 2020, we expect to be a clear leader in the global solar energy market.

In financial services, Hənwhə is accelerating innovations for the future. Using digital technology, we have built an advanced customer management system utilizing Big Data. We are also promoting Fintech-based business models in a range of fields to maintain our leadership in this fast-paced financial market. We're currently building a blockchain-based platform and using artificial intelligence to advance our customer service.

Our services & leisure affiliates are also harnessing Big Data to better understand our shoppers—the latest fashions, trends, and preferences through various social media outlets. Using this data, we're customizing our products to cater to their needs, and developing better marketing programs for our customer segments. Product customizations and tailored marketing programs will allow us to offer differentiated experiences to shoppers and tourists domestically or abroad while also contributing to the local economies. In 2018, we will open a premium marina resort complex with high-end recreational facilities.

At Hənwhə, we reciprocate the loyalty of our customers. We do this by maintaining high-quality products, rewarding customers, and developing products that solve problems. And when faced with the choice, we choose legal, ethical, and economic responsibilities over any short-term gains.

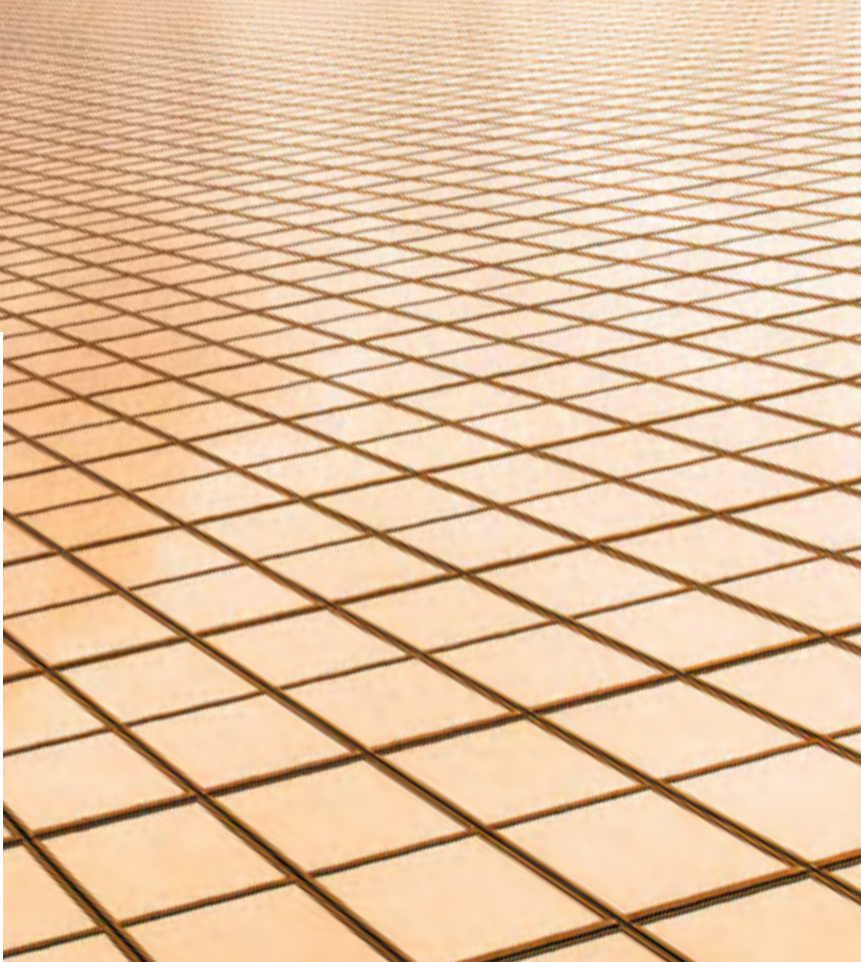
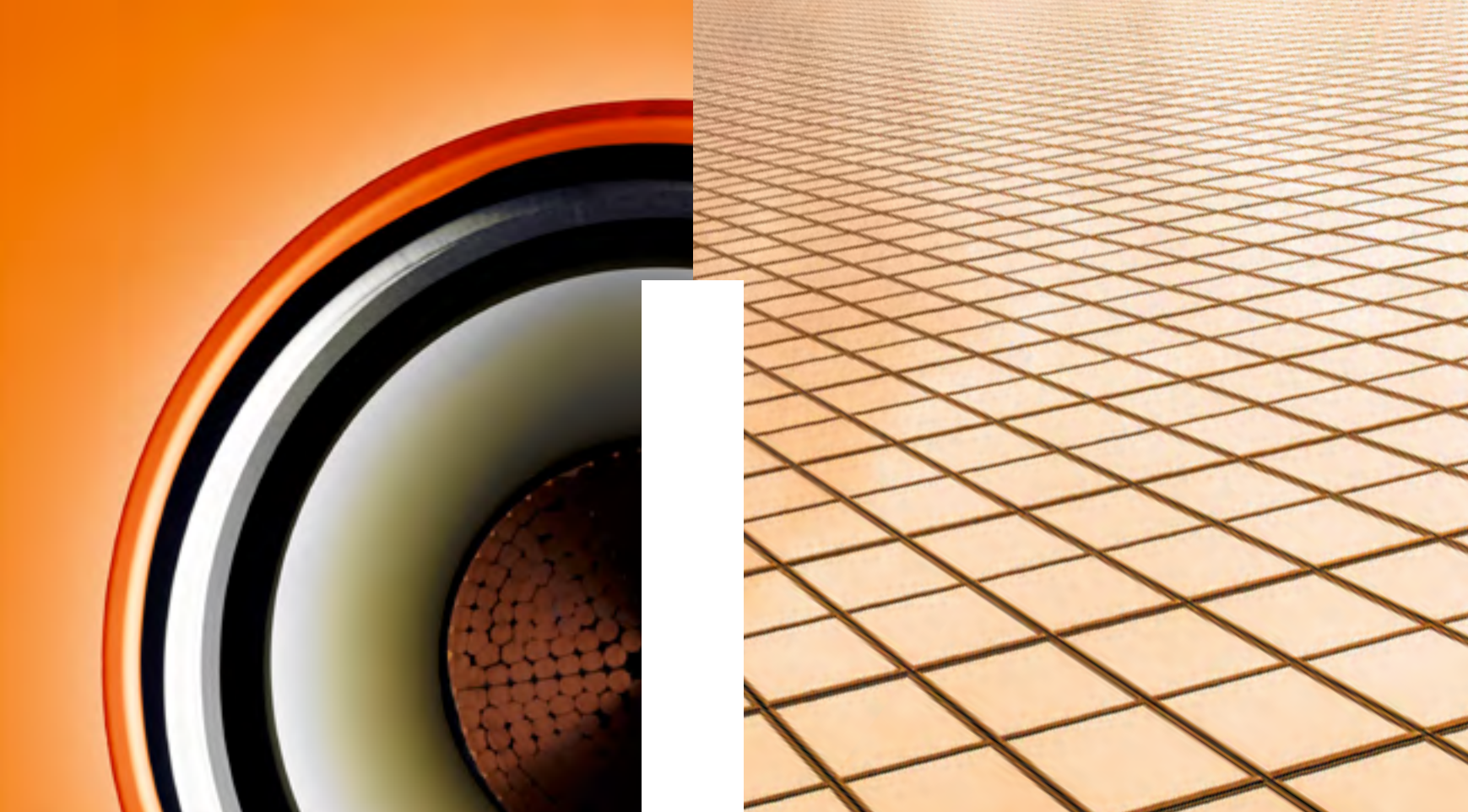
As good corporate citizens, our mission is to help people thrive. We donate solar energy equipment to welfare facilities, schools, and public facilities at home and abroad. This helps people in need and at the same time has the added benefit of helping our planet. We sponsor and promote social contribution activities in culture, arts, and sports. In 2018, we were an official sponsor of the PyeongChang 2018 Olympic and Paralympic Winter Games.

Helping people also means helping our employees, our most valuable assets. We cultivate future talents and foster an organizational culture because we believe that when the business grows, jobs should get better and talents must be nurtured. After all, in the world today, the clearest solution to the greatest challenges, is people.

The people at Hənwhə are our answer to a world of uncertainty where rapid advancements in digital technology are accelerated by emerging technologies and infrastructure changes. Our people understand that because change is constant, we too must change. Innovations and ideas are not enough to address these challenges of tomorrow; we must look beyond maximizing profits and seek long-term value and sustainable social developments, today. The answer isn't simple but with the right cause and the right people, we can *Go Further Together* and continue our success. We hope you agree and join us on this important journey ahead.

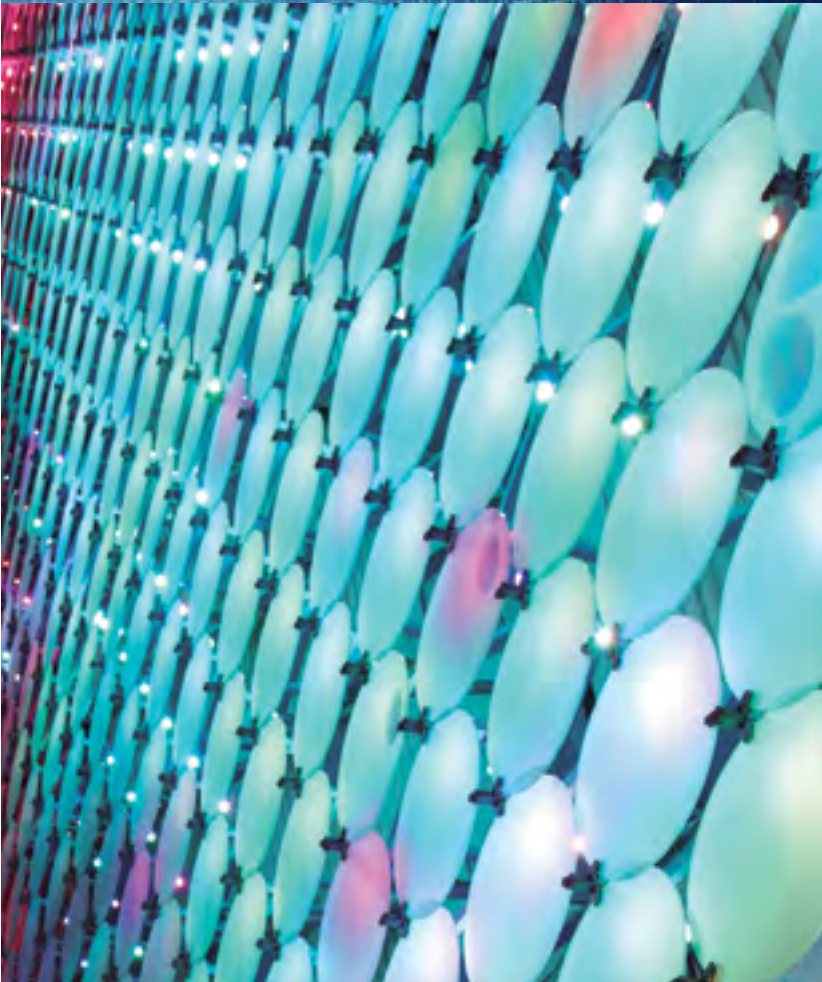


Chairman
SEUNG YOUN KIM



BUSINESS HIGHLIGHTS

At **Hanwha**, we partner with our customers. We listen first and then create solutions. Our expertise and approach are guided by deep understanding of customer needs that we apply to products and services that are changing how the world works, lives, and plays.



A close-up photograph of a clear glass filled with water. A vibrant blue ink is being poured into the water, creating intricate, swirling patterns. The ink spreads from the top, forming delicate, lace-like structures that catch the light. The background is a soft, out-of-focus white. The word "SEEK" is printed in a clean, white, sans-serif font across the center of the glass.

SEEK

A dark, almost black background is covered with a multitude of small, clear, spherical droplets. The droplets are scattered across the frame, some in sharp focus and others blurred, creating a sense of depth and movement. The lighting highlights the rounded surfaces of the droplets, giving them a three-dimensional appearance. The word "FIND" is printed in a large, bold, white, sans-serif font across the center of the image.

FIND

WE SEEK NEW TECHNOLOGIES WITH WHICH YOU CAN FIND NEW APPLICATIONS.

CHEMICALS & MATERIALS

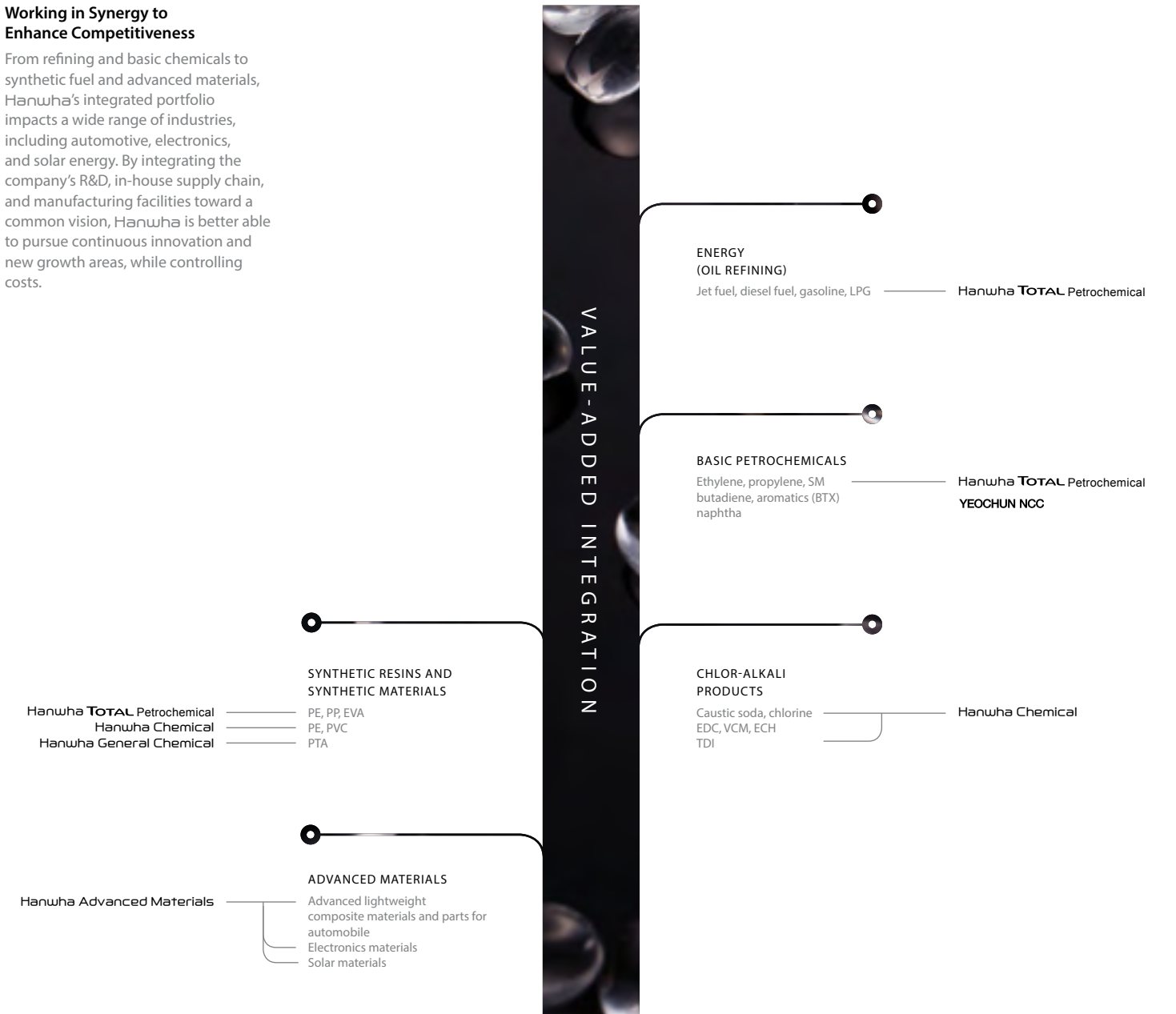
Hanwha researchers are leaders in their fields and passionate about innovating and exploring new ways to produce petrochemicals and advanced materials that our customers leverage to push their own limits of what is possible in automotive engineering, solar energy, nanotechnology, and other fields. For example, our breakthrough process for producing the synthetic resin EVA is allowing companies to manufacture solar cells with higher purity, transparency, and efficiency at lower costs.

In the automotive industry, our revolutionary lightweight composite materials are prized for their durability and flexibility—comparable to steel in strength but with 20 to 25 percent less mass. This means cars can weigh less but perform better. These and other innovations provide greater value for our customers and attract partnership opportunities for Hanwha worldwide.



Working in Synergy to Enhance Competitiveness

From refining and basic chemicals to synthetic fuel and advanced materials, Hanwha's integrated portfolio impacts a wide range of industries, including automotive, electronics, and solar energy. By integrating the company's R&D, in-house supply chain, and manufacturing facilities toward a common vision, Hanwha is better able to pursue continuous innovation and new growth areas, while controlling costs.



PETROCHEMICAL

A Leader In South Korea

Hanwha continues to maintain its leading position in South Korea's petrochemical sector with total sales of USD 18.6 billion.

ETHYLENE

No.1 In South Korea

With an ethylene production capacity of over three million tons, Hanwha now ranks first in South Korea and ninth worldwide in this important market.

Hanwha **TOTAL** Petrochemical's
Daesan Petrochemical Complex





EVA

No.1 Worldwide

Hanwha has an ethylene vinyl acetate (EVA) production capacity of 660,000 tons, the largest of any company in the world.



W&C COMPOUND

World-Class Innovation

After acquiring W&C compound, an innovative polyethylene synthetic resin, for the South Korean market, Hanwha had, in effect, freed the South Korean manufacturers from their dependence on imported resins for power transmissions and distribution cables.



PTA

No.1 In South Korea

With a purified terephthalic acid (PTA) production capacity of more than two million tons per year, Hanwha ranks No. 1 in the domestic PTA market.



AUTOMOTIVE
THERMOPLASTICS

70%
Global
Market Share

Hanwha StrongLite and SuperLite products now account for 70 percent of the global market in GMT (glass fiber mat thermoplastics) and LWRT (low-weight reinforced thermoplastics) technologies.



R & D

Growth
Engines

Hanwha's Research and Development is focusing on growth areas for the future, including new chemical products, automotive parts development, materials, and applications.





QUESTIONS

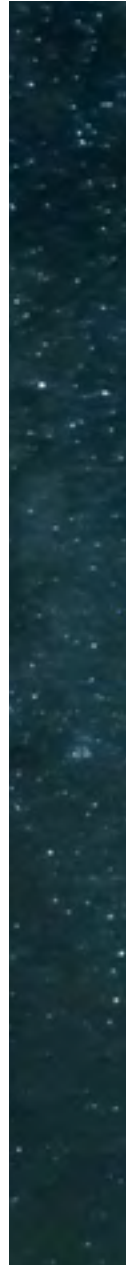


ANSWERS

HERE ARE ANSWERS TO QUESTIONS AS WE LOOK TO THE FUTURE.

AEROSPACE & MECHATRONICS

From here on earth for the skies above, Hanwha is developing world-class products in aerospace and mechatronics to help corporations and governments meet their future needs in manufacturing, commerce, security, and travel. And we continue to pursue technological partnerships with other leading companies to develop solutions that satisfy customers around the globe.



Leading in Innovation and Expertise

We are the only company in South Korea with advanced aircraft engine technology. Through our innovations and industrial expertise, Hanwha is becoming a global force in the aerospace and mechatronics industries with outstanding technologies for radars, optronics, avionics, and unmanned control systems.



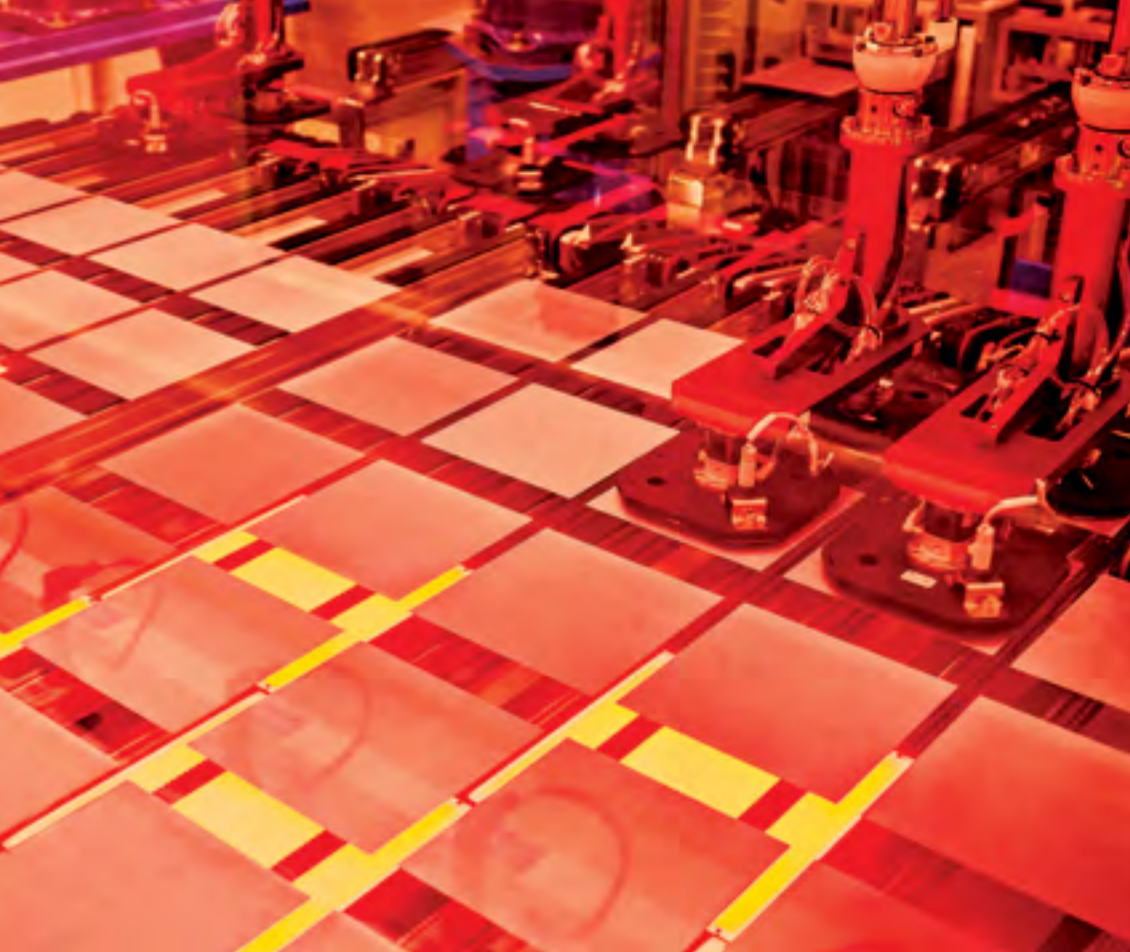
AEROSPACE

USD
12 Billion

Hanwha Aerospace has secured aerospace contracts worth nearly USD 12 billion by partnering with global aviation engine companies such as Pratt & Whitney, GE, and Rolls-Royce. We also signed an agreement with United Technologies International Corporation Asia Private Limited (Pratt & Whitney subsidiary) to acquire a 30 percent equity interest in P&W NGPF Manufacturing Company Singapore Pte. Ltd. The plan is to manufacture hybrid metallic fan blade parts and high-pressure turbine disks for engines.

Hanwha Aerospace's
aircraft engine production site





MACHINERY

Expertise Leads to Growth

With more than 50 years of experience in global mechatronics, Hanwha continues to develop innovative technologies for this industry. Our customers use our technology to improve productivity and efficiency.

SECURITY

Innovative CCTV Solutions

Hanwha Techwin has accumulated over 30 years of core technologies in optics and image-processing. We leverage our technologies to develop complete security solutions, including video surveillance equipment and integrated solutions. With these products we've successfully expanded into new markets and increased market share in global markets. We're now applying our expertise and experience to develop the next-generation technologies around deep learning and intelligent video analytics. We have the answers to today's problems.



ELECTRONICS

C4I Innovation

By leveraging our strategic alliances and building unique technologies in command, control, communication, computer, and intelligence (C4I), Hanwha Systems is bringing innovative solutions to global markets.





TOMORROW



TODAY

WE INVEST IN THE POWER OF TOMORROW SO YOU CAN MEET
THE ENERGY DEMANDS OF TODAY.

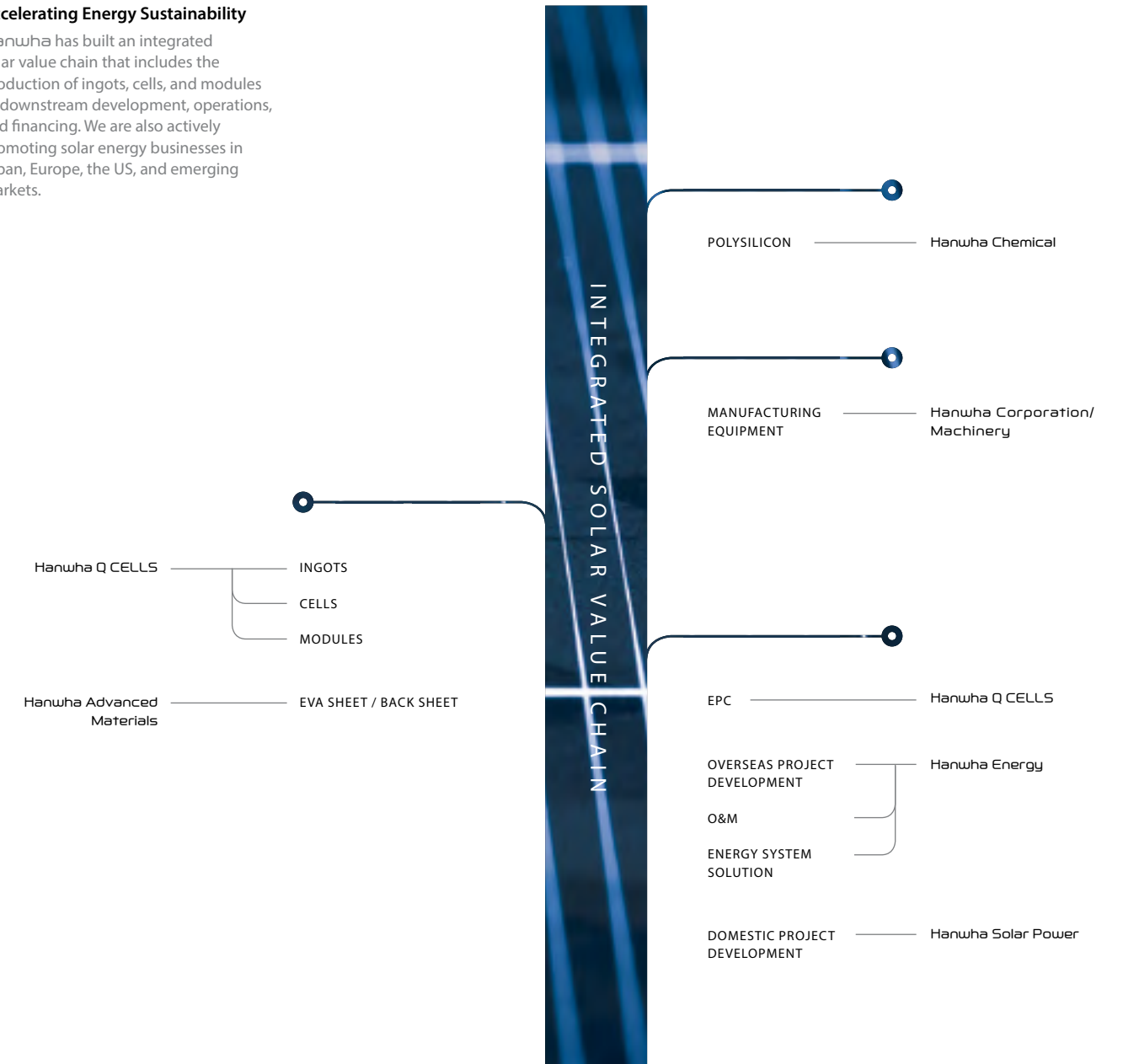
SOLAR ENERGY

With global-level capacity and top-quality solar products and services, **Hanwha** has rapidly become one of the most trusted names in the global solar industry. We are at the forefront of innovation in the solar energy sector, with sustainable solutions designed to address the global energy challenges of today and tomorrow.



Accelerating Energy Sustainability

Hanwha has built an integrated solar value chain that includes the production of ingots, cells, and modules to downstream development, operations, and financing. We are also actively promoting solar energy businesses in Japan, Europe, the US, and emerging markets.





SOLAR CELLS
& MODULES

Technology Leader

Hanwha Q CELLS' proprietary Q.ANTUM solar cells significantly reduce energy consumption by utilizing PERC (passivated emitter rear contact) architecture. In 2016, the company achieved a record-breaking 19.5 percent efficiency rating with its multicrystalline solar module, the first module of its size to break the 300-watt barrier.

Then in 2017, DNV GL, the world's largest classification society, rated each Hanwha Q CELLS' Q.PEAK and Q.PLUS series modules, the Top Performer.

In June 2018, Hanwha Q CELLS succeeded in mass-producing 2 billion 10GW Q.ANTUM solar cells.

Hanwha Q CELLS has the highest ranking among installers and has won the Top Brand PV Seal 2018 from EuPD Research for the fifth time in a row in Europe and the third time in Australia.

In 2016, EuPD Research also ranked Hanwha Q CELLS as the top module manufacturer in the US for the first time.

SOLAR RESEARCH
& SALES

40+ Countries

Hanwha has state-of-the-art solar energy R&D centers in Germany, South Korea, China, and Malaysia. Its marketing and sales operations are in more than 40 countries throughout Europe, Asia, and North America.

Power plant using Hanwha solar panels in
Kahramanmaraş Province, Turkey.



SOLAR CELL
PRODUCTION

No.1 Worldwide

Hanwha Q CELLS is the global leader in solar cell manufacturing, with the world's largest annual 8GW cell production capacity.

(as of Q1 2018)



PV MODULES

Market Share Leader

In 2016, Hanwha Q CELLS signed the largest single contract ever in the solar industry. The agreement was with a company of the US, NextEra Energy Resources, to provide more than 1.5GW of solar modules. Hanwha Q CELLS is the market share leader among all global manufacturers in Japan and the US—the two of the three largest solar markets in the world. Hanwha Q CELLS is also leading in the emerging markets of India and Turkey. Our efforts are setting examples for green growth for the next generation and promoting employment in the new energy industry.



INNOVATE

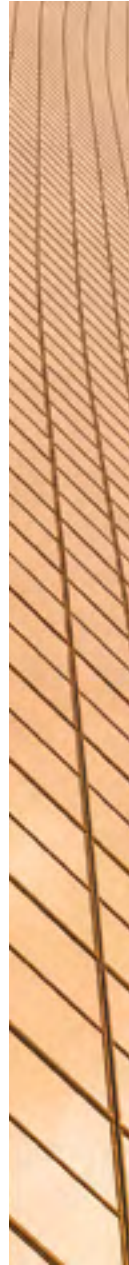


SECURE

WE INNOVATE FINANCIAL PRODUCTS SO YOU CAN SECURE
A PEACE OF MIND.

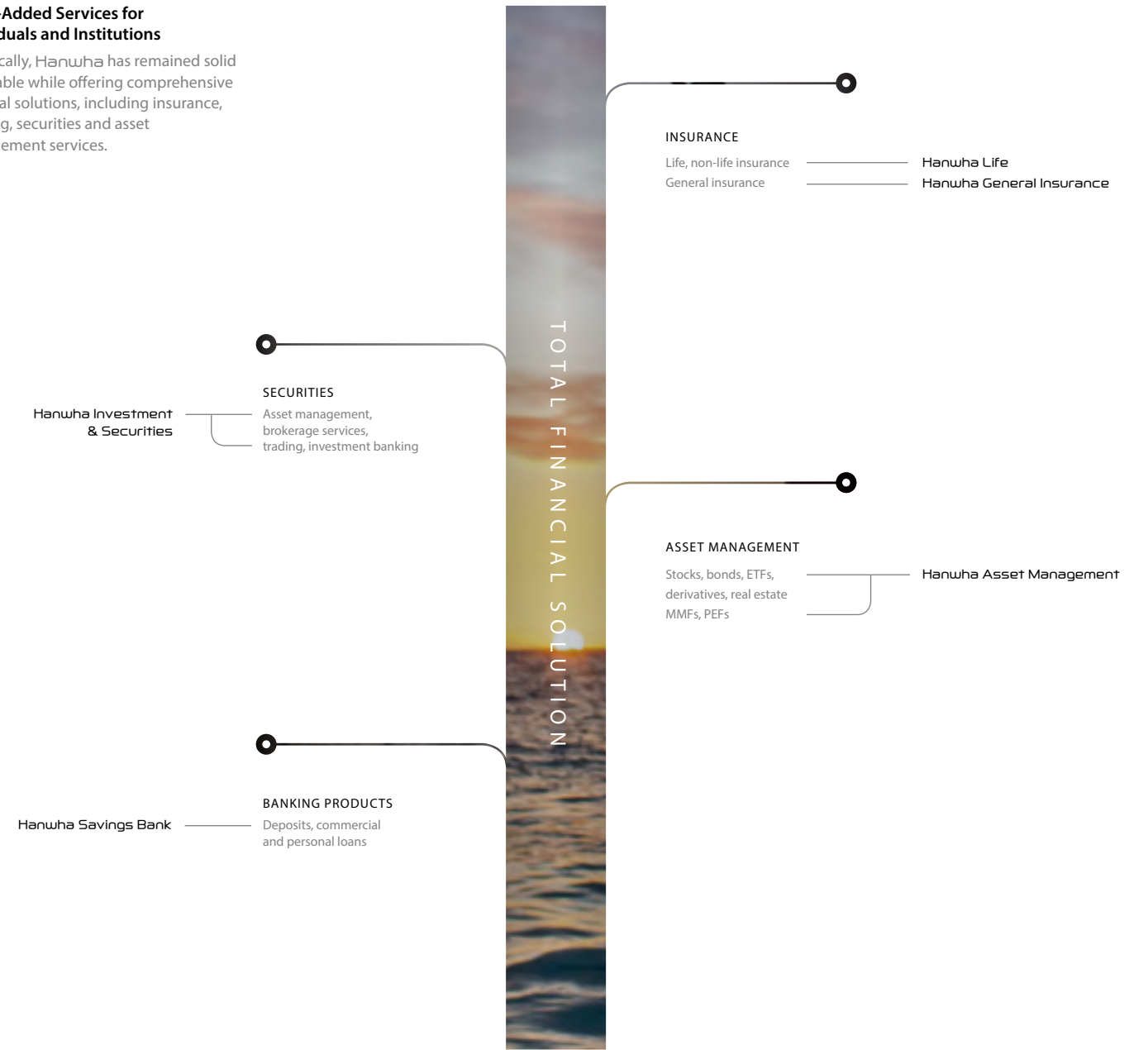
FINANCE

Hanwha offers a complete financial service platform with insurance, securities, asset management, and banking products. We create value for individuals and institutional customers by continuously adapting to today's rapidly changing financial landscapes and providing financial solutions that give customers the freedom to pursue their dreams.



Value-Added Services for Individuals and Institutions

Historically, Hanwha has remained solid and stable while offering comprehensive financial solutions, including insurance, banking, securities and asset management services.



LIFE INSURANCE

USD
103
billion
(KRW 110 trillion)

Seventy years after being established as South Korea's first life insurance company, Hanwha Life reached a new milestone with USD 93.3 billion (KRW 100 trillion) in total assets. In 2017, we grew and achieved new heights to lead the industry with USD 103 billion in total assets. We've maintained a sound financial structure since 2010, when we were first recognized as a major domestic insurer in the securities market. Hanwha Life is achieving industry-leading value in asset management, on-site sales competitiveness, and product development capabilities.

Hanwha Finance Plaza
near City Hall in Seoul





FINTECH

Securing Future Growth

Hanwha is leveraging Big Data strategically and applying the latest financial technologies to create sustainable growth in new markets, including online banking, insurance, and lending with mid-range interest rates.



SALES NETWORK

Global Expansion

Hanwha Life continues to advance in the global market with successful subsidiaries in Vietnam, China, and Indonesia. Our next goal is to become the leading insurance company in each of these countries.





IMAGINE



REALIZE

WE IMAGINE DISTINCTIVE EXPERIENCES TO HELP YOU
REALIZE YOUR DREAMS.

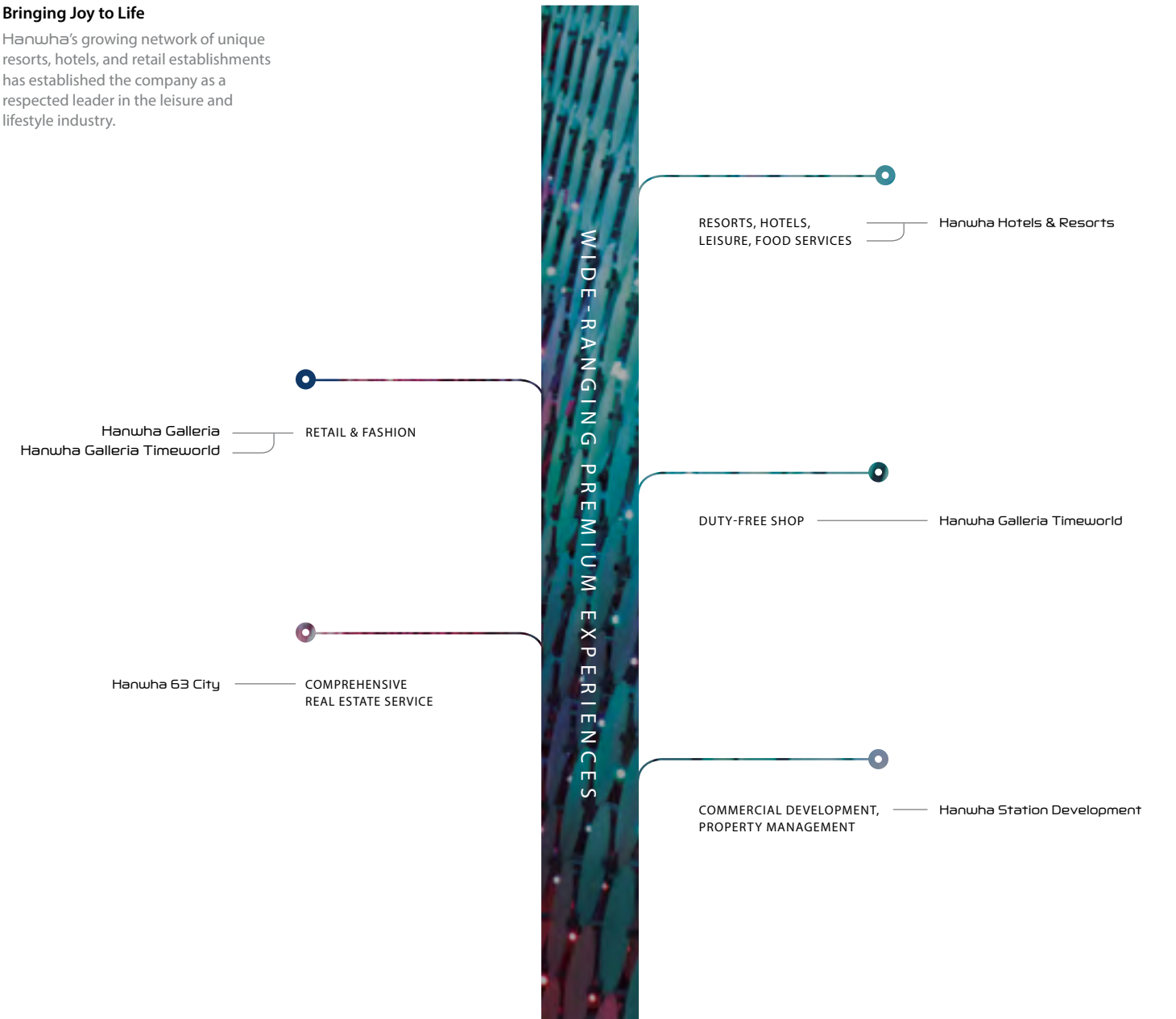
SERVICES & LEISURE

From first-class shopping experiences to luxury hotels and resorts, Hanwha is dedicated to helping our customers enjoy richer and more fulfilling lives. We continue to expand our services and leisure businesses to bring dream-like experiences to life, for people around the world.



Bringing Joy to Life

Hanwha's growing network of unique resorts, hotels, and retail establishments has established the company as a respected leader in the leisure and lifestyle industry.



RETAIL

Premium Contents Producer

The Galleria is South Korea's first and foremost premium department store chain. These stores represent Hanwha's commitment to providing differentiated customer experiences by incorporating timely lifestyle consumer trends into its offerings. Galleria Duty Free 63 is another store operated by Hanwha. It too is renowned for its luxury brands and has become both symbolically and literally, a golden landmark in the nation's capital city of Seoul. The Galleria Duty Free 63 resides within one of the tallest buildings in South Korea, the 63 building, and is also owned and operated by Hanwha. The 63 building boasts an aquarium and observation deck providing a combination of high-end shopping and tourist attractions for the discerning traveler.





AQUARIUMS

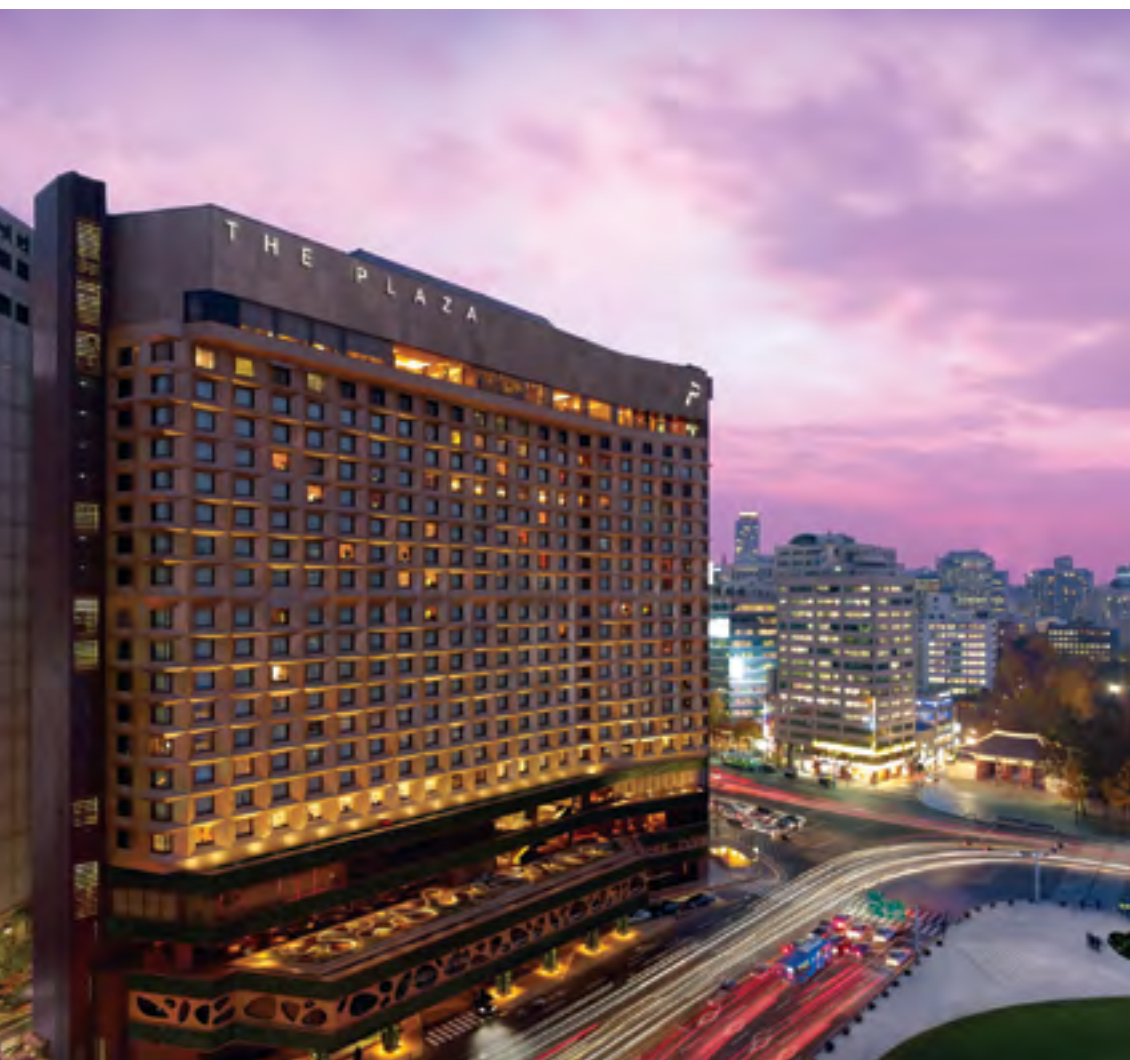
Leader in Maritime Culture

Hanwha's affinity for marine life shows in our chain of award-winning aquariums, including the eco-friendly Aqua Planet located in the South Korean cities of Jeju, Yeosu, Ilsan, and Seoul. Aqua Planet Jeju features a diverse and world-class marine aquarium. Aqua Planet Ilsan features an aquarium and a zoo combined. Aqua Planet Yeosu showcases South Korea's only 360-degree dome aquarium. Our expertise in marine-life and aquarium architecture is renowned and sought out internationally.

HOTELS

A One of a Kind

THE PLAZA is South Korea's most luxurious boutique hotel and considered one of the preminent hotels in Asia. This 5-star hotel is centrally located in the heart of Seoul, amidst a myriad of tourist attractions and a bustling nightlife. THE PLAZA boasts 400 rooms and over 20,000 square feet of event space. It's impressive in size but it is in its refined design, impeccable service, and premium accommodations that we take pride. THE PLAZA is the first hotel in South Korea to join the Autograph Collection, Marriott International's premium portfolio of distinctive hotels. We are introducing exclusive services that combine the advantages of a local hotel brand with the benefits of a premier chain hotel brand.



RESORTS

Fine Stays, Special Destination

Launched in 2018, Hanwha Hotels & Resorts Geoje Belvedere is an upscale beachfront resort complex that offers its guests a holistic experience—where wellness and wellbeing are taken to a whole new level. Nestled between a lush coastal mountain top and an idyllic sea, the Belvedere is the ultimate destination where nature meets luxury. There are 470 rooms, each with breathtaking views overlooking the ocean. Guests can luxuriate in amenities from fine dining to nature immersion programs to aquatic activities including yachting. The Belvedere's single purpose is to help you connect to nature so you can unwind, rejuvenate, and enjoy life, as it was meant to be.





ENVISION



ACHIEVE

WE ENVISION POSSIBILITIES SO YOU CAN ACHIEVE YOUR GOALS.

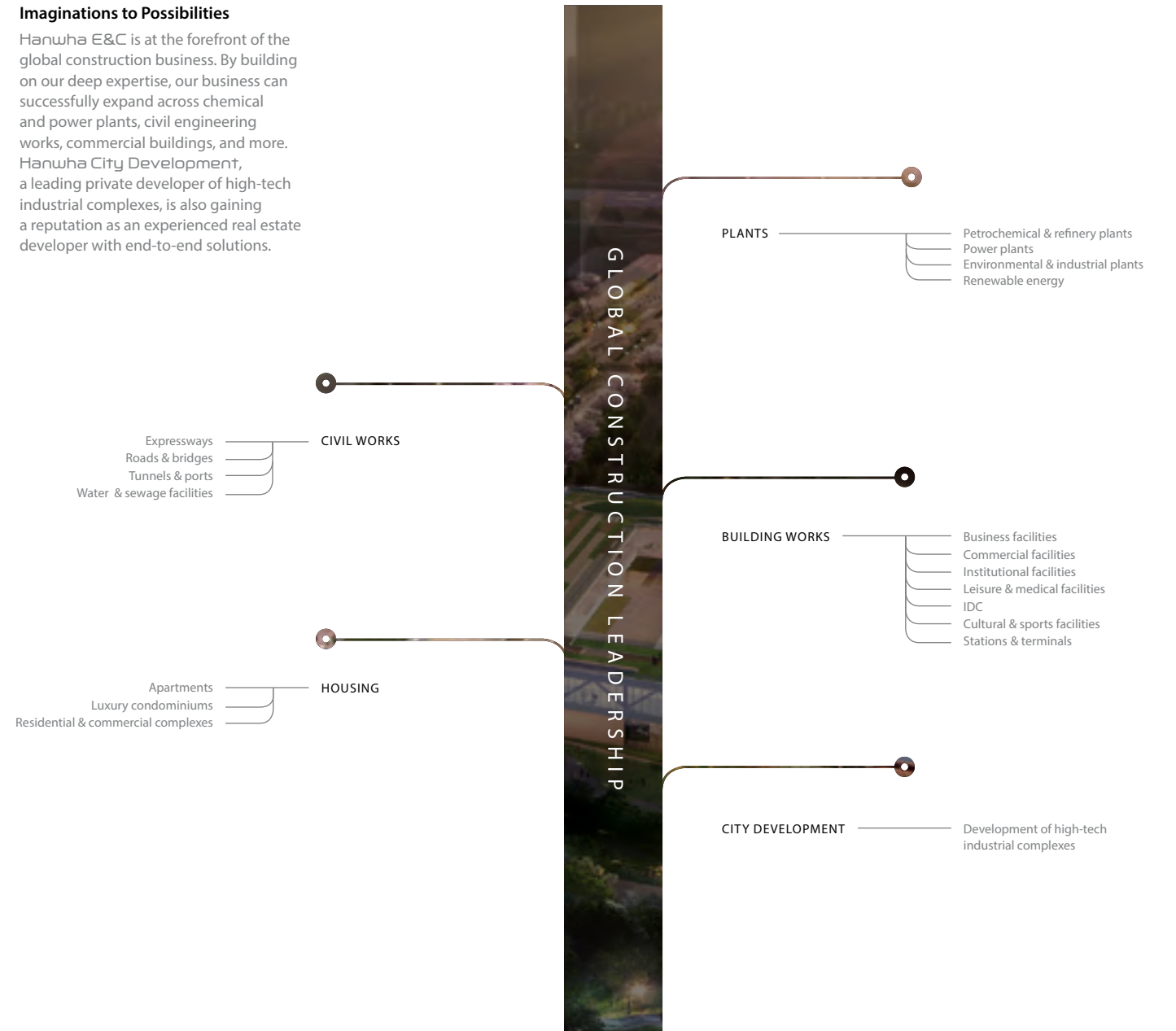
CONSTRUCTION

Hanwha partners with customers to understand their needs and goals. Our deep level of engagement enables us to truly envision before we build and exceed customer expectations after we do. From spectacular performance venues to cutting-edge manufacturing facilities to affordable housing that brings families and communities together, Hanwha is helping to enrich the lives of millions around the globe.



Imaginations to Possibilities

Hanwha E&C is at the forefront of the global construction business. By building on our deep expertise, our business can successfully expand across chemical and power plants, civil engineering works, commercial buildings, and more. Hanwha City Development, a leading private developer of high-tech industrial complexes, is also gaining a reputation as an experienced real estate developer with end-to-end solutions.





IRAQ PROJECTS

Building A City

Hanwha's Bismayah New City Project is an unprecedented effort to build an entire city covering nearly 60 city blocks and including over 800 apartment complexes. The Bismayah New City Project is the largest construction project in the history of the Middle East by a South Korean company. And recently, another contract worth USD 2.1 billion to build the social infrastructure for Bismayah city has been secured, pushing the total value of the project to more than USD 10 billion.



PETROCHEMICAL PLANT
DEVELOPMENT

Turnkey Solutions

Hanwha E&C continues to solidify its market presence in the Middle East and North Africa with industrial, power, and petrochemical plant projects, including the construction of the Saudi-owned Ma'aden petrochemical plant, which will have an annual production capacity of 1.5 million gallons of fertilizer.



SEAWATER
DESALINATION PLANT

Integrated Energy Development

Hanwha E&C is expanding its technologies and capabilities. One example is the Saudi Yanbu II power generation and desalination plant. They produce 15 million gallons of water a day.



SUWON
CONVENTION CENTER

Multiple Innovative Projects

Hanwha Hotels & Resorts and Hanwha Galleria are partnering to build a hospitality infrastructure, a hotel, a department store, and an aquarium. And Hanwha's engineering and construction expertise is bringing the visually stunning Suwon Convention Center to life.



Hanwha OVERVIEW

Hanwaha's Vision

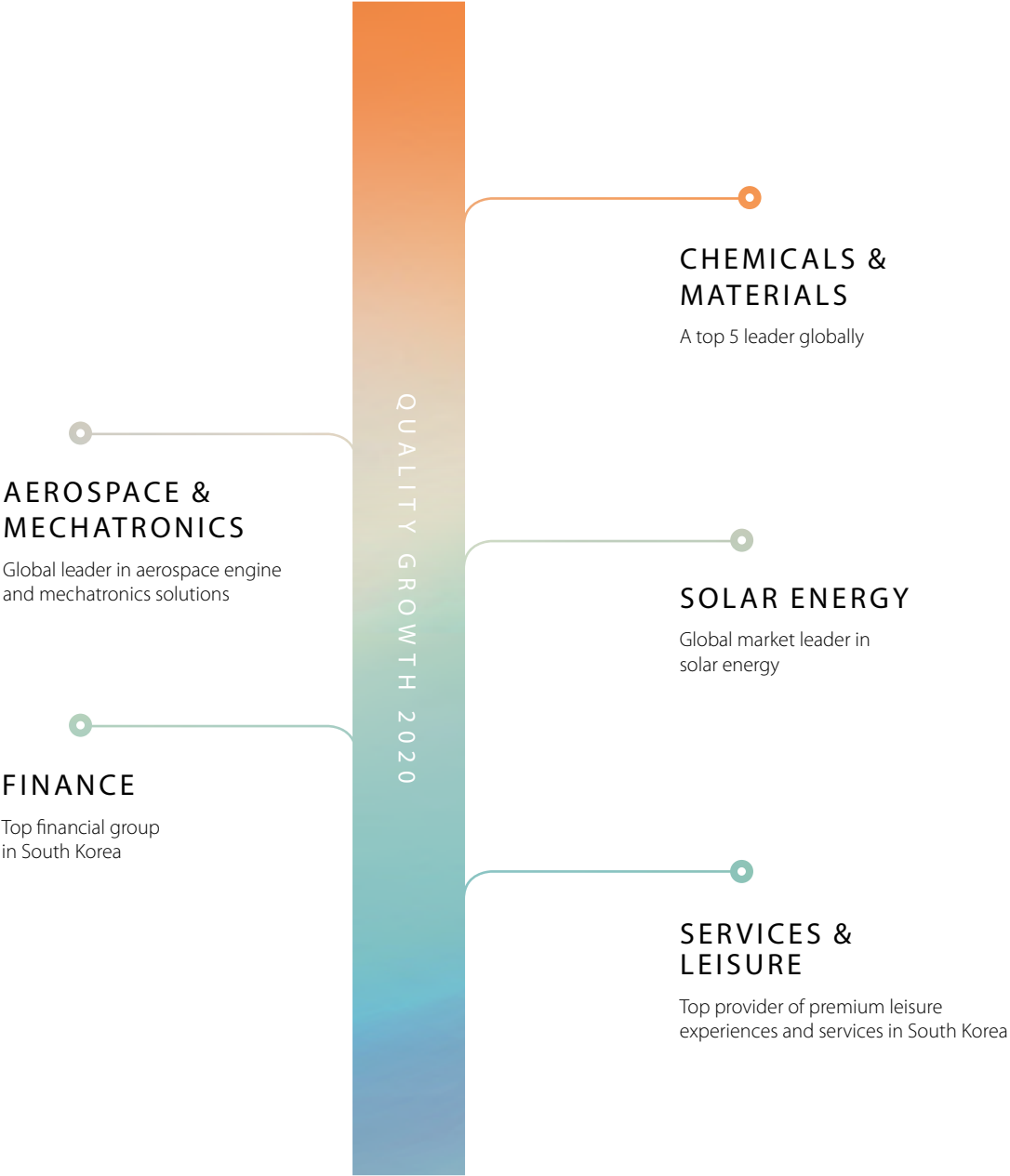
Our vision is to touch the lives of every individual in every country in which we operate. We want to elevate the quality of life with our innovations and solutions. And to achieve our vision, we've set goals to help us lead in all markets our businesses compete in. Anticipating change, innovations, and investments into future technologies and infrastructure are at the forefront of our agenda for each of our businesses. At the same time, we remain steadfast in helping our customers grow with us with the products we build for them. After all, our commitment is to our customers, employees, and to the world in which we live.

Our Spirit & Core Values

At **Hanwaha**, we operate with the spirit of trust and loyalty above all else. They are reflected in our core values and serve to guide us in how we do business and why we innovate.

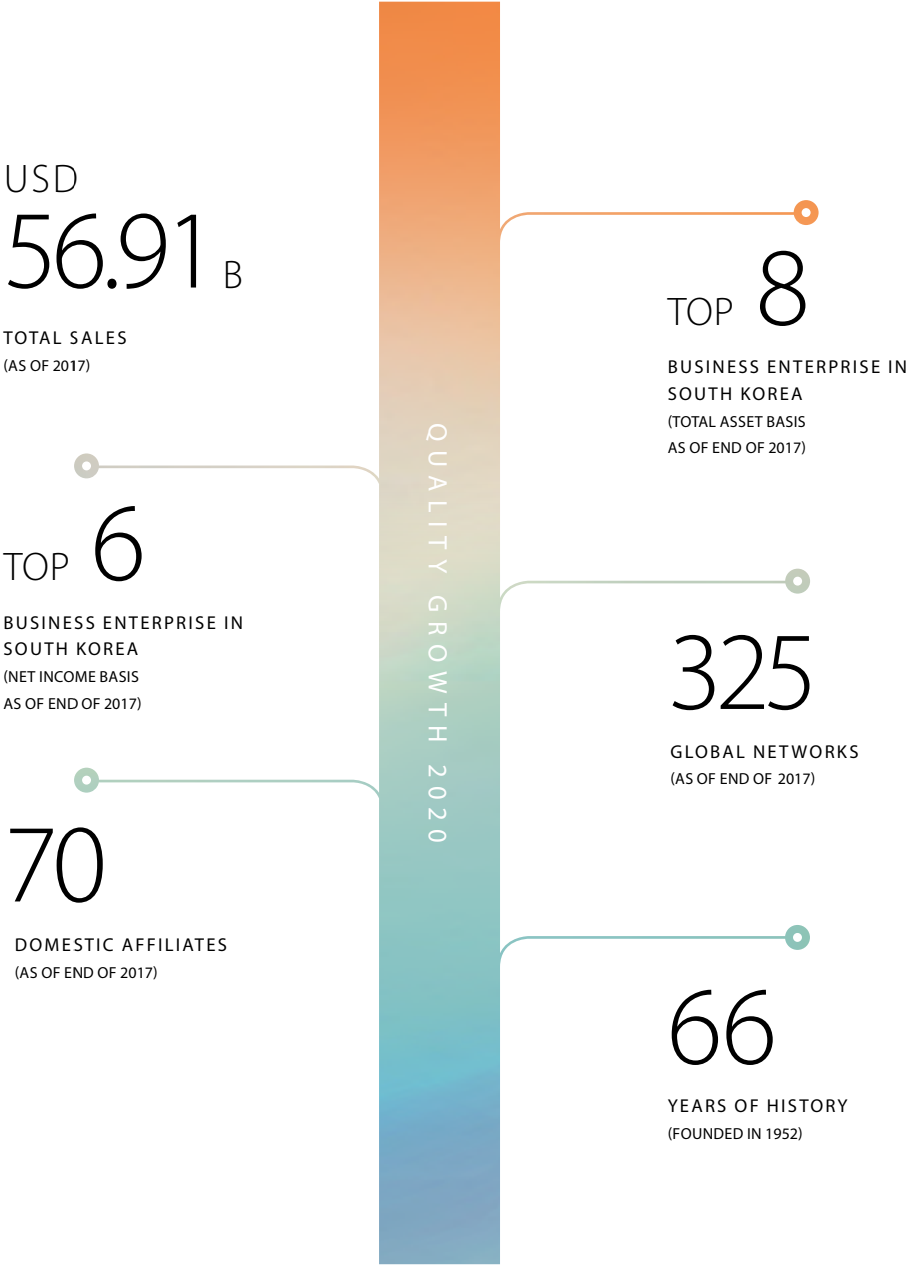
Our Core Values

- We believe in challenging the status quo in the pursuit of excellence through change and innovation.
- We are dedicated to our company, customers, and one another to achieve a greater goal.
- We believe in acting with integrity in everything we do, as individuals and employees.



Hanwha Today

After our founding in 1952, **Hanwha** has grown into a Fortune Global 500 company. Our business expertise and synergies in manufacturing & construction, finance, and services & leisure have made us the 8th largest business enterprise in South Korea. And by quickly anticipating and responding to changing market conditions, we've led the industry with world-class capabilities. Our focus well-executed strategies and our aggressive investments have helped us to successfully overcome the toughest challenges in key industries in chemical, aerospace & mechatronics, solar energy, and finance. We're now building the foundation for sustainable development and a brighter future for all.



Milestones

Foundation of a Business
1952–1963

RESTORING A NATION'S ECONOMY

After the Korean War, Hanwha played a critical role in reconstructing our devastated nation. In 1952, Korea Explosives Co. (now Hanwha Corporation) produced industrial explosives desperately needed for the reconstruction of our country's infrastructure. The company succeeded in producing nitroglycerin in 1959 and became only the second country in Asia to produce industrial explosives. Since then, much has changed and Hanwha today has expanded its business enterprise globally. One thing, however, remains the same: our mission that a business should contribute to its society; and we do.

Business Expansions
1964–1980

MODERNIZATION OF A NATION

As the nation's economy grew, so did Hanwha. Our success came from aggressive and strategic investments in key industries that could accelerate the modernization of our nation. In the mid-1960s, we established the Korea Hwasung Industrial Co. (now Hanwha Chemical and Hanwha Advanced Materials) and entered the petrochemicals business. After launching Kyung-In Energy in 1969, we established Hankook Precision in 1971 (now Hanwha Corporation/Machinery). We sharpened our competitiveness in the machinery business by acquiring Shinhan Bearing Industrial. And in 1972, we continued to advance South Korea's industrialization by constructing Kyung-In Energy's refinery and power plant.

The Second Foundation
1981–1995

STRATEGIC DIVERSIFICATION

When SEUNG YOUN KIM became Hanwha's second chairman, the company's *Second Foundation* had effectively begun. And in the aftermath of the global oil shock in the 70's, one of Mr. Kim's key decisions was to diversify into the petrochemical business by acquiring Hanyang Chemicals and Dow Chemicals Korea. He quickly turned the failing businesses into the powerhouse that they are today (now called Hanwha Chemicals) in the global chemical market. Under Mr. Kim's leadership, we've also diversified into finance and services & leisure. In 1985, we acquired the Junga Group (now Hanwha Hotels & Resorts) to become South Korea's leading leisure company. In 1986, we also acquired Hanyang Stores (now Hanwha Galleria) and expanded into the retail industry.

Building Momentum
1996–2006

RESTRUCTURING FOR THE NEW CENTURY

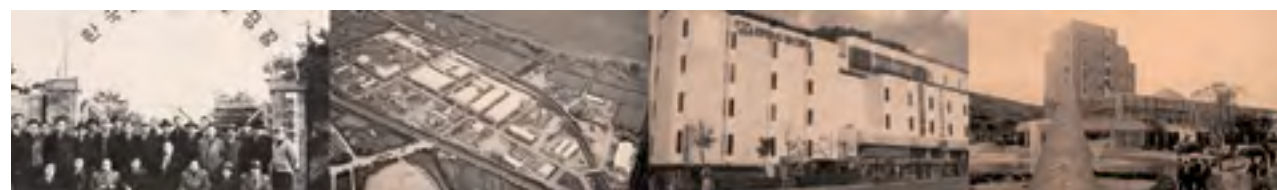
During the 1997 Asian financial crisis that either crippled or nearly paralyzed most companies in South Korea, Hanwha took bold actions, innovating and restructuring. We secured liquidity by selling profitable affiliates, made employee job security our priority and moved forward with faith in our spirit of trust and loyalty. We sought new opportunities and began acquisitions. One of them was Korea Life Insurance in 2002, a business that we have since grown steadily to make it the second largest life insurance carrier in South Korea with assets of KRW 110 trillion in 2017. We emerged from the financial crisis without a single labor dispute, and were heralded as a role model for other South Korean corporations to follow.

Accelerating Global Business
2007–Present

EMERGING AS A GLOBAL LEADER

As the 21st century began, Hanwha accelerated global expansion by diversifying businesses and building a robust network of overseas operations. Hanwha Advanced Materials acquired US-based AZDEL Inc. and established a production subsidiary in the Czech Republic in 2007 to increase its standing as a global automotive component maker. In 2009, Hanwha Chemical began constructing a PVC plant in Ningbo, China. In 2012, Hanwha Engineering & Construction won a USD 10 billion contract to construct an entire city in Iraq. It was the largest overseas contract ever awarded to a South Korean company. Hanwha Life's investment to expand globally began with its Vietnam subsidiary in 2008 and that then led to another acquisition—an Indonesian life insurance company in 2013. Recently, the company entered the Fintech sector to find more opportunities that could lead to greater financial security for more people worldwide.

Solarfun Power Holdings and Q.CELLS were acquired in 2010 and 2012, respectively, paving the way for Hanwha Q CELLS to become the world's No. 1 solar cell producer. In 2016, Hanwha Q CELLS became the market leader in the US, South Korea, Australia, and Turkey. Our progress and successes reflect our efforts and focus to strengthen our global competitiveness and adopt preemptive technologies.



1952 Korea Explosives Co. (now Hanwha Corp.) is founded

1965 Korea Hwasung Industrial (now Hanwha Chemical and Hanwha Advanced Materials) is founded

1976 Sungdo Securities (now Hanwha Investment & Securities) is acquired

1986 Hanyang Stores (now Hanwha Galleria) is acquired

1994 Hanwha R&D Center is built



2002 Hanwha acquires Korea Life Insurance (now Hanwha Life)

2007 Hanwha announces its new corporate identity

2012 Hanwha acquires Germany-based Q.CELLS and Hanwha Q CELLS is launched

2015 Hanwha General Chemical, Hanwha Techwin and more companies are launched

Financial Highlights

* The financial data in the Financial Highlights show the simple aggregate of sales, total assets, total liabilities, and total stockholder equity among the Hanuwa Group's major affiliates at home and abroad. (Source: the Hanuwa Group)

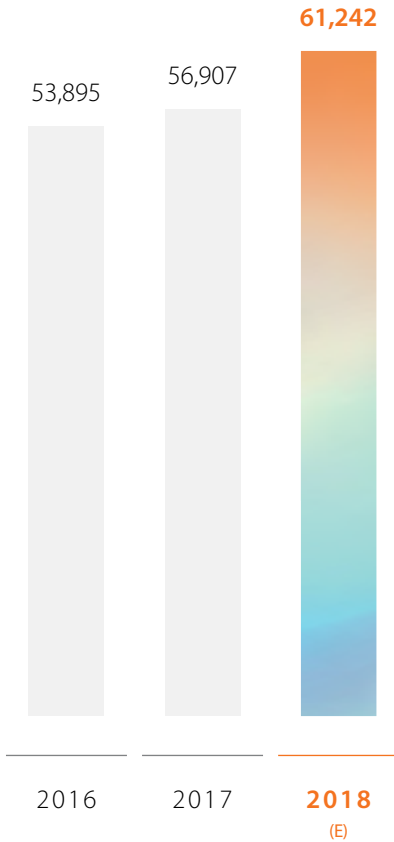
* Figures for sales and total assets of individual affiliate companies published on page 75 and subsequent pages of this brochure are data officially announced by the Financial Supervisory Service.

* This outlook data was generated prior to completing the internal financial statements, accounting reviews, and an external audit report and are therefore subject to change upon settlement of accounts and accounting audit results. The outlook data also include information on forecasts that may be affected by

risks, market conditions, uncertainties, or changes in circumstances. In addition, the actual results may differ from the published or suggested content herein, and may change without prior notice due to shifts in market conditions and change in strategies. This data was generated for reference purposes only. The Hanuwa Group has no obligation to set or change expectations and forecasts for the future contained herein. The data contained herein must not be used for investment purposes. The Hanuwa Group does not provide any guarantee for the data and its contents, and has no liability or responsibility for the outcome of investments made based on this data.

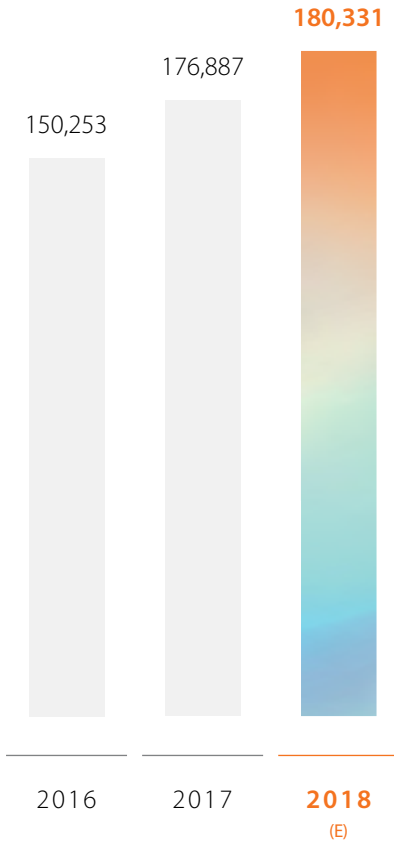
TOTAL SALES

In USD Millions



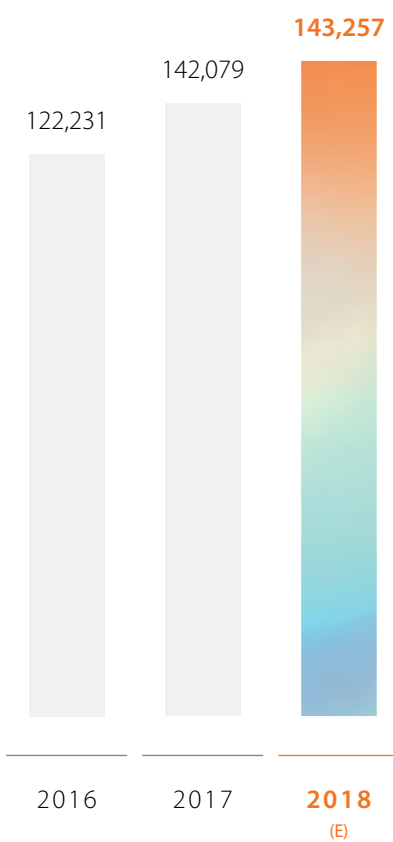
TOTAL ASSETS

In USD Millions



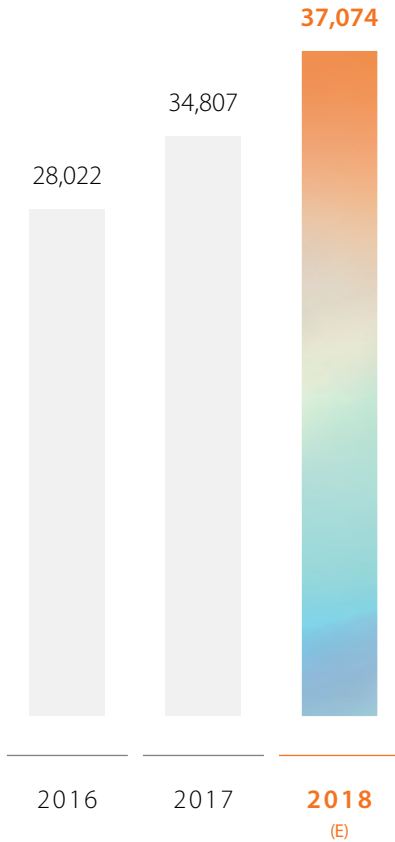
TOTAL LIABILITIES

In USD Millions



TOTAL STOCKHOLDERS EQUITY

In USD Millions



* Sales are converted into US dollars at the average exchange rate of USD 1= KRW 1,130.84 in 2017, and KRW 1,160.50 in 2016.

* Assets, liabilities, and shareholder equity amounts are converted into US dollars at the December 31 closing exchange rate of USD 1= KRW 1,071.40 in 2017, and KRW 1,208.50 in 2016.

* The 2018 expectancy data was converted based on Hanuwa Group's internal exchange rate of USD 1=KRW 1,130.



Hanwha BUSINESSES



Manufacturing & Construction

- Hanwha Corporation
- Hanwha Aerospace
- Hanwha Land Systems
- Hanwha Systems
- Hanwha Defense Systems
- Hanwha Techwin
- Hanwha Precision Machinery
- Hanwha Power Systems
- Hanwha Chemical
- Hanwha General Chemical
- Hanwha **TOTAL** Petrochemical
- Hanwha Advanced Materials
- YECHUN NCC**
- Hanwha Q CELLS
- Hanwha Energy
- Hanwha Engineering & Construction
- Hanwha City Development

Hanwha Corporation

www.hanwhacorp.co.kr

EXPERTISE

Explosives: Industrial explosives products, raw explosives materials, explosives applications, domestic and overseas mining services

Defense: Precision-guided munitions, advanced ammunition, underwater surveillance equipment, navigation system, laser

Trade: Petroleum, petrochemicals, steel, machinery, defense sales, construction materials, papers, healthcare, automation facilities, project organization, green energy

Machinery: Machine tools, aerospace, solar, factory automation, power train, plant machinery

2017 Total Sales

In USD millions

4,103

2017 Total Assets

In USD millions

6,981

Hanwha Corporation was founded in 1952 as Korea Explosives Company, quickly becoming the leader in the explosives industry of South Korea. It has since grown into a global manufacturing and trading company operating in four business areas—explosives, defense, trading, and machinery.

In 1959, Hanwha was the first domestic manufacturer of dynamite in South Korea. After having successfully developed safer, high-quality industrial explosives and fire process products, we have been able to supply the South Korean government with the crucial means to rebuild its cities and infrastructure.

Today, Hanwha Corporation continues to apply its extensive experience with explosives technology and has expanded into raw explosives materials, explosives manufacturing, and explosives applications. We entered the mining service market in 2014, quickly gaining a firm foothold in the world markets with high-caliber products and services. We started offering mining services in South Korea and Indonesia. We continued to expand our business into new service areas. In 2015, we entered a new market and took over the Australian mining service company LDE by providing high-quality products

at competitive prices. We also completed the full vertical integration of nitric acid-ammonium nitrate-industrial explosives by acquiring granular ammonium nitrate production lines. And we continued to invest in innovations to produce high-value-added technologies, such as the electronic detonator.

Since entering the defense industry in 1974, Hanwha Corporation/Defense has contributed significantly to improving South Korea's military defense capabilities. We operate businesses in precision-guided munitions, advanced ammunition, and underwater surveillance equipment. We have also entered the aerospace business, sharpening our competitive edge. In 2015, we conducted large-scale mergers and acquisitions, changing our business focus from ammunition and guided munitions to include self-propelled guns and engines for aircraft and fleets. We're also investing in defense electronics such as radar and combat systems. In 2018, we began building our competitiveness in navigation systems and laser, the core technologies of the future weapon system, as our new growth engines.

We have been instrumental in the formation of the South Korean 3-axis system that is made up of the Korea Air

and Missile Defense (KAMD), Kill Chain, and Korea Massive Punishment and Retaliation (KMPPR)—which earned us a reputation for consistent reliability from the South Korean government. To become a "trusted global partner in providing innovative defense solutions," we are securing core business competencies and strengthening our internal capabilities.

Hanwha Corporation/Trade is an international trading company that has played a leading role in globalizing Hanwha Group after it was founded in 1966. We have built a global network of more than 27 overseas corporations and offices. Our network allows us to work in synergy in world markets for Hanwha Group. As we continue to build our existing trading business, we lay the groundwork for stable growth by investing in value chain businesses. We focus on discovering and fostering new business models that are country-specific and overseas projects in the hospital and infrastructure sectors. In time, these businesses will become new revenue sources for our general trading business. We are increasing our network strategically in Latin America and Africa, and building new overseas business opportunities.

Established in 1953, Hanwha Corporation/Machinery is today leveraging its deep experience and cutting-edge technology to lead the machinery equipment industry worldwide. We produce high-value-added machinery equipment including industrial machinery and machine tools, with a focus on heat treatment, factory automation, and precision processing. Our machine tools, custom built to meet customer feature requirements and production lines, have helped us gain the largest market share in South Korea. And with our technology and experience, we've successfully segued into producing high-quality cells and modules, and to building solar cell manufacturing facilities for our customers.

Our state-of-the-art aerospace technologies have allowed us to make great strides toward becoming a global leader in manufacturing auxiliary aerospace machinery parts and electronics. Our aerospace business builds auxiliary parts for engines (hydraulic and fuel injection systems) and parts for flight control systems such as landing gear electronics. In 2015, we began a partnership with UTAS, a company in Turkey, to export aerospace parts. Our aerospace maintenance business also signed a memorandum of

understanding with GE. We're working with companies around the world not only to establish and strengthen our relationships but also to increase our business competitiveness in the global arena. At the same time, these initiatives are helping us to become a global leader, to explore new growth engines, and to expand our global presence.



Hanwha Corporation provides solar machinery to Hanwha Q CELLS, one of the world's largest photovoltaic manufacturers, recognized for its high-quality, high-efficiency solar cells and modules.

Hanwha Aerospace

www.hanwhaaerospace.com

EXPERTISE

Engines, engine components

2017 Total Sales

In USD millions

3,728

2017 Total Assets

In USD millions

5,365

Hanwha Aerospace total sales and total assets are based on consolidated financial statements.

Hanwha Aerospace began by building businesses in the aircraft engine and film camera industry in 1977. Since then, we've aggressively invested in research to develop our technologies in optics, video, and aircraft engines. We've then expanded into aircraft / gas turbine engines businesses. To evolve as we have, we had to successfully develop top-tier and original application technologies that gave us the competitive edge needed for our businesses around the globe. And as our technologies advanced so did our expertise and our ability to not only meet the changing market demands but to anticipate them.

As South Korea's only producer of gas turbine engines for the last 40 years, we have been in a fortunate position to capitalize on all the opportunities that have allowed us to build a powerful business in aerospace. We now provide a range of gas turbine engine solutions that our nation needs and those that are also desired by markets all over the world. In 2016, we surpassed a milestone of completing 8,000 gas turbine units and signed a contract to provide

large-scale aircraft engine parts to GE and Rolls-Royce, becoming a trusted partner in the global aircraft industry. We also entered into a contract with the American aerospace manufacturer, Pratt & Whitney to operate a joint venture with a Singaporean manufacturing company. Our partnership with Pratt & Whitney is a Risk and Revenue Sharing Partnership (RSP) to co-build the next-generation aircraft engine. This partnership represents our joining the ranks of other leading aircraft engine manufacturers of the world. In 2017, we established a production base in Vietnam to improve our cost competitiveness and increase production capacity.

We're in an industry that sees great and fast changes but despite them, we've seen great successes and we remain committed to our goal to become the top global partner in aviation engine parts. Our strategy is simple: we anticipate the ever-changing markets and address them through continuous development of technology while focusing on quality.

World-class quality and continuous R&D have propelled Hanwha Aerospace to become a global supplier of engines for aircrafts, including fighter jets and UAVs.



Hanwha Land Systems

www.hanwhalandsystems.com

EXPERTISE

Defense land systems (artillery systems, unmanned systems, remote controlled weapon stations)

2017 Total Sales

In USD millions

682

2017 Total Assets

In USD millions

1,175

Hanwha Land Systems entered the defense industry in 1983, developing and producing land systems that played a pivotal role in increasing the defense capabilities of South Korea's armed forces. We became an affiliate of Hanwha Group in 2015. Just two years later, we were spun off from Hanwha Techwin in 2017 as an independent and specialized defense company and renamed Hanwha Land Systems. We are building synergy with other defense affiliates, which reflects the Group's decision to separate commercial and defense businesses.

Over the years, Hanwha Land Systems has been taking on large-scale projects for the national defense of South Korea. As a result, we've accumulated invaluable experience and defense expertise that we can confidently call our core competencies. With them, we are now securing the future of South Korea by helping the nation build an independent national defense. We're developing artillery solutions for modern warfare. We have applied our experience in producing more than a thousand

K55 self-propelled howitzers. We developed the K9 self-propelled howitzer, the world's top-quality howitzer with overwhelming firepower, high maneuverability, and survivability. Our K10 ammunition resupply vehicle is the world's first fully automated ammunition resupply system equipped with a K9 self-propelled howitzer. Our Evo-105 self-propelled howitzer is a new-concept towed gun and an automatic fire control system on a vehicle. We are also developing leading-edge new products, such as defense robots and remote controlled weapon stations suitable for future battlefields.

Our expertise in performance and technology is recognized worldwide, giving us a bridgehead to enter the global defense market and develop new markets. We have exported the K9 self-propelled howitzer—a weapon that has gained a reputation for excellence in the international defense markets, including Turkey, Poland, Finland, India, and Norway. We continue to enter new markets and grow our footprint, such as

exporting the K10 ammunition resupply vehicle to Norway for the first time in 2017.

We intend to grow as a global top provider of land systems. We will continue to invest in advanced technology that we can incorporate into our total convergence solutions for artillery, armored vehicles, robots, unmanned systems, and energy storage systems. And by providing innovative defense platform solutions, we will become a sustainable and trustworthy leader in the global defense industry.



Leveraging our industry experience and expertise, Hanwha Land Systems is becoming a leading defense company with cutting-edge convergence solutions for ground systems.

Hanwha Systems

www.hanwhasystems.com

EXPERTISE

Defense: Surveillance and reconnaissance systems, C4I-SR systems, naval systems, aerospace systems

ICT: Integrated IT business services

2017 Total Sales

In USD millions

1,070

2017 Total Assets

In USD millions

1,372

As a leading global total solutions company, **Hanwha Systems** provides differentiated smart technologies in defense ICT and information infrastructure. In August 2018, we launched the new ICT division through the merger with **Hanwha S&C**. Our ICT division will enable us to increase our leadership in defense electronics by leveraging advanced defense IT and system integration capabilities. And by strengthening our SI business competencies, we will be able to expand into areas of public infrastructure and private security.

Since its founding in 1978, the **Hanwha Systems** defense division has significantly advanced the defense capabilities of South Korea's military. We've applied over 40 years of experience and technologies in precision electronics and ICT to develop advanced systems for surveillance, reconnaissance, control, communication, computer, and intelligence (C4I), naval, and aerospace.

Our surveillance and reconnaissance systems that we developed for South Korea's national defense include the thermal observation device (TOD), electro-optic tracking system (EOTS), infrared detection tracking equipment, and multifunctional observation scopes. **Hanwha Systems** is also developing an active electronically scanned array (AESA) radar for the next-generation South Korean fighter KF-X and upgrading our cutting-edge radars, including FFX Batch-III Multifunction radar and M-sam Multifunction radar.

Hanwha Systems' C4I businesses are completely reliant on our original technologies for developing products that can operate in future combat environments. We produce next-generation tactical information communication networks (TICN) using these technologies and next-generation satellite communications systems. For the South Korean Navy, we serve as the sole supplier for their naval combat management system. Our proprietary technology is at the heart of their enhanced combat systems and integrated solutions for sensors and armament.

In aerospace, we are developing core avionics electronics for the light armed helicopter (LAH) and Korean fighter airplane (KF-X). We are also building Synthetic Aperture Radars for military reconnaissance satellites. Our strategy is to lead the future defense industry by improving our technical capabilities and building strong relationships with key partners who are leading in the Internet of Things (IoT) and Artificial Intelligence (AI).

Our seven customer support centers across the nation provide product support for weapon systems operations. **Hanwha Systems** offers integrated logistics support (ILS) with timely customer support, guaranteed.

Hanwha Systems ICT division's history dates back to **Hanwha Group's** ICT team integration in 1991. After spinning off from **Hanwha Corporation** in 2001, **Hanwha Systems** ICT has accrued deep-level experiences in system

integration from having developed world-class IT solutions and services over the years in a variety of industries including manufacturing, defense, construction, financial services, retail, service, and education. We're now building customized systems with expertise that differentiates us and makes us more competitive in these industries.

Our ICT division operates a Cloud-based Big Data center that provides data analysis. And combined with our smart factories powered by IoT and Big Data technologies, we're on a path to improve productivity, predictability, quality, and processes for our companies and our clients. We're even helping our nation as a whole—keeping cities safe with our integrated security and control platforms designed for the public infrastructure.

We are on a journey, a digital transformation, seeking both possibilities and opportunities with digital innovations and disruptive technologies that combine AI, IoT, and Big Data. We're building internal block chain platforms in anticipation of the Fourth Industrial Revolution. We're forging AI technology partnerships with global leaders like with Element AI, a globally leading AI company. Our partnerships will lead to the development of core technologies on deep learning including text analysis, natural language processing, and knowledge databases. We will apply our technologies to strengthen our businesses globally in finance, manufacturing, and the services industries so that by 2020, we can begin benefiting from the possibilities realized and the opportunities taken.

Hanwha Defense Systems

www.hanwha-defensesystems.co.kr

EXPERTISE

Infantry fighting vehicles, air defense weapons, guided weapons, launching systems

2017 Total Sales

In USD millions

594

2017 Total Assets

In USD millions

713

Hanwha Defense Systems was established in 1937, and in 2016, it became an affiliate of **Hanwha Group**.

Hanwha Defense Systems' goal is to become a global top-tier company in the defense industry. To achieve this goal, we're leveraging our state-of-the-art production facilities to build a comprehensive suite of defense solutions including infantry fighting vehicles, air defense weapons, guided weapons, and launching systems. We believe in developing practical solutions with innovation and technology.

In 1984, we began supplying weapons systems to the South Korean military with the K200, an Armored Personnel Carrier (APC) built independently and commercialized in South Korea. Since then, we've also developed the CHUNMA (our flagship surface-to-air guided system), BIHO (an air defense weapon), K21 Infantry Fighting Vehicles (IFV), and CHUNMU (a multiple rocket launcher). In 1993, we exported the K200 to Malaysia, marking our first large-scale overseas export as a South Korean defense company. In 2007, using our original technology, we developed the K21, a vehicle that can operate on water. We developed the BIHO (an air defense weapon) and the Tigon (a wheeled armored vehicle). We market our products

worldwide including in the Middle East and Southeast Asia.

We have seven specialized infantry fighting vehicle models that use the K200 as the base: the K277 (for command post), the K281/K242 (mortar-equipped), the K216 (aka CBR - Chemical, Biological, and Radiological), the K288 (rescue), the K221 (smoke grenade launchers), and the K263A (self-propelled 20mm Vulcan). Since 2009, we have produced the K21, a world-class IFV with improved firepower, survivability, and maneuverability for high-speed operations.

We provide a lineup of air defense and guided missile solutions that are optimal for a range of operations to combat mid- and low-altitude aerial threats. The CHUNMA is South Korea's first surface-to-air guided system, an effective weapon system against low-altitude aerial threats on core assets. In 2015, we mass-produced the BIHO to allow the mounting of conventional weapons. Its use has boosted the anti-air defense capabilities of the South Korean armed forces. Because of its excellent maneuver capability, the BIHO can be highly effective in various air defense operations such as in mechanized infantry.

Hanwha Defense Systems is exceptional at producing a range of launching systems that leverage advanced technology and augments that with deep experience. These systems include launching platforms, command and fire control systems, ammunition systems, and ammunition carrier vehicles. Our flagship system is the multiple rocket launcher CHUNMOO. As with the BIHO, the CHUNMOO was co-developed with a partner's R&D. We also produce more than 40 other launching systems. Our land launchers include the CHUNGOONG that can effectively eliminate enemy threats at medium altitudes. Our Blue Shark is a launcher that can be mounted on a ship to launch torpedoes. The HAESUNG is a ship-to-ship guided missile launcher that can precisely strike enemy ships from 150km away.

Hanwha Defense Systems is South Korea's premier defense company. Through hard work and strong R&D investments, we are also becoming a leader in the global defense industry and gaining recognition for developing reliable defense solutions. We're creating synergy with our defense affiliates. Together, we will develop comprehensive defense systems that will transform **Hanwha** into a top 10 global defense company.



Hanwha Defense Systems has led South Korea's defense industry for more than 40 years. Since being designated as a defense company in 1973, we have developed cutting-edge technology to build infantry fighting vehicles, air defense weapons, guided weapons, and launching systems.

(left)
Hanwha Systems R&D Center develops cutting-edge technologies to build world-class radars, electro-optics, missile seekers, and tactical communication systems.



(right)
The Hanwha Data Center embodies a state-of-the-art integration infrastructure that enables our clients to derive better solutions for stronger value for their customers.



Hanwha Techwin

www.hanwhatechwin.com

EXPERTISE

Video surveillance solution

2017 Total Sales

In USD millions

513

2017 Total Assets

In USD millions

357

Hanwha Techwin total sales and total assets are based on consolidated financial statements.

Established in 1977, Hanwha Techwin's advanced optical technology and image-processing technology have made us a global leader in video surveillance. We've heavily invested in R&D to innovate and meet the ever-changing market needs. In so doing, we've been gaining recognition as a global top-tier company. By applying our experience and subject matter expertise to our product development, we've been able to create a complete line of security solutions from CCTVs and video recorders to integrated management software. Our products are designed to meet every application including urban surveillance, retail, transportation, and banking.

We manufacture over 2.7 million video surveillance devices in South Korea, China, and Vietnam. They are sold through our sales networks across Europe, the Americas, China, Middle East, and Asia. Currently, 76 percent of our sales comes from our overseas markets.

Hanwha Techwin's flagship brand, Wisenet, represents our technological excellence in video surveillance systems. Hanwha Techwin offers a wide range of products from economically affordable to premium grade solutions that can be customized.



Hanwha Precision Machinery

www.hanwhaprecisionmachinery.com

EXPERTISE

Chip mounters, screen printers, application equipment, collaborative robots

2017 Total Sales

In USD millions

224

2017 Total Assets

In USD millions

146

After developing the first chip mounter in 1989, Hanwha Precision Machinery has become a leading worldwide Smart Factory solutions provider, offering Surface Mount Technology (SMT) mounters, semiconductor equipment, insertion and assembly automation equipment, collaborative robots, industrial automation equipment, and integrated software solutions.

We have two primary product lines. Since launching in 2013, our SM series has continuously evolved. It boasts the best performance in its class and is our bestselling product line. In 2017, it achieved the No. 1 market share in the global medium-speed chip mounter market. Our new flagship product line, the DECAN series, is a high-speed mounter that can claim to be the world's only modular conveyor system where key components can be replaced.

Hanwha Precision Machinery's T-Solution is a comprehensive SMT production line solution designed for Smart Factories. It connects all assets in a production line and utilizes Big Data analysis to provide seamless operations, better quality control, and the ability to operate remotely. T-Solution, recently launched, embodies the principles of Industry 4.0 in terms of interoperability, connectivity, and autonomy. It yields higher production efficiencies, greater installation accuracies, zero defects, and lower maintenance costs.

Leveraging our unmanned automation technology and experience, we launched South Korea's first collaborative robot in April 2017. Robots that can perform basic tasks and supplementary work enable us to maximize efficiencies in many industries, including automotive, electronics, food, and medicine.

Our solutions that include the T-Solution, SMT mounters, and collaborative robots, are just some of our products that represent our commitment to innovate continuously and our ability to overcome the toughest challenges. We do this to develop customer-oriented solutions that deliver greater efficiency, versatility, and value. We do this because ultimately, as partners, when our customers succeed, we succeed.



The DECAN series, our flagship product line, is a new high-speed mounter that adopts the world's only modular conveyor feature. The SM Series is our bestselling product line with best-in-class performance.

Hanwha Power Systems

www.hanwhapowersystems.com

EXPERTISE

Industrial air and gas compressor, gas turbines, power generation system

2017 Total Sales

In USD millions

177

2017 Total Assets

In USD millions

198

After the establishment of a new corporation in July 2017, our year-end sales exceeded USD 77.7 million.

Hanwha Power Systems launched in 1997 on the strengths of reliable technology and deep experience in gas turbine engines. Since then, we've become a global powerhouse and have sold more than 5,000 units worldwide. Using advanced technology, we developed high-value-added product lines. Our product lines include air compressors for industrial processes, fuel gas compressors for power plants, boil-off gas compressors for LNG terminals and plants, and extremely low-temperature compressors, expanders, and LD/HD (low duty/high duty) compressors for LNG carriers.

In 2011, we entered the gas compressor market and are now the only energy equipment company in South Korea capable of independently designing, producing, and testing large-capacity high-pressure gas compressors. Our high-efficiency compressors along with our expanders, give our customers a competitive advantage in delivery and the ability to build their core components in-house. In 2013, we launched the world's largest air-cooled turbo compressor SA3100. In 2014, we won the contract to supply the world's first

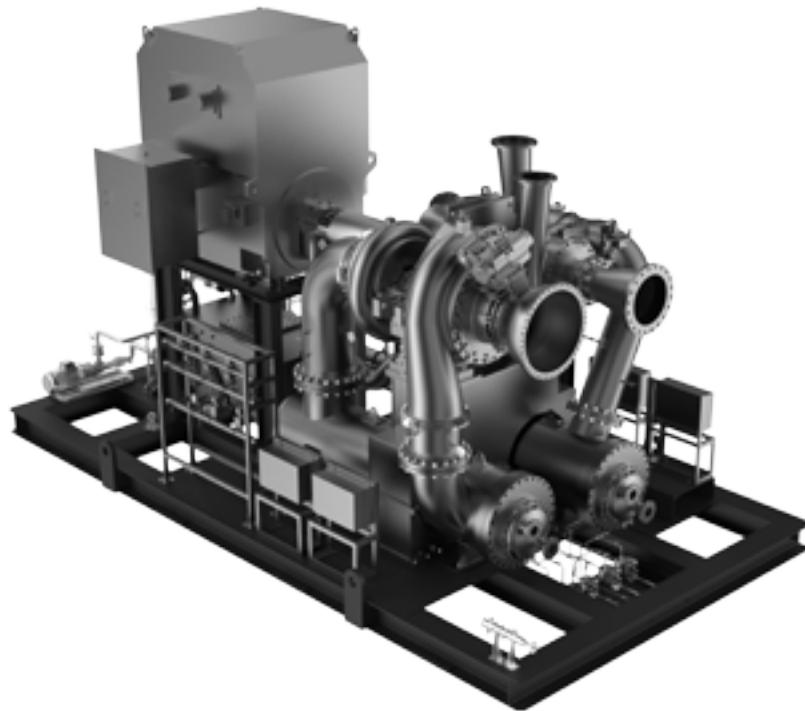
marine Vapor Recovery Unit (VRU) steam recovery turbo compressor. And, in 2015, we entered the LD/HD compressor market with a compressor for LNG carriers and solutions for shipbuilders.

Hanwha Power Systems is an energy equipment company that is rapidly expanding its sales and R&D networks globally. We currently have six international sales offices, as well as production facilities in South Korea and China. Our R&D centers, located in the cities of Houston, the US and Pangyo, South Korea, are accelerating our development co-ops on a global scale. At the same time, we've been focusing on developing closer relationships with our key customers in the O&G industry. In the first half of 2016, we obtained a vendor approval for API617 and API672 from Saudi Aramco. We also strengthened our cooperation with GE Oil & Gas by signing MOUs for gas turbine generators and packages.

Our next goal is to become a total energy solutions supplier. To this end, we're working to strengthen our product portfolio in the compressor business and expand into turbine-related

businesses that can support petroleum gas and power generation customers. Recently, we received an order from the US Department of Energy (DOE) for a project related to SCO2 engine development. We are now looking to collaborate with Southwest Research Institute (SRI) in the US. The SCO2 project is expected to supplant the steam turbine market and become a game changer that creates new markets in the distributed power generation market. In partnership with KEPCO in 2017, we began the development of a pure oxygen gas turbine—an eco-friendly and highly efficient power generation equipment. We expect our collected efforts and accomplishments to propel us to leadership in the eco-friendly power generation solutions market.

In the petrochemical process, our compander is a state-of-the-art turbomachine that features the capabilities of both a compressor and an expander without using redundant components such as a base frame, gearbox, or an oil system. Hanwha Power System's compander represents the company's leading expertise in turbo compressor and turbo expander technology.



Hanwha Chemical

hcc.hanwha.co.kr

EXPERTISE

PE, PVC, CA, polysilicon, TDI

2017 Total Sales

In USD millions

3,507

2017 Total Assets

In USD millions

6,985

Established in 1965, Hanwha Chemical is a total solutions chemical company with streamlined production systems for polyethylene (PE), polyvinyl chloride (PVC), and chlor-alkali (CA). As South Korea's leading petrochemical company, we dominate the nation's chemical industry with high-quality PVC, CA, and linear low-density polyethylene (LLDPE) that we offer at competitive prices.

In 2012, we successfully commercialized high-density ethylene vinyl acetate (EVA) for the first time in South Korea. Just four years later, we localized the production of chlorinated polyvinyl chloride (CPVC), enhancing the quality of our PVC.

We obtained the New Technology Certification from the Korean Agency for Technology and Standards and, in 2017, we built a production line that could produce up to 30,000 tons of CPVC annually. We partnered with the Institute of Chemical Process at Seoul National University and the Korea Advanced Institute of Science and Technology (KAIST) to establish joint research centers. It was a significant step toward enhancing quality and accelerating the pace of innovation.

We continue to improve production efficiency and cost competitiveness while meeting the growing demand for our products around the world. Our PVC plant, completed in 2011 in Ningbo city in China's Zhejiang Province, was built to produce up to 300,000 tons of PVC annually. Today, with continuous improvements in the production process, the plant is producing 350,000 tons of PVC each year. In Bang Phli, Thailand, we built an alkali soluble resin plant with an annual capacity of 17,000 tons. This facility serves as an important base of operations as we enter other markets in Southeast Asia.

Hanwha Chemical was the first South Korean petrochemical company to tap into new business opportunities in the Middle East. We signed joint venture contracts with International Polymers Company, a private petrochemical company in Saudi Arabia, and Gulf Advanced Cable Insulation Company in 2009. In 2015, we achieved cost reductions and economies of scale as our joint venture with International Polymers began to produce EVA and LDPE. With Gulf Advanced Cable Insulation, we are producing wire and cable compounds.

In 2016, we strategically acquired a company to maximize the synergy in production processing of CA and vinyl chloride monomer (VCM) while enhancing our production efficiencies with toluene diisocyanate (TDI), a raw material for polyurethane products.

In our upstream solar businesses, we're continuing our investments in infrastructure and working to become a global leader. One of our facilities alone can annually produce up to 15,000 tons of polysilicon. Our facilities employ advanced technologies that produce environmentally-friendly products, such as ECO-DEHCH, an eco-friendly premium plasticizer. They represent our commitment to a better environment for a better tomorrow.



The Hanwha Chemical Ningbo PVC plant in Zhejiang, China, was completed in 2011, enabling us to target China's PVC market with outstanding quality and value.

Hanwha General Chemical

hgc.hanwha.com

EXPERTISE

PTA, PV Business

2017 Total Sales

In USD millions

1,591

2017 Total Assets

In USD millions

2,870

Hanwha General Chemical was established in 1974 and then acquired by Hanwha Group in 2015. It was the first company in South Korea to localize production of purified terephthalic acid (PTA), a primary component in many types of polyester. PTA is used in clothing, industrial fibers, film, and paint. The applications for PTA are expanding dramatically.

Today, our annual PTA production of two million tons, makes us No. 1 in both production capacity and market share in South Korea. Our experience and technology are also recognized worldwide. We have leveraged many years of our expertise and applied our PTA processing technology, proven since 2010 in the Middle East. And since joining Hanwha Group, we have enhanced our cost competitiveness by creating synergies with chemical affiliates and diversifying our markets through innovative management and sales practices.

In June 2017, we established Hanwha Solar Power to advance mid- to long-term growth beyond the single PTA business. Established as a growth engine for our PV business, Hanwha Solar Power also contributes to South Korea's efforts to develop renewable energy. We're seeking to improve our PTA-related technologies and develop related businesses in the value chain we have grown over the last 40 years. And to be globally competitive, we're making strategic investments and operating PV businesses not just at home but also abroad.

PTA is the primary raw material for polyester and is widely used in PET resin, bottles, films, paint, and industrial materials.



Hanwha TOTAL Petrochemical

www.hanwha-total.com

EXPERTISE

Ethylene, propylene, BD, EG, SM, PX, PE, EVA, PP, gasoline, diesel, jet fuel, LPG, solvent

2017 Total Sales

In USD millions

8,559

2017 Total Assets

In USD millions

6,233

Since its founding in 1988, Hanwha TOTAL Petrochemical has led the growth of the petrochemical business in South Korea through technology innovations and market expansion strategy. In 2003, Hanwha TOTAL Petrochemical set out to build a foundation to become a global chemical and energy company. The company executed its plan by forming a joint venture with the Total Group, a major French company in the energy and chemical industry. Since then, and after becoming a Hanwha affiliate, Hanwha TOTAL Petrochemical has achieved a record-breaking financial performance.

The product portfolio of Hanwha TOTAL Petrochemical includes basic chemicals such as ethylene, propylene, and butadiene. Hanwha TOTAL Petrochemical also produces base chemicals like styrene monomer, paraxylene, and ethylene glycol. With 18 plant units in the Daesan Petrochemical Complex, the company is able to produce a wide range of products needed for

energy such as gasoline, diesel, jet fuel, and liquefied petroleum gas to polymers that are used in feedstock materials such as polyethylene and propylene.

We are the only company in South Korea that operates a naphtha-cracking center (a core facility in our petrochemical plant), a condensate fractionation unit (a refining facility), and an aromatics plant, all in one single complex. This complex represents a successfully organized vertical system—from sourcing to producing to distributing the final products. The efficiency we've achieved with this system allows us to diversify our business portfolio and pursue stable growth. In 2010, after registering our refining business with the South Korean Ministry of Trade, Industry & Energy (MOTIE), we began as a full-fledged energy business. In 2014, we made the biggest investment since establishing the business by building an additional aromatics plant, a condensate fractionation unit and an ethylene-vinyl acetate (EVA) plant. With the additional production facilities, we now produce 1.09 million tons of ethylene, 2 million tons of paraxylene, and 1.06 million tons of styrene monomer annually.

We have the No. 1 market shares in the EVA used in solar cells, HDPE used in bottle caps, the EVA used in extrusion coating, and flow mark free polypropylene (FMF PP). These products have been recognized as World Class Products by MOTIE. We attribute our success not only to the vertical system we employ and our product diversifications but also to the power and vast global network of Hanwha Group.

Hanwha TOTAL Petrochemical is the leading producer of EVA, used in solar cells and the global leader in terms of market share.



Hanwha Advanced Materials

www.hwam.co.kr

EXPERTISE

Automotive materials, electronics materials, solar materials

2017 Total Sales

In USD millions

1,055

2017 Total Assets

In USD millions

1,548

Founded in 1965, **Hanwha Advanced Materials'** vision is "A high-tech materials company that protects the values of humanity and the environment." To achieve this vision, we're developing an innovative line of products and technologies that are more environmentally conscious while catering to the needs of our customers around the world. We produce lightweight composite materials and thermoformable components for automobiles, highly efficient advanced film for solar energy, and high-performance coating films for mobile phones and display. We have also developed local production plants and R&D centers in South Korea, the US, Europe, and China. Our global sales continue to rise.

Since entering the automotive materials business in 1986, we have launched a diverse portfolio of products for automobile structures and interiors. We now leverage original technologies to build high-strength, super-lightweight materials and automotive parts. Among the materials we produce are: StrongLite—Glass fiber Mat-reinforced Thermoplastic (GMT) and SuperLite-Light—Weight Reinforced Thermoplastic (LWRT).

They've captured the highest market shares globally, in their respective categories. We are a major supplier to global automakers including Hyundai, Kia, BMW, Daimler, Volkswagen, GM, Ford, and Toyota. As a global supplier, we have manufacturing factories in Alabama and Virginia in the US, Beijing, Shanghai, and Chongqing in China, the Czech Republic and Germany in Europe, and in Mexico where the largest number of cars are produced for North America. By relying on our 10 production sites around the world, we can anticipate the needs of global automakers for parts standardization and global sourcing.

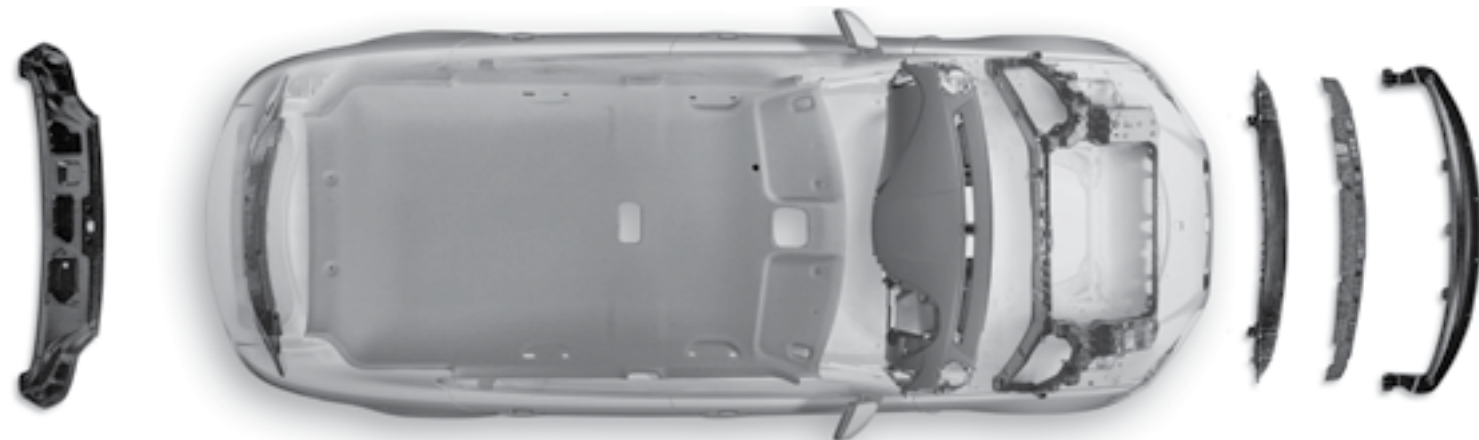
In 2015, we launched the Lightweight Composite Materials R&D Center that will help our R&D to be more globally competitive and help us to lead the global trend toward lighter parts. Our research focuses on thermoplastic for automobiles, thermosetting composite materials, and on designing and developing new applications. We also develop new materials and manufacturing methods, offering improved functionality and innovative plastic hybrids that enable the latest technologies in the market. We are actively tracking paradigm shifts in the automotive market, as represented

by smart cars and electric vehicles. While keeping up with the rapidly expanding electric vehicle market in China, we are also exploring sales opportunities for battery cases in electric vehicles.

We offer products built with in-house technologies we've been refining for sheet manufacturing for the last 30 years. In 2010, we succeeded in developing and mass-producing EVA sheets and back sheets used in photovoltaic modules. We operate a plant for 7.5GW EVA sheets and 2.5GW back sheets in South Korea but we're expanding the business to Europe, America, and Southeast Asia.

We are especially competitive in the high functional film market. Currently, we produce electronic circuits such as coverlay film (insulation film), Flexible Copper Clad Laminate (FCCL), bonding sheet (adhesive sheet), and Electro-Magnetic (EMI) shielding film. Our flagship FCCL LinkTron is used as a key component material for precision electronic products such as smartphones and tablet PCs. We are now expanding into manufacturing circuit materials used in automotive electronics.

Hanwha Advanced Materials maintains the world's largest market share for StrongLite (GMT) and SuperLite (LWRT)—materials proven to reduce the weight of automobiles. We are now expanding our operations and production facilities globally to keep up with the rapidly growing market for lightweight composite materials for auto parts.



YEOCHUN NCC

www.yncc.co.kr

EXPERTISE

Petrochemical feedstock production

2017 Total Sales

In USD millions

4,789

2017 Total Assets

In USD millions

2,395

YEOCHUN NCC operates the world's leading naphtha-cracking facility in the Yeosu National Industrial Complex. The facility was built in 1999 and is located on the southern tip of the Korean Peninsula. **YEOCHUN NCC** represents a fifty-fifty joint venture between **Hanwha** and Daelim, two South Korean conglomerates that own naphtha-cracking facilities. The facility annually produces 1.95 million tons of ethylene, 1.11 million tons of propylene, and 5.50 million tons of various petrochemical base materials, including benzene, toluene, xylene, styrene monomer, and butadiene.

With fully automated and optimized processes producing high-purity feedstocks, this state-of-the-art facility gives **Hanwha** affiliates a competitive edge to produce high-quality downstream petrochemical products.

Although our production facilities are already technologically advanced with large-scale production capacities, we're continuing to make improvements. We attribute our improvements and growth each year to loyal customers, the use of a sophisticated management system, and sound financial structure. Additionally, our professional and highly skilled employees effectively combine industry expertise with cutting-edge technology, truly making our workforce a key differentiator.

Supported by steady flow of investments, product specialization, facility expansion, and business focus, we've become a leading Naphtha Cracking Center (NCC) company in South Korea. And as we continue efforts to improve our capabilities, it's why we'll become a world-class petrochemical company.



As the world's leading naphtha-cracking facility, our **YEOCHUN NCC** plant produces ethylene, propylene, and other petrochemical feedstocks. This state-of-the-art facility gives our **Hanwha** affiliates a competitive edge in petrochemicals.

Hanwha Q CELLS

www.hanwha-qcells.com

EXPERTISE

Solar power solutions: ingots, cells, modules, and systems

2017 Total Sales

In USD millions

2,189

2017 Total Assets

In USD millions

2,263

Hanwha Q CELLS total sales and total assets are based on 20-F (Nasdaq) standard.

Hanwha Q CELLS is a total solar power solution provider with the world's largest cell production capacity. Our business scope ranges from the midstream of ingots, cells, and modules to downstream solar solutions for residential, commercial buildings, and solar power plants.

Since our foray into the solar energy business in 2010, Hanwha Group has transformed Hanwha Q CELLS into the world's leading producer of solar cells and modules. Our current production networks span across China, Malaysia, and South Korea. Bolstered by strong revenue and driven to stay ahead of the growing worldwide demand, we've continued to invest in R&D and manufacturing innovations. The Jincheon Plant in South Korea, built in 2016, can annually produce more than 1GW of QANTUM cells (the world's most efficient cells). Our QANTUM technology is based on PERC cell technology, providing monocrystalline efficiency for multicrystalline module cells. The latest QANTUM module, QPLUS, won the Module Manufacturing Innovation award at the Solar Industry Awards 2015 in Hamburg, Germany.

For two consecutive years, Hanwha Q CELLS has won the Intersolar Award in the Photovoltaics from Intersolar, the world's leader in solar energy conferences and exhibitions. In 2017, our QPEAK RSF L-G4.2 steel-frame module won in the Photovoltaic category. A year later, in June 2018, our QPEAK DUO-G5 solar module followed suit, winning in the same category and earning high praise for its 120 half-cell, six-bus bar monocrystalline module that the Intersolar jury panel called "the new standard for residential and commercial rooftop."

Hanwha Q CELLS is ranked among the best by installers, winning the Top Brand PV Seal 2018 from EuPD Research for the fifth time in a row in Europe and for the third time in Australia.

Our technology infrastructure enables differentiated technology innovation. Our base solar R&D work is done in Thalheim, Germany, but our R&D network is located in China, Malaysia, and South Korea. Our R&D centers all receive Hanwha's continuous support and investments to develop solar technology, including anti-PID, hot spot protection, and more.

By employing our cutting-edge technology and economies of scale, Hanwha Q CELLS has been able to take advantage of the growing demand for solar power around the world. We have been able to offer higher quality products at competitive prices. In 2014, we entered the rooftop solar power equipment market in Japan and Europe and the large-scale power plant markets in the US, Thailand, Chile, and Latin America. In the same year, we secured a series of large solar projects across Europe—in the UK, France, and other countries. Solar project contracts in Japan helped us achieve the top international market share in 2016 and recognition as a key worldwide player. In 2015, we partnered with US-based NextEra Energy to provide 1.5GW of modules, accelerating our entry into one of the world's largest solar markets. And by 2016, we earned the No. 1 market share in the US, South Korea, Australia, and Turkey.

Hanwha Q CELLS is securing its global leadership in the solar power industry through long-term growth and expertise —this is part of our strategy to optimize for the needs and policies of worldwide energy markets.

Hanwha Energy

hec.hanwha.co.kr

EXPERTISE

Group energy, solar energy, O&M, system solution

2017 Total Sales

In USD millions

397

2017 Total Assets

In USD millions

1,556

Established in 2007, Hanwha Energy is a comprehensive energy solutions company. We operate cogeneration plants that provide a stable supply of high-quality electricity and ultra-high-pressure steam to companies in national industrial complexes in South Korea. By providing readily available power, our plants improve the competitive advantage of our off-takers. Our cutting-edge technology consistently complies with South Korean government requirements for energy efficiency and greenhouse gas emissions reduction.

We are diversifying our energy business as we promote overseas solar power generation, O&M business, system solutions business, and more to help us to build sustainable growth. In Japan, we operate several solar power plants with a combined capacity of 50MW, including a 24.5MW solar power plant

in Ōita. We also constructed a 31.7MW plant in Turkey and a 202MW plant in India, which both began commercial productions in 2017. The solar power plants under construction in Japan are approximately 100MW, and we are planning an expansion in the near future. In the US, we signed a 1GW PPA through our local subsidiary for several locations, including Texas and Nevada. Commercial operations are expected to begin soon.

To efficiently operate and systematically maintain solar power plants, we are building an O&M business that uses our Hanwha Energy Integrated System (HEIS) as its base. Our O&M services help to ensure stable profits for our customer's assets through improved performance, maximum productivity, and efficiency. As a result, our O&M business has become one of the main pillars of our renewable energy business.

In addition, we are expanding our energy system solutions with our smart energy business model. In December 2017, we built a 19MWh solar energy connected to Energy Storage System (ESS) in Saemangeum, South Korea. We are using ESS to take advantage of the discount on the retail electricity rate and achieve peak savings at factories and buildings in South Korea. Going forward, we plan to implement our energy solutions for distributed energy sources, such as ESS and microgrids in other countries, including Japan, the US, and in Europe.

The outstanding quality control capabilities of anti-PID, hot spot protection, and Tra.Q demonstrate how Hanwha Q CELLS' global R&D can successfully leverage a variety of solar power technologies.



This state-of-the-art cogeneration plant provides a stable supply of high-quality electricity and ultra-high-pressure steam to companies in the Yeosu and Gunsan national industrial complexes in South Korea.

Hanwha Engineering & Construction

www.hwenc.com

EXPERTISE

General construction, residential complexes, urban development, industrial plants, civil engineering, water treatment.

2017 Total Sales

In USD millions

2,942

2017 Total Assets

In USD millions

5,434

Hanwha E&C has quickly grown into a global player by leveraging its extensive experience in construction projects and by implementing its new technologies and long-term expertise across industrial, chemical, and power plants, civil engineering works, commercial buildings, and more. We have averaged an annual growth rate of 30 percent since 2002, and gained international recognition. We've been recognized as a top global contractor in *Engineering News Record* and our works are often referred to as the "bible of the construction industry."

The Bismayah New City is a USD 10.1 billion project, the largest urban development in Iraq's modern history. It is also Hanwha E&C's flagship project. Bismayah city will be the world's largest new urban construction that includes infrastructure facilities for 100,000 households and 300 schools. The Bismayah New City is the first overseas project of its kind by a South Korean company and is expected to be lauded as a key project in global new city development.

In 2014, we demonstrated our technological prowess by successfully building the world's largest domed arena in the Philippines, a bridgehead for our Southeast Asian market entry. We are also building power and petrochemical plants in the Middle East and North Africa, and developing large-scale real estate projects in North America.

In South Korea, Hanwha E&C has been responsible for the nation's largest urban development projects that have included the construction of homes for more than 70,000 households at 87 sites. We led the industry by pioneering advances in large-scale site construction, including Daedeok Techno Valley, South Korea's first development project and effort to build an entire city.

We also developed the nation's first advanced membrane filtration water treatment technology and sewage water treatment technology. By providing future technology that is also eco-friendly, we are raising the bar for value that can be derived in building projects.

Hanwha City Development

www.hcd21.co.kr

EXPERTISE

Real estate development including multifunctional industrial complexes

2017 Total Sales

In USD millions

191

2017 Total Assets

In USD millions

288

Figures above represent total sales and assets of five subsidiaries.

Hanwha City Development has been recognized as the leading private developer of high-tech industrial complexes since its establishment in 2001. Starting with success in Daedeok Techno Valley, additional projects followed such as the Asan Techno Valley project (2,984,000m², 300 enterprises, 8,000 households), the Seosan Techno Valley project (1,994,000m², 200 enterprises, 6,000 households), the Gimhae Techno Valley project (1,643,000m², 200 enterprises), and the Gyeonggi Hwaseong Bio Valley project (1,745,000m², 200 enterprises). Each completed project stood out as an achievement and garnered high praise. The projects are considered exemplary development models and not surprisingly, they have been benchmarked by several local governments.

Encouraged by these achievements, we've made further investments for the future, breaking ground on the Yongin Techno Valley project in 2015. There is high anticipation Yongin Techno Valley will be an industrial complex that will be home to many R&D centers, companies, and startups in IT, fusion technology, and in other areas of technology. When completed in 2020, the industrial complex is expected to play an important role as the center of the industrial belt, south of Seoul.

We're also building for the future of our local economies. The Siheung Recycling Industrial Complex will help revitalize the local economy by improving industrial environments, attracting businesses, and creating local jobs.

Hanwha E&C's business reputation is recognized globally. Our reputation for reliability and dependability has allowed us to secure a series of contracts to construct large-scale petrochemical plants in the Middle East and North Africa.



Our Gyeonggi Hwaseong Bio Valley industrial complex will provide an optimal business environment for cutting-edge tech companies.

Finance

- Hanwha Life
- Hanwha General Insurance
- Hanwha Investment & Securities
- Hanwha Asset Management
- Hanwha Savings Bank

Hanwha Life

www.hanwhalife.com

EXPERTISE

Life insurance, mortgage and personal loans, trust, fund, retirement pension

2017 Total Sales

In USD millions

15,113

2017 Total Assets

In USD millions

102,962

Established in 1946, **Hanwha Life** is a leading life insurance company that is both the first and the oldest in South Korea. Early on, we played a critical role in developing the insurance industry and the country's economic growth.

In 2017, we expanded but made sure to stay structurally sound. We reported total assets of USD 102.96 billion. At the end of 2017, we achieved a 206.4 percent risk-based capital (RBC) ratio, demonstrating the soundness of our asset quality. Our strong credit ratings from both domestic agencies and abroad attest to our creditworthiness. We have received sterling AAA credit ratings from South Korea's top rating agencies for the past eleven years. From abroad, we received global credit ratings of A1 from Moody's and A+ from Pitch international credit rating agencies.

Hanwha Life leads the industry with innovative products and we're committed to adding new services that meet a wide range of customer needs, including retirement and health insurance. Since we introduced our exclusive license system—the insurance industry's equivalent of a patent—we have gained 15 exclusive sales rights for our original insurance policies, an industry high.

We also innovate to improve our interactions with our customers and their overall experiences before, during, and after the purchase of our products and services. It begins with customer-centric marketing and selling with the customers in mind—by

aligning our offerings to their life stages. Using Big Data to capture and analyze customer needs, behaviors, interests, and patterns, we've learned and systematically applied this knowledge to better customize and satisfy our customers. And to this end, we've improved call centers, training our customer service professionals to be readily available and deliver better customer care.

Certificates and awards from government organizations and customer satisfaction survey firms have recognized these efforts. We won the Grand Prize at the Korea Service Awards from the Korea Standards Association in the life insurance sector for eight consecutive years through 2017. We were also inducted into the Hall of Fame. Quality Index survey, managed by Korea Management Asset Consulting, ranked us at the top for eight straight years for customer service and seven for our call centers. Since our first certification in 2007, the Korea Fair Trade Commission has awarded **Hanwha Life** with six consecutive Certifications for Excellence in Consumer-Centered Management (CCM) and our tenth anniversary certificate of merit.

To increase sales and profitability, we are focusing on value-based sales, improving product features, and expanding protection-type and variable insurance sales. We are also diversifying investment assets and risk management to aggressively and preemptively respond to changes in the financial market. One such investment is in

building a foundation to lead in Fintech, in the future. We are participating in the Internet-only K-Bank and launching DreamPlus 63 Gangnam branch, the largest Fintech nurturing center in South Korea.

In the international market, we lead the industry. Our Vietnam subsidiary was founded in 2008, the first of its kind by a company from South Korea. With an effective localization strategy and a strong nationwide sales network, we turned a profit in 2016, a first for a South Korean insurer. Our Chinese subsidiary, Sino-Korea Life Insurance, entered new markets in Shanghai and Jiangsu Province, quickly rising to become the largest foreign-invested insurance company in Zhejiang Province.

In Indonesia, our subsidiary is working to build a balanced profit structure with a long-term perspective based on a value-focused strategy. In executing our strategy in the second phase, we expect to increase our global market share in Asian countries like Cambodia and Myanmar.

In 2018, **Hanwha Life** continues to secure profitable structures that support value-based sales and advanced asset management. We plan to expand our global business and secure growth engines in Fintech and Big Data. We push for innovation and with each success, we're inspired to continue the drive and to operate as a world-class life insurance company.

Hanwha Life, which leads the life insurance industry in South Korea, launched Onsure, the first online life insurance sales channel in South Korea. Onsure serves as yet another channel through which we will expand our life insurance business.



Hanwha General Insurance

www.hwgeneralins.com

EXPERTISE

Long-term insurance, automobile insurance, general insurance, mortgages, personal loans

2017 Total Sales

In USD millions

6,125

2017 Total Assets

In USD millions

13,892

Established in 1946, Hanwha General Insurance is the first South Korean insurance company funded solely by domestic capital. Throughout history, we've played a pivotal role in developing South Korea's general insurance industry. Today, we're a major insurer with total assets of nearly USD 14 billion. We use advanced services to enhance customer value and offer a comprehensive product portfolio ranging from long-term insurance to auto and general insurance. We created a Consumer Protection charter, improved service quality and minimized customer inconvenience to provide an overall superior customer experience. We also expanded the scope of what our call center agents could do to ensure a one-call, one-stop system. In addition, we were the first South Korean insurer to introduce an electronic signature system, making it easier for customers to complete transactions from their mobile devices. We have even introduced a mobile application called Smart Insu, catering to the ways and needs of our customer. More than 100,000 customers have installed the app.

Our efforts to improve customer service have been recognized with the top three service quality awards by the South Korean government organizations: CCM certificate, Call Center Service KS Certificate, and the Certificate of Excellent Service Quality.

Our company is on an upward trajectory, building a risk-based management structure, improving long-term insurance loss ratio, advancing the compensation process, and increasing high yield, higher value-added contracts. We are posting healthy financial growth by seeking diverse, stable overseas and alternative investments.

As a result, we have been recognized for financial stability and growth potential, earning an A- and an AA- credit rating in South Korea, based on insurer financial strength from A.M. Best, the international insurance industry rating organization.

Hanwha General Insurance has a diversified investment portfolio and is also a major insurer with total assets of USD 14 billion.



Hanwha Investment & Securities

www.hanwhawm.com

EXPERTISE

Securities brokerage and underwriting, asset management

2017 Total Sales

In USD millions

1,498

2017 Total Assets

In USD millions

6,012

Established in 1962, Hanwha Investment & Securities provides comprehensive asset management services, including brokerage and acquisition of stocks, bonds, and derivatives, as well as sales and asset management services for various financial products. With our differentiated systems and high-quality talent, we have successfully established ourselves as a reliable asset management partner. Our financial products and customer-oriented services are offered domestically and overseas.

In the ever-changing capital market, we're grounded by our company policy to listen to our employees, our customers, and to continuously encourage innovations within the organization. We differentiate our services by putting customers first and building customer trust.

We have established a stable and diversified profit structure with our business portfolios in investment banking, trading, wealth management, and institutional investors. To be able to readily

respond to the rapidly changing digital financial environment, we developed unique ways to ensure simpler and more convenient investment experiences for our client. Our easy-to-use application STEPS displays essential information that is beneficial to starting and experienced or inexperienced investors. We have improved even the intuitive features of our mobile trading system and continue to upgrade others based on customer feedback.

Hanwha Investment & Securities continues to develop its digital financial platform so it can provide differentiated products and services that can respond to digital transformations and trends. Our business motto is "To grow together," with our clients, shareholders, and employees with sustainable products that yield sustainable profits. As a trusted and financially stable company with expertise in a range of industries, we are confident we can build a happier future for our customers.



The foundation of our principles is our customer satisfaction, protecting investments and growth. At Hanwha Investment & Securities, we're committed to responsible management and service innovations to ensure we can serve as a reliable financial partner.

Hanwha Asset Management

www.hanwhafund.com

EXPERTISE

Asset management

2017 Total Sales

In USD millions

90

2017 Total Assets

In USD millions

195

Founded in 1988, Hanwha Asset Management has grown into a comprehensive asset management company offering a full range of financial instruments, including stocks, bonds, MMFs, fund of funds, social overhead capital, derivatives, real estate, ETFs, and PEFs in both domestic and overseas capital markets. At the end of 2017, we were among South Korea's top three asset management companies with USD 82.17 billion in assets under management (AUM). We have top-tier expertise and well-organized systems in all areas, including product development, research, compliance, and risk management. All our products and services cater to the needs of our customers because we apply our principles and management philosophy to placing our customers first before anything else.

Hanwha's expertise and industry-leading innovations have been recognized with numerous industry awards in South Korea, including the Grand Prize in global funds at the 2017 Korea Fund Awards by *Money Today*

news media, the Grand Prize in global funds at the 2017 Herald Fund Awards by *Korea Herald* news media, the Grand Prize in global funds at the 2017 Korea Securities Awards by *Seoul Economic Daily* news media, Top Financial Product in the First Half in 2017 by South Korea's *Economic Review* magazine, and the Grand Prize in South Korean bond funds at the 2017 Asia Fund Awards for Hanwha Short-Term Government and Corporate Bond Funds.

Hanwha Asset Management is accelerating its strategic overseas expansion to become a leading asset management company in Asia. Our Singapore subsidiary manages equity and alternative investments in the pan-Asian market. We acquired a New York-based subsidiary to handle our assets in the US and other countries. We have also established a Chinese subsidiary as a wholly foreign-owned enterprise (WFOE) so we can better execute our global strategy and expand our business footprint overseas.

Hanwha Asset Management is widely recognized for its innovative solutions and a disciplined approach to asset management. With them, Hanwha Asset Management's mid- and long-term plan is to become the best asset management company in Asia.



Hanwha Savings Bank

www.hanwhasbank.com

EXPERTISE

Deposits, commercial and personal loans

2017 Total Sales

In USD millions

38

2017 Total Assets

In USD millions

638

Founded in 1997, Hanwha Savings Bank joined Hanwha Group in 2008 and has since grown into one of the most stable savings banks in the industry. Even in unfavorable business climates, we've been able to safely pursue external growth with our experienced sales teams and a highly disciplined management team. We also found success extending the fundamental roles of microfinance institutions and supporting small and medium-sized companies with great potential.

Today we are a sound savings bank whose continued growth is backed by the confidence of our customers. We constantly strive to benefit both our clients and the society by developing products that serve their interests. Our risk management system enables us to perform faithfully by providing individual and business clients with top-quality financial products and services.



Hanwha Savings Bank is a stable financial institution that has earned its customers' trust over the years with its top-quality sales teams, financial products, and disciplined management.

Services & Leisure

- Hanwha Hotels & Resorts
- Hanwha Galleria
- Hanwha Galleria Timeworld
- Hanwha 63 City
- Hanwha Station Development

Hanwha Hotels & Resorts

www.hwrc.co.kr

EXPERTISE

Resorts, hotels, leisure, food services

2017 Total Sales

In USD millions

964

2017 Total Assets

In USD millions

2,207

Hanwha Hotels & Resorts began operations in 1979 as the developer of South Korea's first resort condominium project. It joined Hanwha in 1986. With resort, hotel, and food service businesses, we are rapidly becoming South Korea's premier leisure and food service provider.

Our Resorts Division owns South Korea's largest condominium chain including the Ocean Palace Golf Club & Resort in Nagasaki, Japan, which boasts over 4,800 guest rooms across 12 properties. In Japan and South Korea, we own and operate premier golf courses totaling 126 holes. Our partners include Resort Condominiums International (RCI), a worldwide membership network; Private Label, which provides benefits for hotels and resorts in Southeast Asia; and the Golden Horse Hotel and Mines Wellness Hotel in Malaysia.

We also operate Seorak Waterpia, Pororo Aqua Village in Gyeongju, Jeju Therapy Center, Royal Saddle Equestrian Society, and Jade Garden in Chuncheon—all renowned attractions and the envy of other companies in the industry.

In addition, we operate 63 Square on the Han River, which offers high-quality services and attractions, including 63 Art and an elaborate aquarium.

We've applied our expertise and technologies developed from the 63 Sea World, the first aquarium in South Korea. We built the breathtaking Aquarium Belt, South Korea's largest network of aquariums across four cities: Jeju, Yeosu, Ilsan, and Seoul. And in partnership with Geoje city government, we are creating a new tourist destination, Hanwha Resort Geoje Belvedere. The marine resort, with 470 rooms and a private marina, is expected to be completed in 2018.

Our Hotel Division has developed THE PLAZA into a world-class 410-room luxury boutique hotel. Located in the heart of Seoul, THE PLAZA offers impeccable service and experience accented by its unique interior design. In 2016, the hotel became the first in South Korea to join the Autograph Collection, a luxury portfolio owned by Marriott International. Our exceptional customer service and upscale accommodations have been recognized by the hotel industry. THE PLAZA was selected as one of the Top 25 Hotels for Luxury and Best Service by the 2017 TripAdvisor Travelers' Choice Awards. It also ranked No. 3 among Best Luxury Hotels in South Korea by *Global Traveler*, a worldwide business travel magazine. The International Hotel Awards selected THE PLAZA as its 2017 Best Large Hotel

and Best City Hotel. Connoisseurs can experience THE PLAZA's seven outstanding cuisines in the landmark 63 Building, along with a panoramic view of Seoul. Food is prepared with fresh seasonal ingredients by top award-winning chefs.

Hanwha Hotel & Resorts' Food Culture Division provides comprehensive services, including food service contracts, dining business services, and food material supplies. The Food Culture Division uses a unique operations system and has more than 30 years of service experience in catering and professional services. Our Food Culture Division also runs concept restaurants, including the Chinese Bistro T-won and the Oreno, which features both French and Italian cuisines. Our dining business unit features commissioned services in multiuse complex facilities, as well as an elegant wedding and banquet services. And with a food analysis lab certified by the Food Sanitary Inspection Institution, a rigorous sanitation management system, and a state-of-the-art distribution system, we are an industry leader in food material supply.



Seorak Sorano combines the beautiful natural scenery of the East Sea with the high peaks of Mount Seorak, where guests can appreciate a soothing and relaxing experience. Guests can also enjoy leisure facilities such as Seorak Waterpia, Seorak Cinerama, Film Lot, and Plaza CC Seorak.

Hanwha Galleria

www.hanwhagalleria.co.kr

EXPERTISE

Retail, fashion

2017 Total Sales

In USD millions

328

2017 Total Assets

In USD millions

1,723

Founding in 1976 in South Korea, **Hanwha Galleria** has specialized in retail services with great focus on department stores. We operate other retail businesses including online malls, global brand direct sourcing, and the retail of exclusive brands.

Currently, we have five stores (including the store of **Hanwha Galleria Timeworld**, a subsidiary of **Hanwha Galleria**) across Korea in major cities of Seoul, Suwon, Cheonan, Daejeon, and Jinju. Our Galleria Luxury Hall in Seoul is South Korea's preeminent department store, featuring the world's leading luxury brands. The Luxury Hall East offers high-end luxury brands with unique values while the other side of the building, the Luxury Hall West, showcases global fashion trends, fine dining, and premium services.

Together, the Galleria department stores offer an unparalleled suite of upscale shopping experiences. They carry distinctive brands and follow local fashion trends while also offering a food culture

that is sure to satisfy every discerning taste. Individually, each department store offers its own differentiated experiences tailored to the needs of local customers segments. Each store also maintains a solid No. 1 position among department stores in the region.

In 2020, we will open our 6th Galleria department store in Gwanggyo, Suwon, as part of our department store business expansion to meet growing demands. By relying on our rich experience and capabilities in operating luxury department stores, the Gwanggyo store will attract customers by featuring favorite brands and enhanced convenient services. As a growth engine for **Hanwha Galleria**, the Gwanggyo store is slated to become the flagship landmark in Gyeonggi-do, along with a convention center, hotel, and multiuse building in the luxury complex.

Our vision is to be the No. 1 premium content producer. To this end, **Hanwha Galleria** will offer unparalleled values that no other retailer can provide.

We've already begun by enhancing our merchandising with better lifestyle products and offering more services dedicated to VIP customers. Our department store division is stocking the best high-end brands, Galleria-only brands and making them available in exclusive stores and environments our customers have come to expect. And going forward, we'll look more to sustainable business models for the rapidly changing landscape.

Our goal is to deliver the highest-quality service in the industry. Going digital is one path we're taking; the other is continuing our investment in our current business with renovations and new store openings. This way, as we pursue our vision, we'll continue our constant growth streak.

Hanwha Galleria Timeworld

www.hanwhagalleria.co.kr

EXPERTISE

Retail, fashion, duty-free shops

2017 Total Sales

In USD millions

292

2017 Total Assets

In USD millions

457

Hanwha Galleria Timeworld, a subsidiary of **Hanwha Galleria**, primarily oversees department stores in the city of Daejeon and duty-free shops in Seoul.

Hanwha Timeworld is itself also the largest high-end department store in central South Korea. It is located in the metropolitan area of Daejeon city, where public institutions, financial companies, and large apartment complexes are concentrated. **Hanwha Galleria Timeworld** specializes in luxury fashion brands from around the world and it was the first of its kind in the region to feature brands such as Louis Vuitton, Gucci, and Prada. We've cemented our status as the premier high-end shopping destination in Daejeon, one of the largest cities in South Korea.

We've subdivided an expansive area for home living & décor shopping, experiencing culture, entertainment, and a maze of International gourmet restaurants to satisfy the interests and tastes of anyone young and old. We're moving beyond local

destinations to become major destination points that serve the nation's desire for luxurious experiences for the discerning taste. We do this with exceptional customer service and customer-segmented marketing practices.

Galleria Duty Free 63 is located inside the 63 Building in Yeouido, a key area for both business and tourists located in the southwest region of Seoul. Since opening of the store in December 2015, we have carried customers' favorite brands such as Gucci, Yves Saint Laurent, Stefano Ricci, and Chanel.

Galleria Duty Free 63 is conveniently located next to a variety of tourist attractions including Aqua Planet 63 and 63 Art. And because they're all located within the 63 Building, customers are treated to a combination of wonderful entertainment and exclusive shopping experience. By attracting tourists and diverse customer groups seeking everything from restaurants to aqua parks in one location, we have become Seoul's

Galleria Luxury Hall's luxury brands, global fashion trends, fine dining, and premium services are all part of our vision to create the next-generation of luxury malls that cater to the upscale and refined shopping experience.



Located inside the 63 Building, a landmark of Seoul city and located alongside the Han River, Galleria Duty Free 63 has transformed the experience for both travel and high-end luxury shopping.

Hanwha 63 City

www.63realty.co.kr

EXPERTISE

Comprehensive real estate service

2017 Total Sales

In USD millions

206

2017 Total Assets

In USD millions

76

Hanwha 63 City was founded in 1986 as a real estate service firm, providing a comprehensive set of services designed to increase the value of client assets.

We have developed expertise we built over the years from managing skyscrapers and providing property management services that maximize real estate values. Our leasing services use a scientific database and we provide focused-investment advising that helps our clients make better decisions on their properties. Managing the landmark 63 Building has sharpened our skills in property management and deepened our expertise in electrical facilities, machinery, equipment, disaster prevention, firefighting, communications facilities, building maintenance, and security. Our comprehensive technical services include completed construction site inspections, safety audits, functional checks of firefighting facilities, and interior design.

Hanwha 63 City has partnered with Hanwha Estate—a spinoff of the Hanwha Group. Hanwha 63 City is offering renewable energy and construction/security solutions that leverage its expertise in renewable energy and integrated security systems.

Hanwha 63 City has also taken advantage of its nationwide network and solid business portfolio to steadily increase its stake in real estate management. Hanwha 63 City will continue to partner with Hanwha Estate to innovate and assist customers as South Korea's No. 1 experts in comprehensive real estate services.

Hanwha 63 City is increasing the value of client real estate asset management by offering its own comprehensive management service. Hanwha 63 City offers services in security, energy, machinery equipment, and the firefighting expertise gained from years of building and managing skyscrapers.



Hanwha Station Development

www.hwsd.co.kr

EXPERTISE

Commercial development, property management

2017 Total Sales

In USD millions

56

2017 Total Assets

In USD millions

388

Hanwha Station Development is our nation's premier developer and manager of railway stations. Since its founding in 1987, we have pioneered retail and leisure culture by combining commercial complexes with private stations. We developed building complexes in the centrally located Seoul Station and the Cheongnyangni Station—logistics hubs in the northeastern part of Seoul. By leveraging our expertise and capabilities in business assessment, concept development, project financing, lease marketing, construction management, and facility operation, we are fast becoming an industry-leading developer and manager of commercial complexes.



Located in the northeastern part of Seoul, Cheongnyangni Station is a nine-story complex with more than 177,793 square meters of space, including three underground levels. With a department store, an outlet mall, a theater, and restaurants, it is driving economic growth for the community around it.



Corporate Social **Responsibility**

SOCIAL RESPONSIBILITY

- Eco-Friendly Solar Energy

As a world-class solar energy business, our mission is to achieve sustainable growth; our guide is our social responsibility. This is why we're educating children through eco-friendly programs, and people to join the energy revolution through activities that counteract climate change and help the environment. From installing entire solar power generation systems to make communities energy self-sufficient to building solar forests to fight deforestations, we're not only using solar energy, we're making a difference.



Hanwha solar modules donated to the World Economic Forum Congress Center in Davos

Having installed a total of 640 solar modules on a 1,000-square-meter roof on the World Economic Forum Congress Center, we will be able to reduce 20 tons of CO₂ emissions per year.

- Happy Sunshine Campaign
- Hanwha Hope Project: Happy Sunshine
- Hanwha Solar Forest
- Solar modules donated to the World Economic Forum in Davos

Happy Sunshine Campaign

Hanwha is driving the use of sustainable energy in communities with expertise gained from vertical integration of our solar businesses. Our best-known program is Happy Sunshine, a project where we donated solar power generation systems to welfare centers in South Korea. We also operate Hanwha Hope Project, where we donated solar power generation systems to elementary schools in underserved areas in China. We continue to run solar education programs for kids in local communities. We're spreading awareness, showing the need for eco-friendly energy, and teaching the principles of photovoltaic power generation.

Hanwha Solar Forest

Hanwha created the Hanwha Solar Forest mobile game with Tree Planet, a UNCCD-certified game company. When users plant virtual trees, we, in turn, plant real trees. Since 2011, the Hanwha Solar Forest campaign in collaboration with the UN Convention to Combat Desertification has planted 490,000 trees across six locations in South Korea, Mongolia, and China to combat desertification and raise awareness of climate change. Our three forests in China utilized seedlings grown by solar energy facilities and donated by Hanwha. Hanwha Solar Forest is the first time solar energy was used to prevent desertification. The United Nations Convention for the Prevention of

Desertification (UNCCD) has praised it as a best practice, urging others to follow.

Solar Panels Donated to Davos

The World Economic Forum, held annually in Davos, Switzerland, addresses pressing issues facing the world, such as environmental sustainability. Since 2013, we have donated photovoltaic modules to the City of Davos at the annual World Economic Forum. The solar modules donated by Hanwha Q CELLS have a capacity of 340KW. This amount of energy is enough to reduce 20 tons of CO₂ emissions per year. Our donation demonstrates that the possibility of clean, sustainable energy is a reality.

SOCIAL RESPONSIBILITY

- Culture, Arts and Sports

At Hanwha, we're committed not only to our customers and employees but also to the people who live in the communities where we do business. Giving back is part of culture and we do this through professional organizations and financial support. We engage in activities that help keep dreams alive and enthusiasms going. And by combining our professional talents with our desire to do good, we're turning ideas into practical solutions to improve lives and the world we live.



Grand Prize Winner at the 2016 Seoul International Fireworks Festival photo contest.

Seoul International Fireworks Festival

Since 2000, Hanwha has annually held the Seoul International Fireworks Festival to put on spectacular fireworks shows with themes around optimism and dreams.

- Orchestra Festival with Hanwha
- Hanwha Classic
- Hanwha Seoul International Fireworks Festival
- Hanwha Time to Burn Campaign
- Hanwha Eagles
- Team Hanwha Q CELLS

Arts and Culture

Hanwha supports a range of arts and cultural events. Since 2000, we have sponsored the Orchestra Festival, the largest event of its kind in South Korea. Our annual Hanwha Pop and Classic Journey has been held in cities across the country since 2004, and the Hanwha Classic has performed classical music since 2013. In recognition for popularizing classical music and promoting the Korean culture and arts, Hanwha was awarded the Grand Prize at the Mecenat Awards hosted by Korea Mecenat Association in 2006 and 2011. In 2014, we received the Achievement Award at the SAC Awards by Seoul Arts Center.

Seoul International Fireworks Festival and Time to Burn Campaign

Hanwha hosts the Seoul International Fireworks Festival with the world's leading fireworks technology companies, lighting up the sky over the Yeouido Hangang River Park every autumn. Since its debut in 2000, the festival has wowed over a million spectators, providing unforgettable memories for families and friends. With the slogan of *Sharing Hope through Fireworks*, this has become a flagship cultural festival. Hanwha Time to Burn Campaign supports people who cannot afford time for leisure. It is a unique campaign to help people achieve their inner dreams and passion for travel. It is recognized as an extraordinary social contribution program.

Operating and Assisting Sports Teams in South Korea

Through sports, Hanwha has created positive energy and communicated inspirational messages to sport fans and followers. In 1986, we founded the Hanwha Eagles to help revitalize professional baseball as a national favorite pastime. We also established Team Hanwha Q CELLS in 2011 to promote golf in South Korea and hosted the annual Hanwha Classic, the nation's top golf tournament.

SOCIAL RESPONSIBILITY

- Talent Development and Employee Volunteers

Since the Hanwha Social Responsibility Center was founded in 2007 to commemorate the company's 55th anniversary, Hanwha has called upon each affiliate company to participate by sending volunteer teams for various social activities. We also make great efforts to nurture the talents of our future leaders.



Hanwha-KAIST Science Outreach Program, Convergence Science Camp
Hanwha partnered with KAIST to jointly host a science camp to nurture future scientists

- Bugil Foundation
- Hanwha Science Challenge
- Hanwha-KAIST Science Outreach Program
- Hanwha Arts Plus
- DreamPlus
- Relay Volunteer Service on Foundation Day

Supporting Young Leaders of the Future

Hanwha believes that fostering talents will ultimately contribute to society. In 2011, we began sponsoring the Hanwha Science Challenge, a high school science competition aimed at discovering talent in science and nurturing potential Nobel Prize candidates. And as a way to expand on this program, we established the prestigious private school, the Bugil Foundation, to develop students who could one day become scientists. Since 2016, we have also hosted Hanwha-KAIST Science Outreach Program, a science education program for middle school students in the Daejeon area. Hanwha Arts Plus supports artistic skills and creativity in youth. Our employees provide various cultural and arts education

to children. From 2009 to 2014, we have provided programs that offer classes in art, music, and dance to more than 2,000 children on welfare program. Since 2015, we have promoted South Korean traditional culture and arts education opportunities, including gayageum (a zither-like string instrument) and samulnori (a genre of percussion music). In 2014, we began operating DreamPlus, a program to discover and support promising startups. We are making dreams come true for future leaders by helping them to finance, create, and grow startups.

Caring Employee Volunteers

Hanwha actively engages in social contributions with the help of its employees. One of our flagship programs is an

enterprise-wide program designed to provide educational opportunities for low-income and physically challenged children. Since its launch in 2003, this innovative program has supported study rooms and special education classes for children of all abilities and challenges. We've also provided art programs for disadvantaged children.

We support experiential educational activities in every industry. We help those who are neglected and those whose environments have been compromised. Every October, as part of celebrating Hanwha's founding, all affiliates participate in volunteer services for the disadvantaged. Our work for people in need reminds us and keeps us committed to our philosophy to do good for all and for always.

ENVIRONMENTAL AND SAFETY RESPONSIBILITY

Hanwha supports a sustainable future by proactively responding to a changing global energy paradigm and by building a corporate culture that embraces environmental protection and safety. We are expanding new and renewable energy businesses centered on solar energy. In response to climate change, we strive to reduce environmental impact with low-carbon energy sources in all areas of our businesses.



Hanwha Q CELLS, the first solar energy solutions provider to receive the Product Carbon Footprint Certification (ISO 14067)

Hanwha Q CELLS received the industry-first Product Carbon Footprint Certification (ISO 14067), solidifying our global status.

- Reduced 50,000 TOE (Ton of Oil Equivalent) in energy
- Reduced USD 30 million worth of energy costs
- Reduced more than 170,000 tons of GHG
- Reduced 1.19 million tons of water, waste water and other wastes
- Hanwha TOTAL Petrochemical received ISRS 8 grade

Protecting the Environment and Addressing Climate Change

In 1991, through the ECO-2000 campaign, Hanwha became the first South Korean company to implement environmental management. We announced our Environmental Safety and Health Policy in 2000 and have since implemented sustainable management practices for environment, safety, health, energy, and greenhouse gases. We also created a master plan to set performance index targets for 2020 for environmental performance and safety. The plan included the reduction of greenhouse gases, increasing energy productivity, and improving LTR (Loss Time Injury Rates).

Responding to Climate Change and Reducing Pollutants

Hanwha is taking the lead in fostering a low-carbon society. In 2014, Hanwha SolarOne (now Hanwha Q CELLS) was the first solar energy solutions provider to receive Product Carbon Footprint Certification (ISO 14067), a new international standard at the time, reinforcing our commitment to helping the environment. We are reducing greenhouse gas emissions and waste by organizing and putting a task force to work. Worldwide, we are building facilities to reduce energy use and waste generation. Last year, we reduced greenhouse gas emissions by 170,000 tons, an amount equivalent to the greenhouse gas reduction of 34 million pine trees.

Establishing a Culture of Safety

Hanwha works to gain community trust by promoting safety and creating safe workplaces. It's part of our corporate culture. Along with regular safety leadership training for executives, the Hanwha Eco-Institute, Hanwha headquarters, and individual facilities jointly adhere to a strict set of rules and safety policies. This system monitors the safety status of every plant and raises the safety awareness of every employee. We also actively work to prevent accidents by employing management practices and industry leading indicators for occupational safety.

WINNING PARTNERSHIPS

Hanwha believes our partners are also part of our family. For small and medium-sized business partners, we help create self-reliant environments and encourage good management over them. We support our partners to build a foundation for growth and independence.



Building an eco-friendly energy self-sufficient project on South Korea's Jukdo Island

In collaboration with Chungcheongnam-do, Hanwha transformed Jukdo Island to become energy self-sufficient.

- Agreements on fair trade and mutual growth
- Co-prosperity fund
- Private equity fund for mutual growth
- Ongoing meetings with partner companies
- Energy self-sufficiency project on South Korea's Jukdo Island

Commitment to Mutual Growth

Since 2009, **Hanwha** has fostered collaborative partnerships with over 1,500 small and medium-sized enterprises. We've helped them grow their businesses by strengthening their core competencies, supporting their financial needs, and guiding them to engage in fair trade practices. In 2011, we promoted mutual growth with our partners instead of competing with them. Since then, we have created an annual co-prosperity fund of USD 121 million and earmarked a private equity fund of USD 172 million for mutual growth.

Building Winning Partnerships

Leveraging our spirit of "trust and loyalty," **Hanwha** stays connected with our suppliers. We work frequently with partner companies and have put into practice our belief in "Going Further Together" by engaging in joint businesses, exchanging technology, sharing information, and providing exemptions from performance guarantees. We are expanding industry-specific programs to help our partners become more competitive as they expand their domestic and international sales networks. We are also supporting their innovations, equipment purchasing, and assisting them in executing best practices for safety, process, environment, and quality control.

Invigorating the Regional Economy

Hanwha helps suppliers in rural areas to sell their products at our department stores and duty-free shops. For example, when we find hidden high-value-added agro-fishery products that at the same time increase the local economy, we stock them in our retail stores. Also, using our micro-grid business, solar energy-linked ESS (Energy Storage System) technology, we transformed Jukdo Island in Chungcheongnam-do into an energy self-sufficient island, reducing energy costs and helping tourism.

HUMAN RESOURCES

Hanwha pursues a future-oriented organizational culture that continuously innovates while overcoming challenges. To this end, we recruit talented people from all over the world and sponsor programs that help employees grow into global talents. *Young Hanwha* is a program that fosters this effort, helping us to move forward and build on the passion that is part of our foundation.



Growing Hanwha with global talent

Together, Hanwha's worldwide talent is building *Young Hanwha*.

- Global talent program
- Overseas training programs
- Programs for core talent
- Work-life balance policies
- One-month sabbaticals
- Flexible work shifts and an end to overtime
- Job market

Sharing Values

Hanwha strives to hire creative individuals who are driven to innovate. We seek people who pursue excellence and will be loyal to our customers, colleagues, and company values. We seek people who work hard to achieve their goals and understand the importance of supporting a greater cause. We develop global talent with professionalism and by providing a range of training programs for specific jobs and positions.

Cultivating Global Leaders

Hanwha continues to invest in talent. Our global talent program nurtures employees with potential and interests in global business. In our regional specialist

program, we send associate and junior managers all over the world to become local experts by experiencing the business and culture of those countries. We also operate a special program to select and develop executive talent to lead **Hanwha's** future and growth. We recruit talent and potential CEO candidates and sponsor their educations in the world's best MBA, EMBA and Sloan Fellows Programs. We also provide opportunities to earn masters or doctoral degrees in STEM (Science, Technology, Engineering, and Math) and assign graduates to work with our R&D staff.

Promoting Work-Life Balance

Hanwha's company-wide work-life balance policies are designed to improve employees' quality of life. Our efforts have received broad recognition. We're listed as one of South Korea's's 100 best places to work, and as a family-friendly and gender-equality driven company. When we commemorated our 64th anniversary in 2016, we announced the *Young Hanwha* program and introduced corporate culture initiatives like getting a one-month sabbatical when promoted, flexible work shifts, and support for career development. These initiatives are all contributing to the foundation that will ultimately help **Hanwha** become a global top-tier company.

AMERICAS

- Brazil **Hanwha Techwin** (video surveillance system sales & marketing)
- Canada **Hanwha Q CELLS** (sales & marketing)
- Canada **Hanwha Canada Development** (solar business management)
- Chile **Hanwha Q CELLS** (downstream solar)
- Mexico **Hanwha Advanced Materials** (producing auto parts)
- USA **Hanwha International** (trading)
- USA Eagle Petroleum (oilfield development)
- USA **Hanwha TechM** (powertrain assembly)
- USA Universal Bearings (producing bearings)
- USA **Hanwha Machinery America** (machine tool sales)
- USA **Hanwha Techwin** (video surveillance system sales & marketing)
- USA **Hanwha Power Systems** (energy equipment sales and R&D)
- USA **Hanwha Azdel** (producing auto materials)
- USA **Hanwha Advanced Materials** (producing auto materials and parts)
- USA **Hanwha America Development** (real estate development)
- USA **Hanwha Q CELLS** (sales & marketing)
- USA 174 Power Global Corporation (sales & marketing)
- USA **Hanwha Life Investment** (investment)

EUROPE & AFRICA

- Czech Republic **Hanwha Advanced Materials** (producing auto materials and parts)
- France **Hanwha Q CELLS** (sales & marketing)
- Germany **Hanwha Europe** (trading)
- Germany **Hanwha TechM** (machine tools sales)
- Hanwha TOTAL Petrochemical** (sales)
- Germany **Hanwha Advanced Materials** (producing auto parts)
- Germany **Hanwha Q CELLS GmbH** (R&D, sales & marketing)
- Germany **Hanwha Q CELLS Berlin** (EPC)
- Italy **Hanwha Power Systems** (energy equipment sales & marketing)
- Italy **Hanwha Q CELLS** (sales & marketing)
- Russia **Hanwha Power Systems** (energy equipment sales)
- Turkey **Hanwha Q CELLS** (sales & marketing, downstream solar)
- UK **Hanwha Techwin** (video surveillance system sales & marketing)
- UK **Hanwha Q CELLS** (sales & marketing)

CHINA

- Beijing **Hanwha China** (supporting **Hanwha** affiliates in China)
- Beijing **Hanwha Advanced Materials** (producing auto materials and parts)
- Chongqing **Hanwha Advanced Materials** (producing auto parts)
- Dongguan **Hanwha TOTAL Engineering Plastic** (producing polypropylene)
- Hangzhou Sino-Korea Life (life insurance)
- Hong Kong **Hanwha Corporation** (trading)
- Lianyungang **Hanwha Q CELLS Technology** (producing PV ingots)
- Ningbo **Hanwha Chemical** (producing PVC)
- Qidong **Hanwha Q CELLS** (producing solar cells, modules, R&D)
- Shanghai **Hanwha International** (trading)
- Shanghai **Hanwha Power Systems** (energy equipment sales & marketing)
- Shanghai **Hanwha Chemical** (trading)
- Shanghai **Hanwha TOTAL Petrochemical Trading** (polyethylene and polypropylene sales)
- Shanghai **Hanwha Advanced Materials** (producing auto materials and parts)
- Shanghai **Hanwha Q CELLS** (sales)
- Suzhou **Hanwha TechM** (machine tools and powertrain assembly)
- Tianjin **Hanwha Techwin** (producing video surveillance system and sales)

ASIA, MIDDLE EAST & OCEANIA

- Australia **Hanwha Q CELLS** (sales & marketing)
- India **Hanwha International** (trading)
- India **Hanwha Chemical** (sales)
- India **Hanwha Q CELLS** (sales & marketing)
- Indonesia **Hanwha Life** (life insurance)
- Japan **Hanwha Q CELLS** (sales & marketing)
- Japan Acropark Golf (golf club and resort operation)
- Malaysia **Hanwha Chemical** (sales & marketing)
- Malaysia **Hanwha Q CELLS** (producing solar cells, modules and R&D)
- Saudi Arabia **Hanwha Saudi Contracting** (operation support)
- UAE **Hanwha Techwin** (video surveillance system sales & marketing)
- UAE **Hanwha Power Systems** (energy equipment sales & services)
- Vietnam **Hanwha Techwin** (producing video surveillance system)
- Vietnam **Hanwha Life** (life insurance)



We have maintained trusted partnerships that have lasted more than 60 years. Together, we have collaborated, invested, and built across markets in almost every continent. Together, we have grown. **Hanwha** has 70 affiliates in South Korea alone and 325 networks around the world (as of end of 2017). And as we continue improving quality and innovating to exceed customer expectations, **Hanwha** will continue to grow *beyond* today's interconnected global business environment. This is the **Hanwha Group**.

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