

# Hanwha Profile 2017



	Contents
02	CHAIRMAN'S MESSAGE
06	BUSINESS HIGHLIGHTS
08	Chemicals & Materials
18	Aerospace & Mechatronics
26	Solar Energy
34	Finance
44	Services & Leisure
52	Construction
60	Hanwha OVERVIEW
62	Our Vision, Spirit & Core Values
64	Hanwha Today
66	Milestones
68	Financial Highlights
70	Hanwha BUSINESSES
73	Manufacturing & Construction
91	Finance
97	Services & Leisure
104	CORPORATE SOCIAL RESPONSIBILITY
112	GLOBAL NETWORK & DIRECTORY

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

SEUNG YOUN KIM



At Hānwhā, we continue to grow by building on trust and loyalty—the basis of our relationship with customers. At the same time, we’re staying committed to our vision to improve the quality of life for everyone whose lives we touch. We’re doing both to provide our customers with the highest possible value while building sustainable returns for our partners.

Our businesses in advanced chemicals, sustainable energy, aerospace, and financial services have been providing practical solutions to real-world challenges. In 2016, both our solutions along with the results of our investments in future businesses and advanced infrastructure have led to record revenues of more than USD 53.89 billion and resulted in more than USD 150.25 billion in assets. We also rose 50 places higher on the Fortune Global 500 Company list and still stayed highly competitive in every industry. Our success can be attributed to our strategic response to rapid changes in customer needs, markets and industries. So when we saw change, we changed. We innovated and pivoted to develop differentiated solutions that were one step ahead. Hence, the results last year have been unprecedented.

In 2016, Hānwhā’s chemical sector has developed environmentally friendly plasticizers and supplied parts for electric vehicles to GM. We improved economies of scale and became even more cost-competitive at our EVA production facility that is No. 1 in the world. And our lightweight composite materials for automobiles now hold 70 percent of the global market share.

In sustainable energy, we've been meeting the challenges of climate change head-on by increasing renewable energy efficiencies and capabilities of core cell and module technologies. In the first quarter of 2018, we will have achieved the world's largest 8GW cell production capacity, and have already been recognized by EuPD Research's Top Brand PV Seal across three continents. And in the later part of 2016, Hanwha planted its sixth Solar Forest to combat deforestation in China.

In aerospace, we won supply contracts for aircraft engine parts for the second year, totaling more than USD 12 billion. We established a dedicated production line that leverages the industrial Internet to produce much higher product quality and manufacturing efficiency.

In financial services, Hanwha ranked first in size and second in new contract premiums among 15 overseas insurers in Zhejiang Province in 2016. In Korea, we completed an advanced customer management system that harnesses Big Data and AI efficiencies. And we participated in a \$100 million Series A funding round of a world-renowned artificial intelligence startup.

These achievements in 2016 assures us of what we must do going forward.

Going forward, Hanwha businesses will focus on improving product quality and capacity with cutting-edge technology and environmentally friendly materials to reach the levels that will lead the global markets.

We will continue to meet the changing needs of customers globally and meet their growing demands. In today's age of super-connectivity, diverse products and digital convergent solutions are necessities.

We will continue our investments in energy, Fintech-based businesses, and the next industrial revolution. We will seamlessly connect people, digital networks, and machines across all disciplines, economies, and environments.

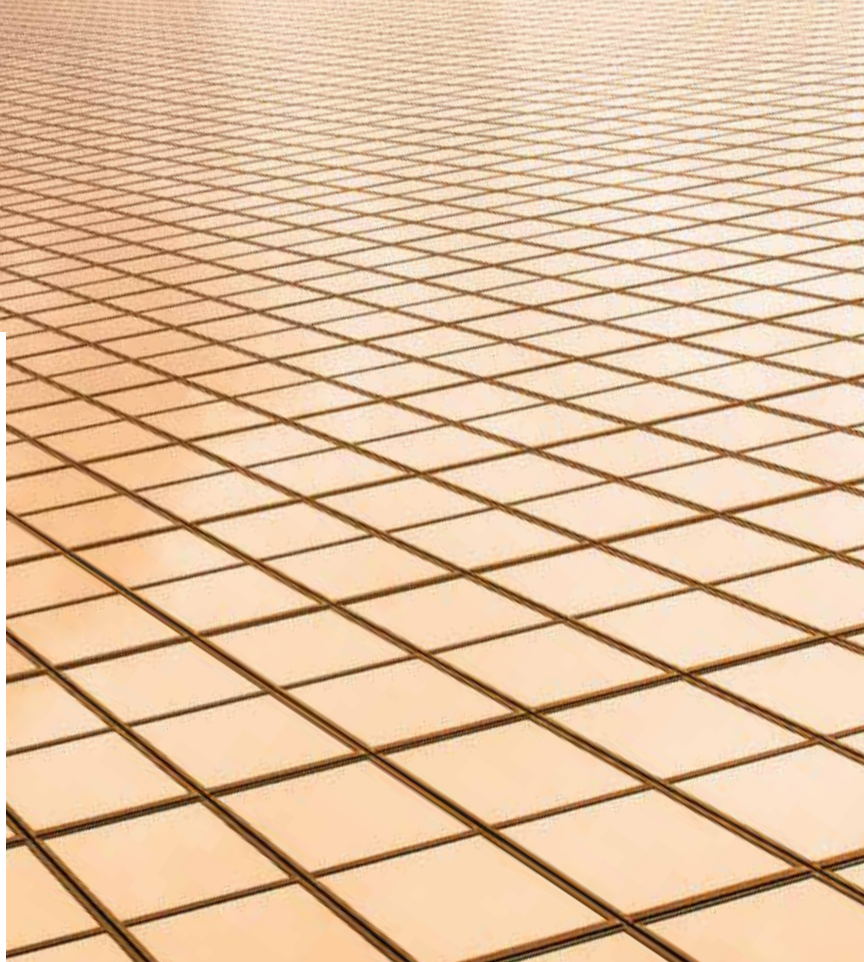
We will execute our strategies to pursue overseas market expansions with localization strategies and our competitiveness. We're not only expanding into key emerging markets but also growing in them as the leader.

The world is now in a state of uncertainty—changes are accelerated by technology and environmental changes are alarming. Our businesses are prepared to weather these challenges and even excel, despite them. And as we do, we won't lose sight of our responsibilities as corporate citizens. Most recently, we've provided free solar energy to social welfare, education, and public facilities in South Korea, China, the US, and Europe. We also provided a student educational program to help young people understand the environment and become ecologically sensitive. We are now installing dynamic energy capabilities on every continent and socially contributing to the culture and the arts. Worldwide, wherever our businesses are, we are investing in the communities around them and boosting their local economies.

We are working hard to seek stability and innovation today while taking on the challenges for growth tomorrow. Join us.

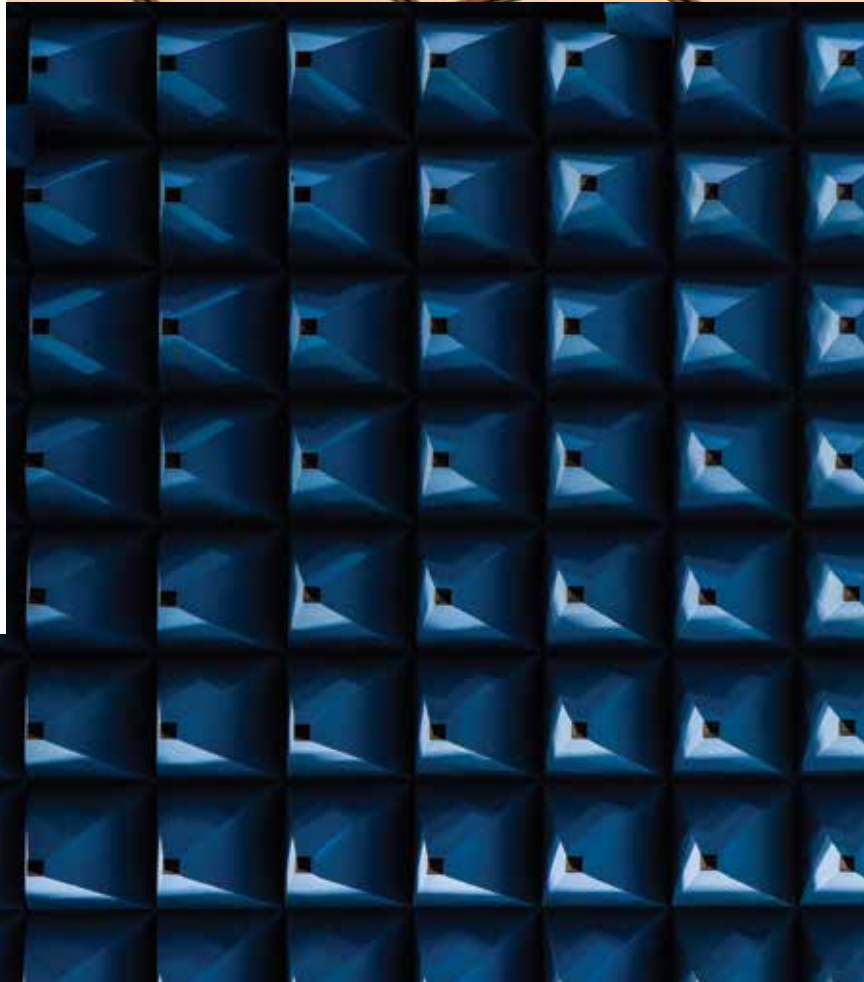


Chairman  
SEUNG YOUN KIM



# 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.





SEEK



FIND

WE SEEK NEW TECHNOLOGIES SO YOU CAN FIND NEW APPLICATIONS.

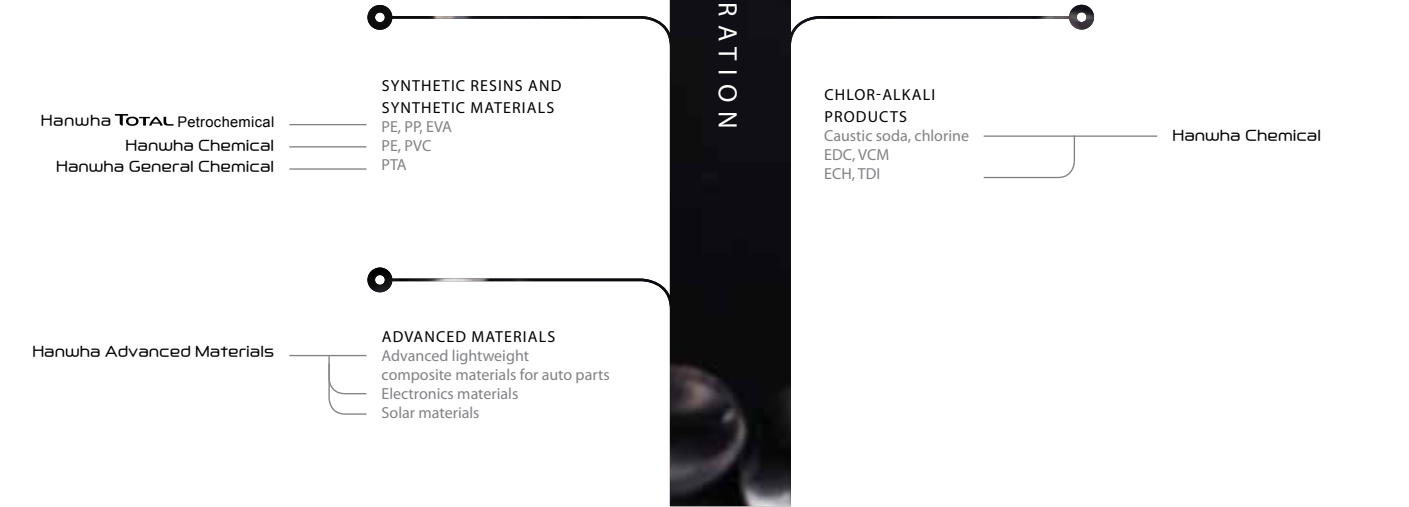
# CHEMICALS & MATERIALS

Hanwha researchers are leaders in their fields and passionate about innovating and exploring new ways to produce petrochemicals and advanced materials so our customers can push the 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 20-25 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 leadership position in South Korea's petrochemical sector with total sales of USD 16.37 billion.

ETHYLENE

# No.1 In South Korea

With an ethylene production capacity of 3.04 million tons, Hanwha now ranks first in 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 research and development is focusing on growth areas for the future, including new chemical products, automotive parts development, materials and applications.





# QUESTIONS

HERE ARE ANSWERS TO SOME QUESTIONS YOU MAY HAVE  
AS WE LOOK TO THE FUTURE.

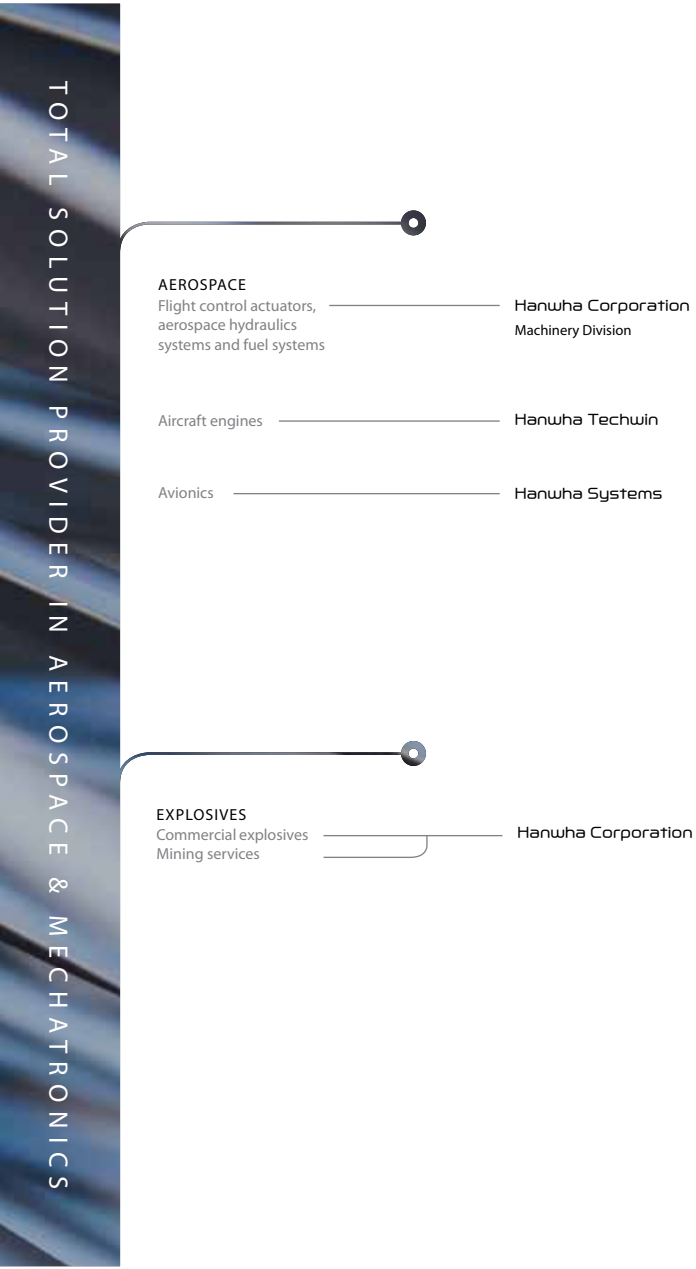
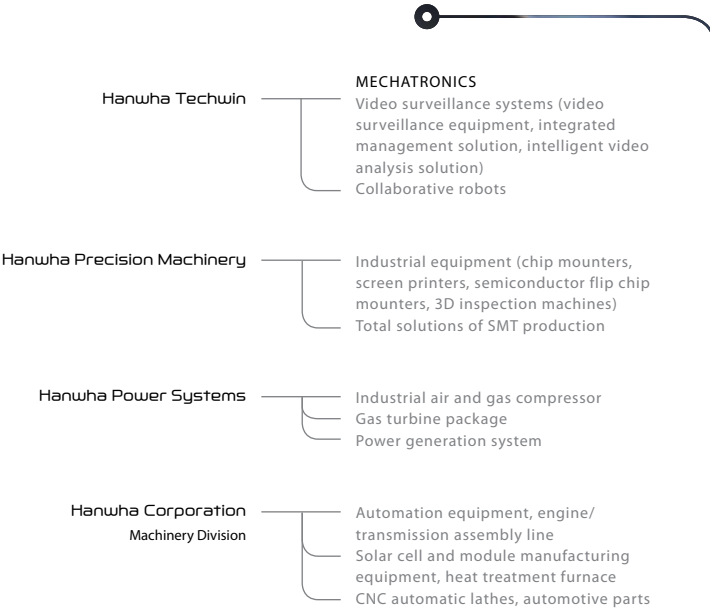


# ANSWERS

# AEROSPACE & MECHATRONICS

From here on earth to 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. And 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.



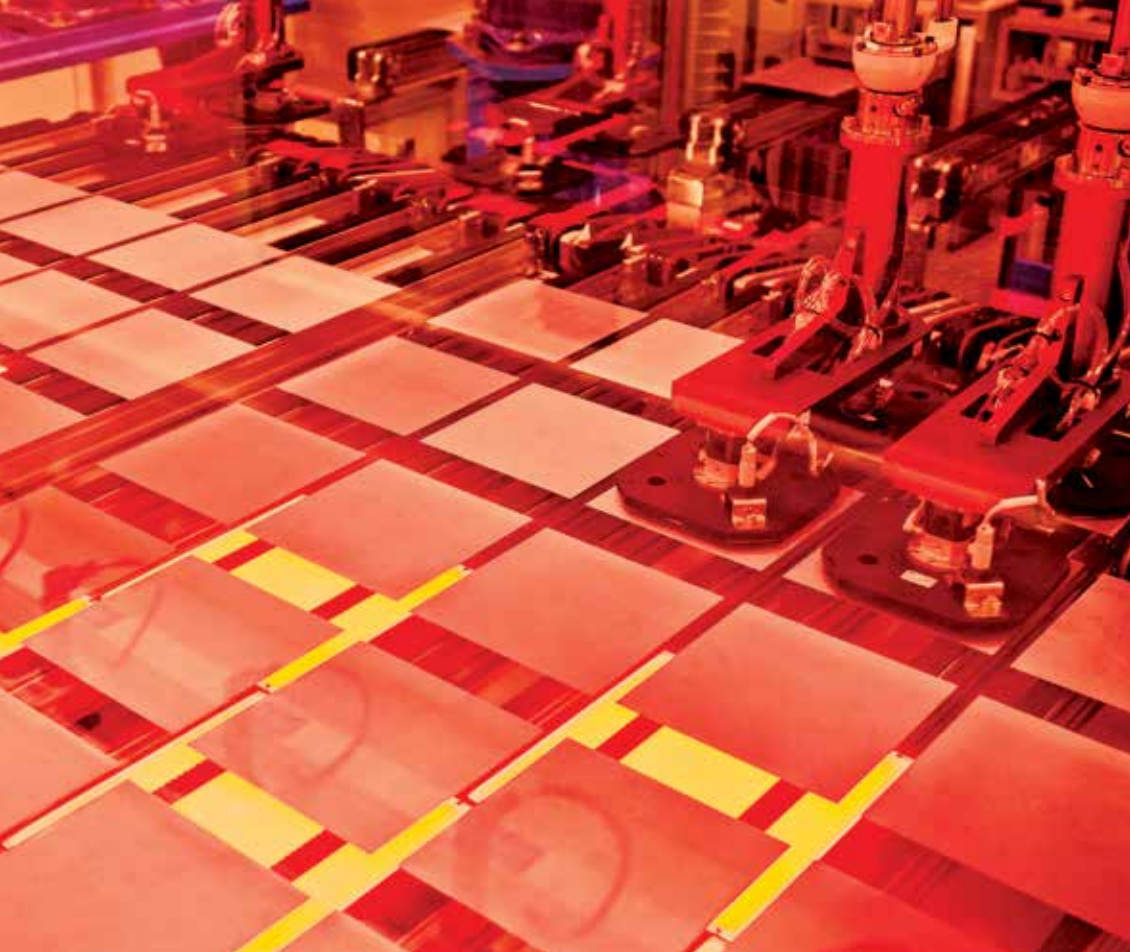
## AEROSPACE

# USD 12 Billion

Hanwha Techwin has secured aerospace contracts worth nearly USD 12 billion in the past two years 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 Techwin's aircraft engine  
production site





#### MACHINERY

## Expertise Leads to Growth

With more than a half-century of experience in the global mechatronics industry, Hanwha continues to develop innovative technologies that help customers improve productivity and efficiency.



#### SECURITY

## Innovative CCTV Solutions

Hanwha Techwin provides total security solutions that include world-class CCTVs, video recorders, and a wide range of security devices. We're also becoming a technology leader by building integrated network control systems that harness the latest advancements in Big Data and the Internet of Things.

#### 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

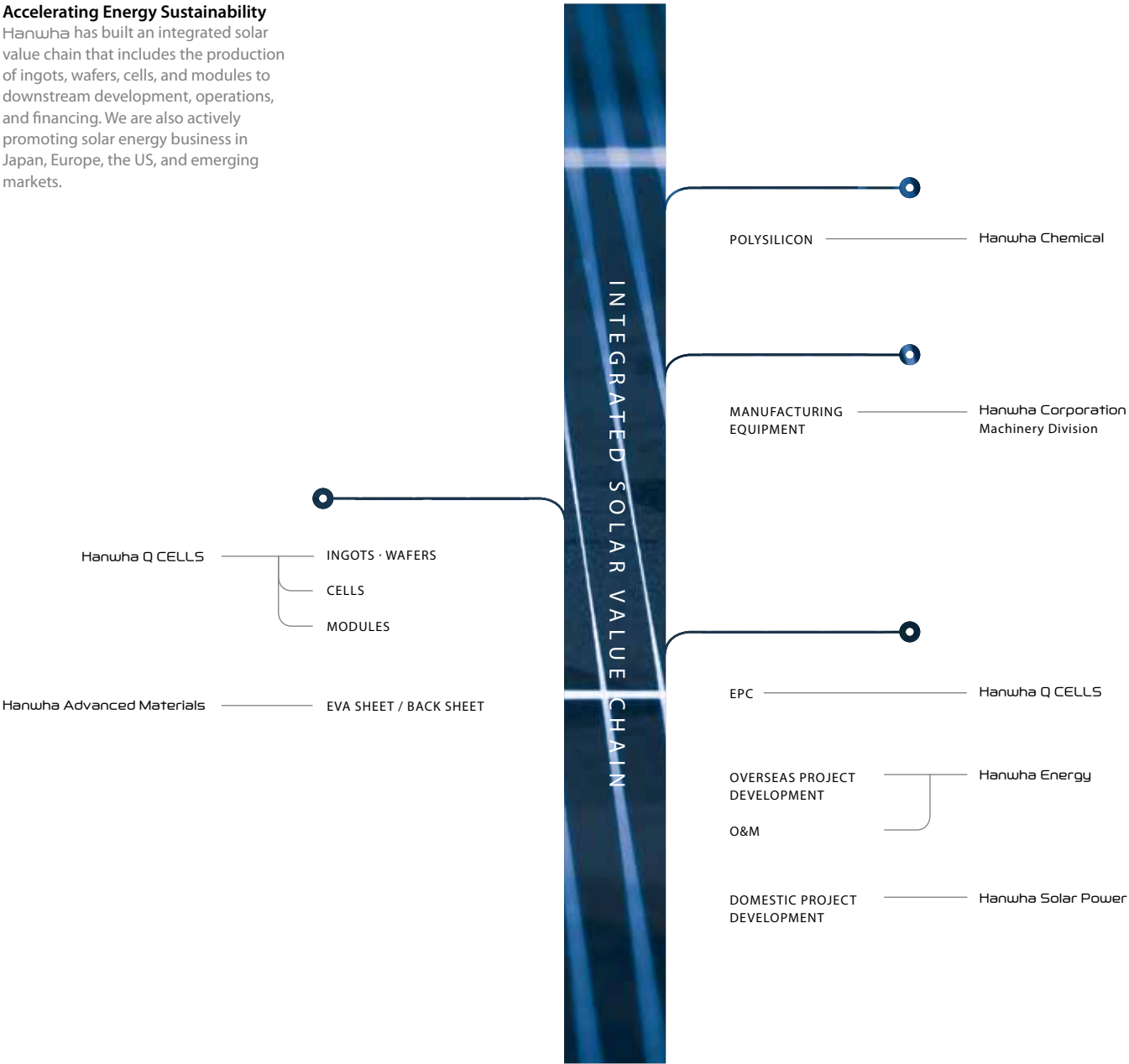
WE INVEST IN THE POWER OF TOMORROW SO YOU CAN MEET  
THE ENERGY DEMANDS OF TODAY.

# 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 solar industry worldwide. 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, wafers, cells, and modules to downstream development, operations, and financing. We are also actively promoting solar energy business 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. In addition, Q.PRO-G2 modules were rated the No. 1 polycrystalline solar modules using the 2013 and 2014 PHOTON module yield measurement test. In June 2017, Hanwha Q CELLS succeeded in mass-producing 1 billion (5GW) Q.ANTUM solar cells. Hanwha Q CELLS is ranked among the best by installers, winning the Top Brand PV Seal 2017 from EuPD Research for the fourth time in a row in Europe and the second time in Australia. EuPD Research also ranked Hanwha Q CELLS as the top module manufacturer in the US for the first time in 2016.

#### 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 the US company 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 individual 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.

Hanwha Investment & Securities

SECURITIES

Asset management, brokerage services  
Trading, investment banking

Hanwha Savings Bank

BANKING PRODUCTS

Deposits, commercial and personal loans

TOTAL FINANCIAL SOLUTION

INSURANCE

Life, non-life insurance  
General insurance

Hanwha Life

Hanwha General Insurance

ASSET MANAGEMENT

Stocks, bonds, ETFs, derivatives, real estate  
MMFs, PEFs

Hanwha Asset Management

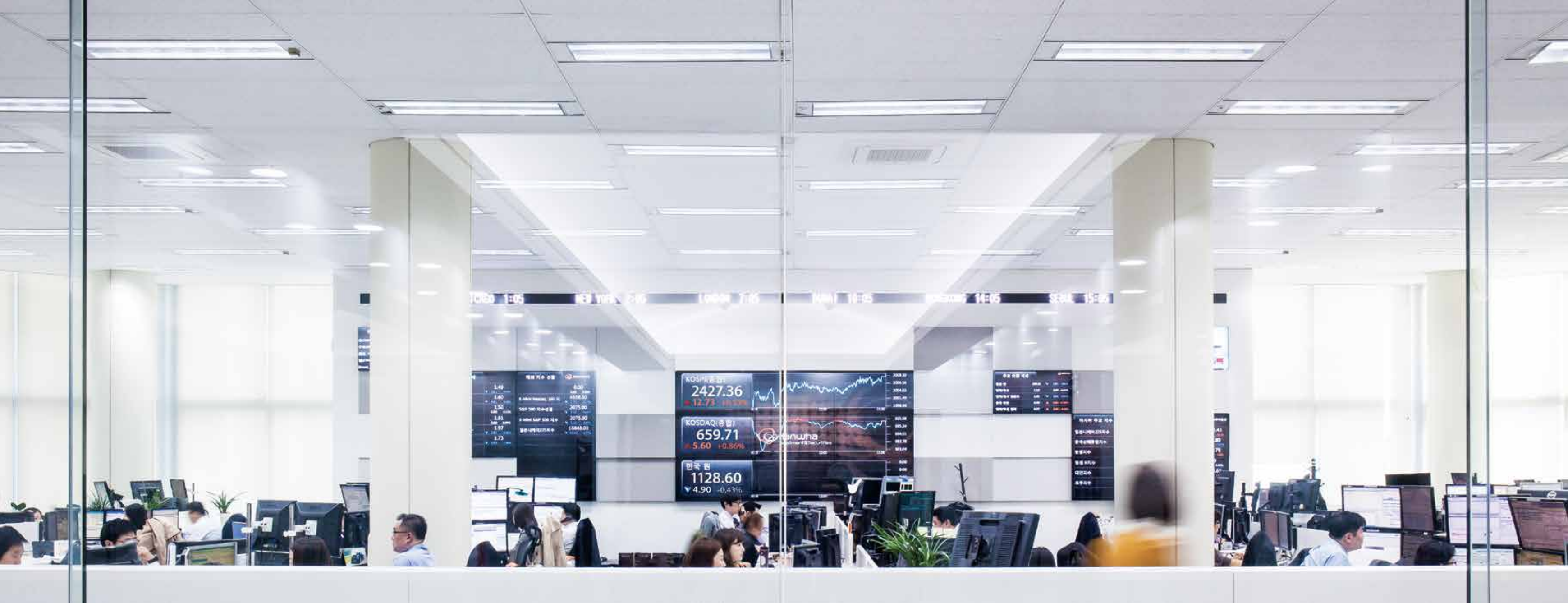
LIFE INSURANCE

USD  
82.7  
Billion  
(KRW 100 Trillion)

Seventy years after being established as South Korea's first life insurance company, Hanwha Life has reached a new milestone with USD 82.7 billion (KRW 100 trillion) in total assets.

Hanwha Finance Plaza  
near City Hall in Seoul





FINTECH

# Securing Future Growth

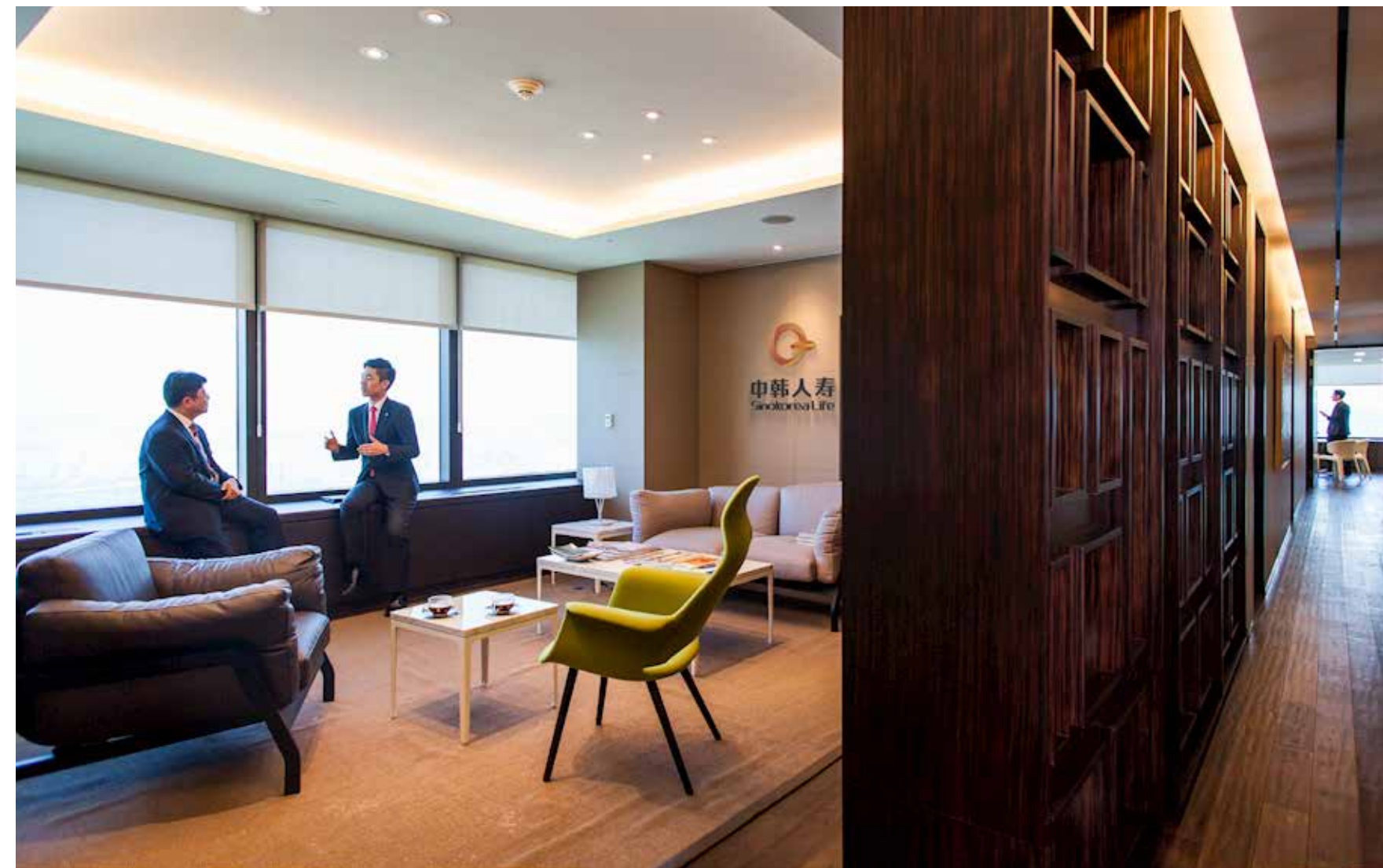
Hanwha is leveraging Big Data strategically and applying the latest financial technologies to create sustainable growth in new markets, including online banking, insurance and lending with mid-range interest rates.



#### SALES NETWORK

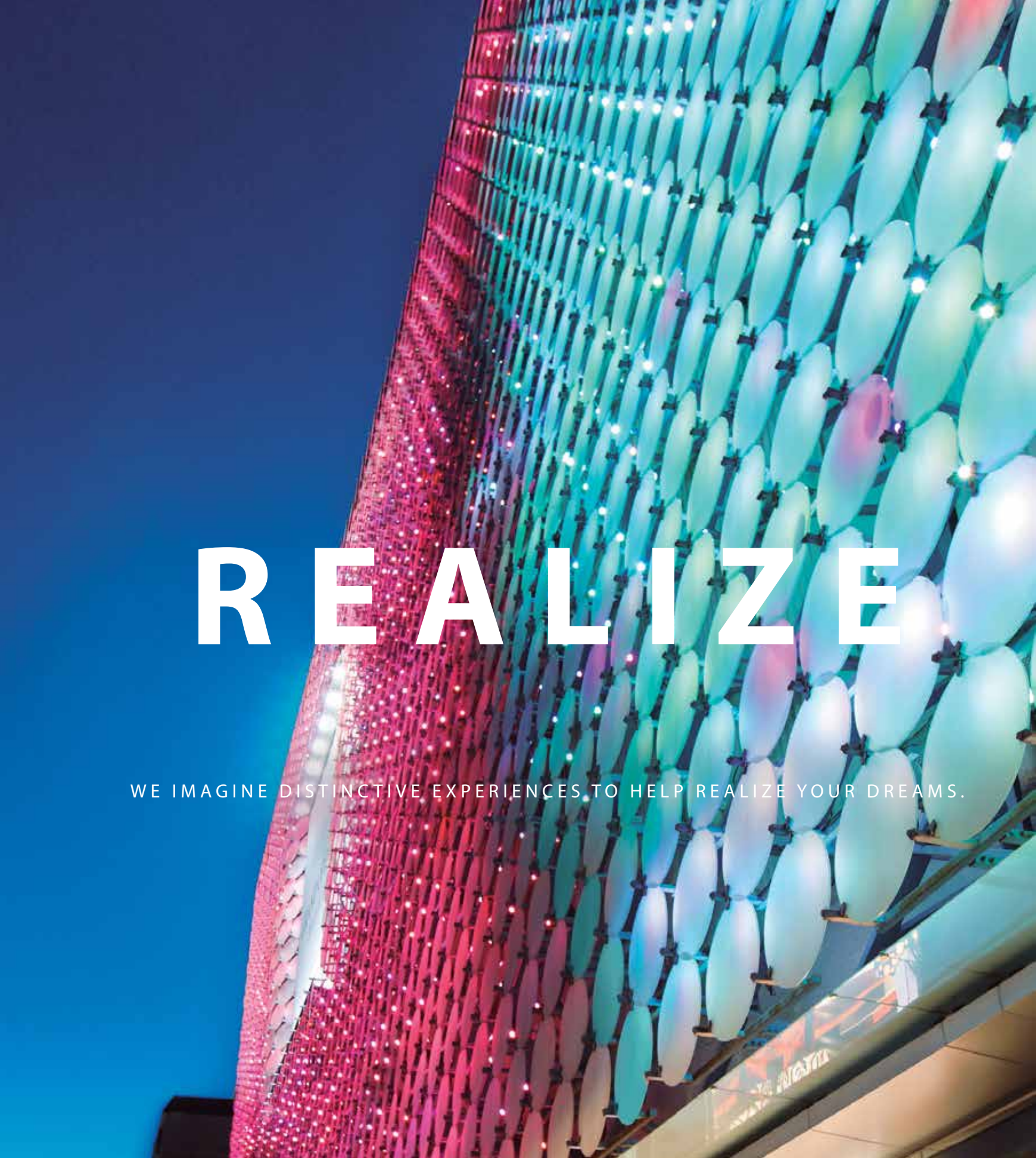
## Global Expansion

Hanwha Life continues to advance in the global market having established successful subsidiaries in Vietnam, China, and Indonesia—all with the goal of becoming the leading insurance company in each country.





IMAGINE



REALIZE

WE IMAGINE DISTINCTIVE EXPERIENCES TO HELP REALIZE YOUR DREAMS.

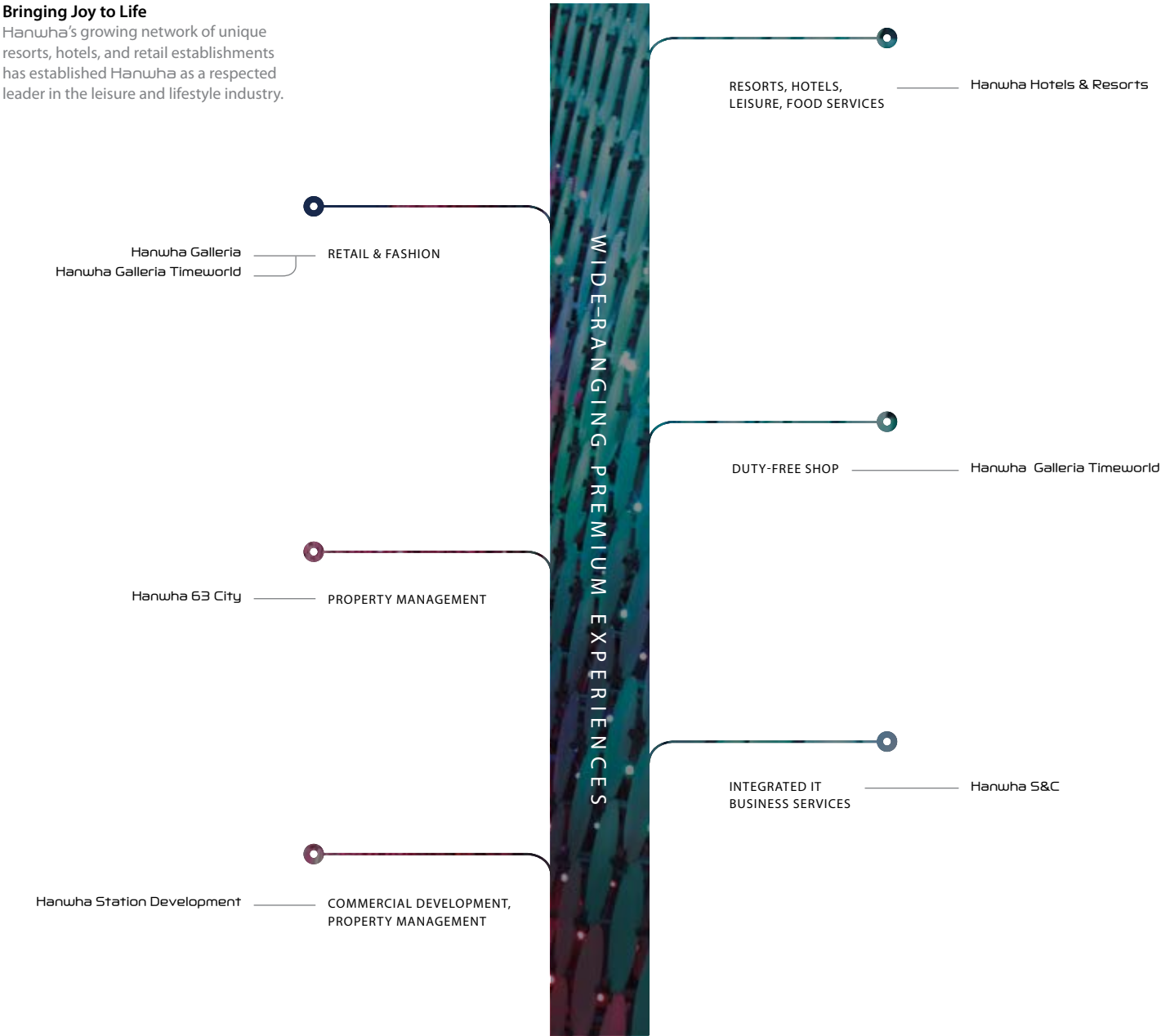
# SERVICES & LEISURE

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 Hanwha as a respected leader in the leisure and lifestyle industry.



RETAIL

# No.1

## Premium Retailer

Galleria Duty Free 63 is a golden landmark in Seoul, renowned for its luxury brands and providing a high-end shopping experience.





#### AQUARIUMS

## Leader in Maritime Culture

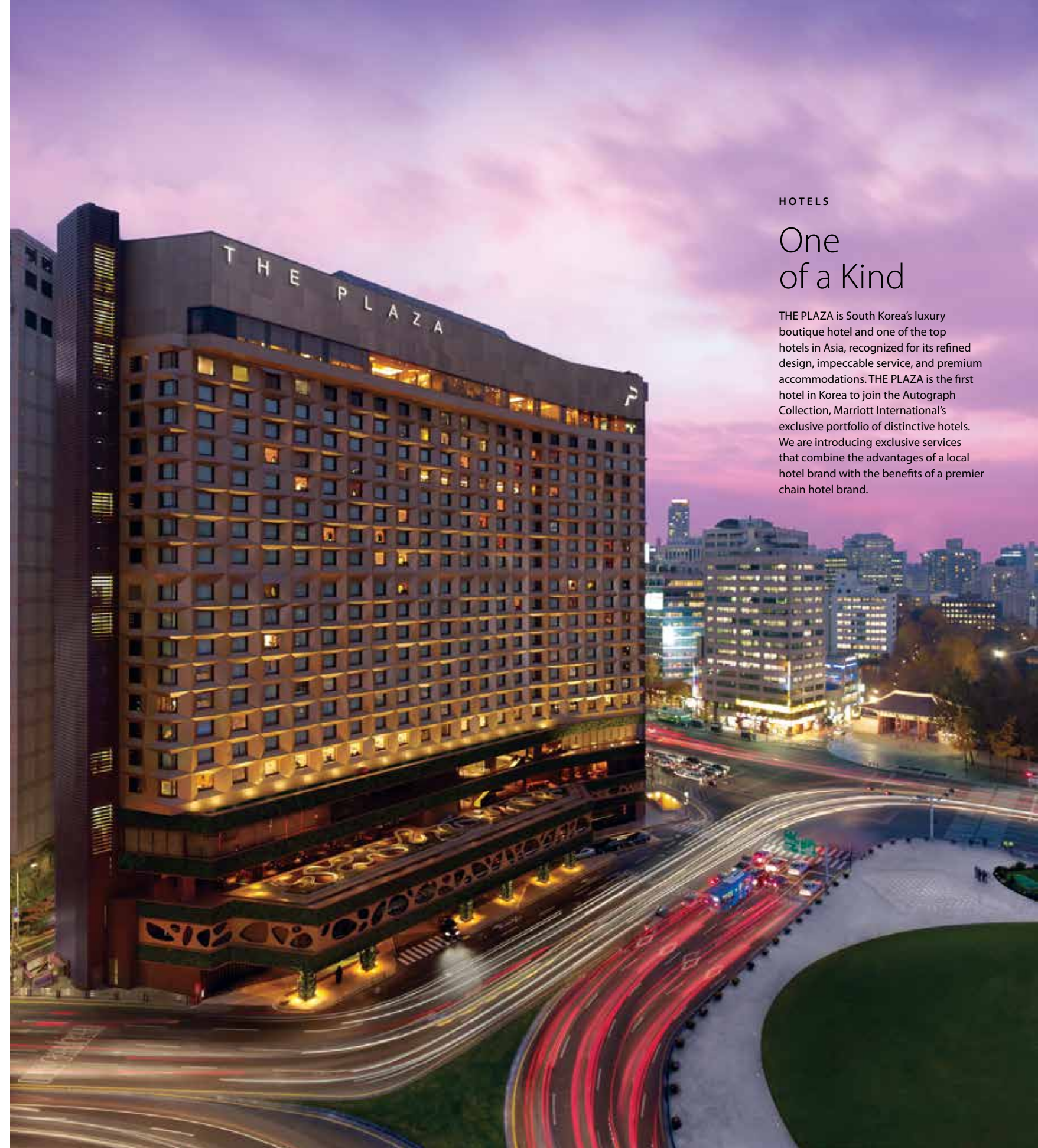
Hanwha's affinity for marine life shows in our chain of award-winning aquariums, including eco-friendly Aqua Planet in four locations: Jeju, Yeosu, Ilsan, and Seoul. Our expertise in marine-life and aquarium architecture is recognized and sought out internationally. Wanda Nanchang Aquarium in China has employed our services to provide overall management along with consulting on the design and construction of its marine-life facility.



#### RESORTS

## Expanding Globally

Hanwha Hotels & Resorts is building an international network of hotels and resorts, including the Ocean Palace Golf Club and Resort in Nagasaki, Japan, and the Saipan World Resort in the Mariana Islands in the South Pacific.



#### HOTELS

## One of a Kind

THE PLAZA is South Korea's luxury boutique hotel and one of the top hotels in Asia, recognized for its refined design, impeccable service, and premium accommodations. THE PLAZA is the first hotel in Korea to join the Autograph Collection, Marriott International's exclusive 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.

An abstract background featuring a dark blue field with a complex, glowing grid of light blue lines that create a sense of depth and perspective, resembling a digital or architectural blueprint.

ENVISION

An aerial photograph of a modern city at sunset. The scene includes a tall skyscraper, a large stadium with a distinctive roof, and a waterfront area with a fountain and a walkway. The sky is a mix of orange, yellow, and blue.

ACHIEVE

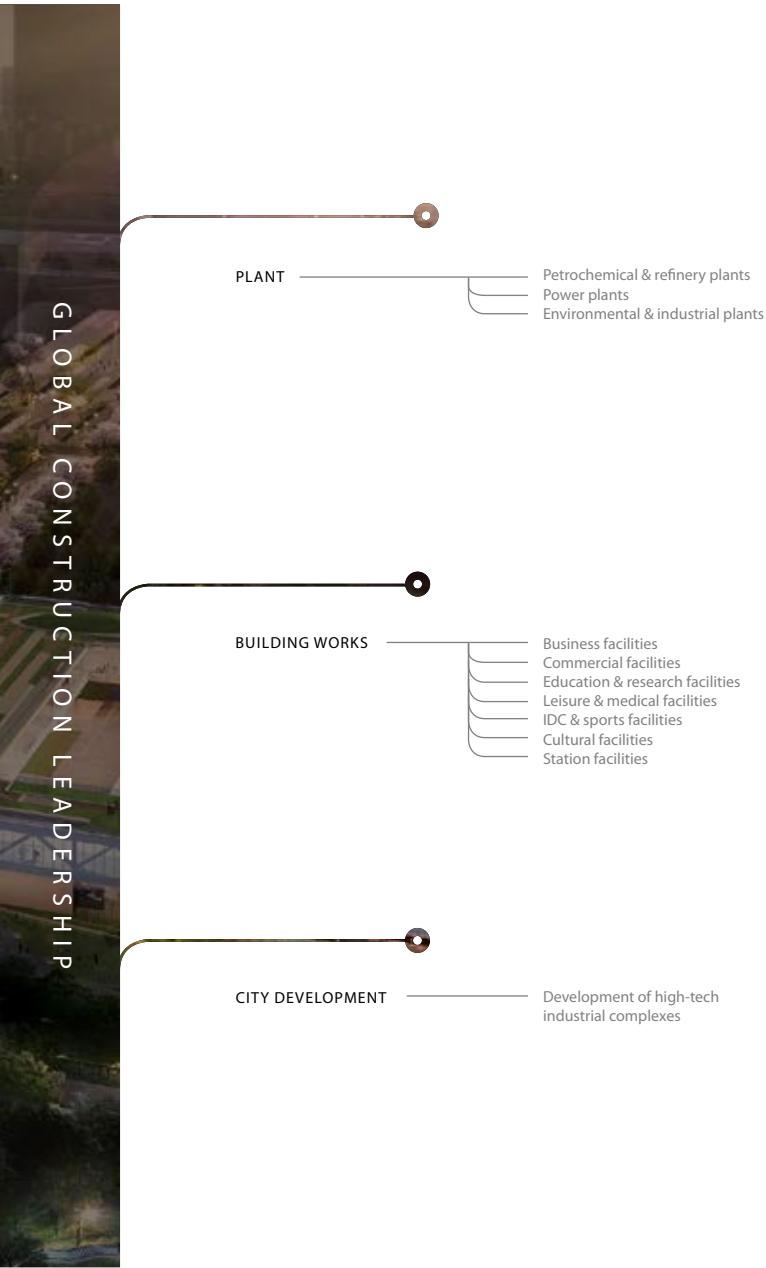
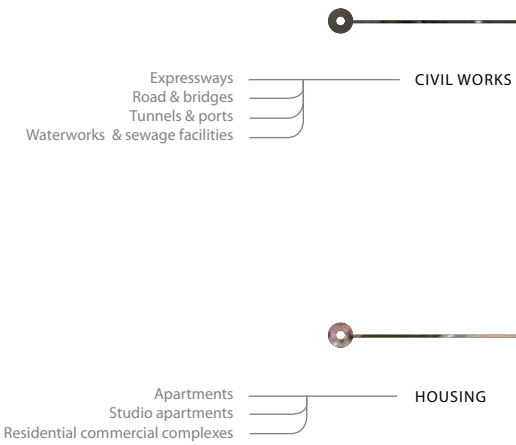
WE ENVISION POSSIBILITIES SO YOU CAN ACHIEVE YOUR GOALS.

# 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 breathtaking 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 of people 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 reputation as an experienced real estate developer with end-to-end solutions.





#### IRAQ PROJECTS

## Building a City

Hanwha's Bismayah New City Project is the building of an entire city on an unprecedented scale with nearly 60 city blocks and 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 has built the Yanbu desalination plant. It provides 15 million gallons a day to help Saudi Arabia resolve its water deficit problem while simultaneously generating 160MW of electricity. Hanwha E&C is expanding its technologies and capabilities. One example is the Saudi Yanbu II power generation and desalination plant. It produces 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

# Hanwha's Vision

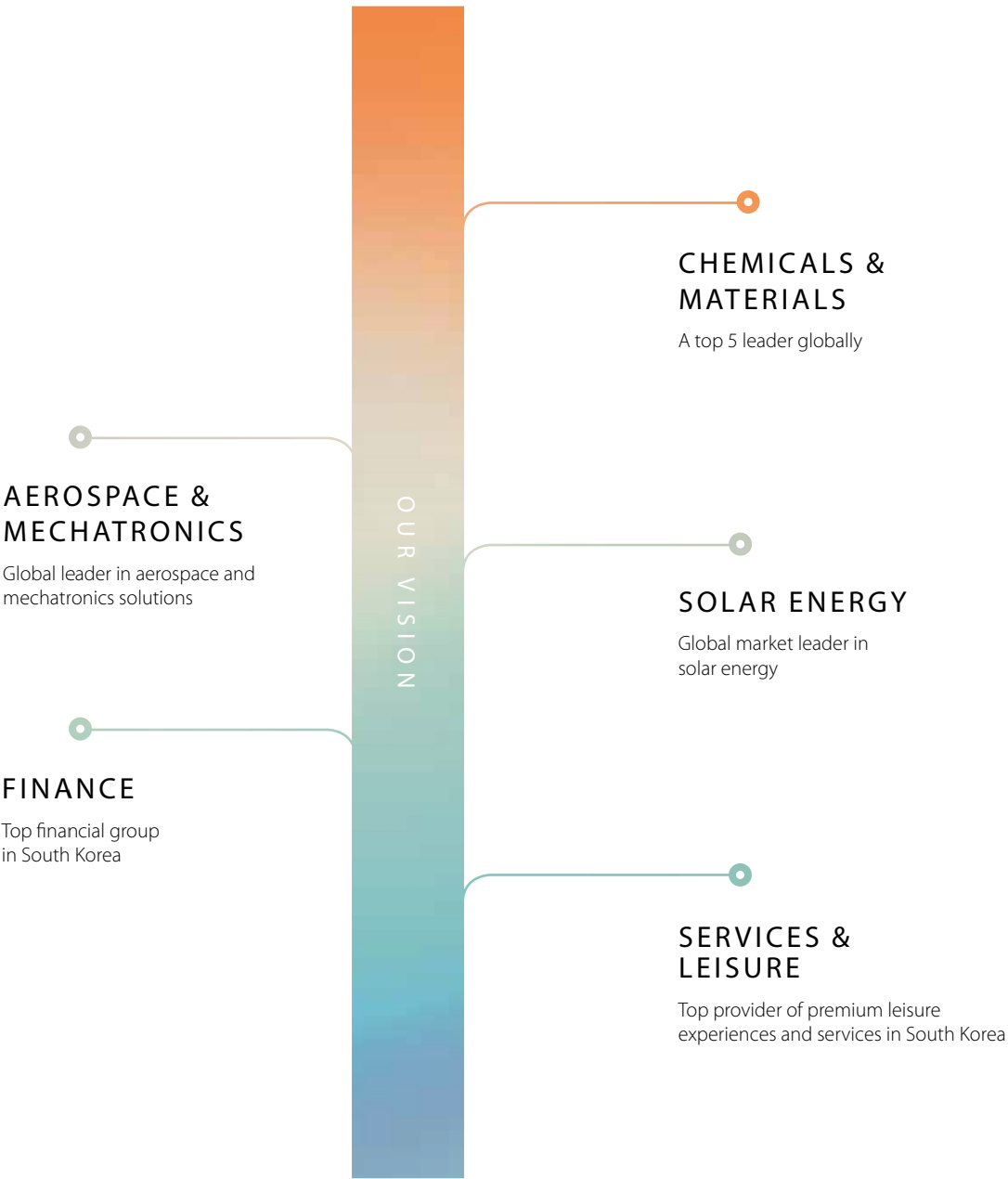
Our vision is to touch the lives of every individual in every country in which we operate. We want to elevate the quality of life with our innovations and solutions. And to achieve our vision, we've set goals to help us lead in all markets our businesses compete in. In 2017 **Hanwha** entered its third and final stage of our vision to achieve a Quantum Jump. Quantum Jump motto is: *as we lead, we will also serve*. This means that we will continue to foster a corporate culture where we hold serving customers our top priority.

## Our Spirit & Core Values

At **Hanwha**, we operate with the spirit of trust and loyalty above all else. They are reflected in our core values and serve as the guiding force behind how we do business and why we innovate.

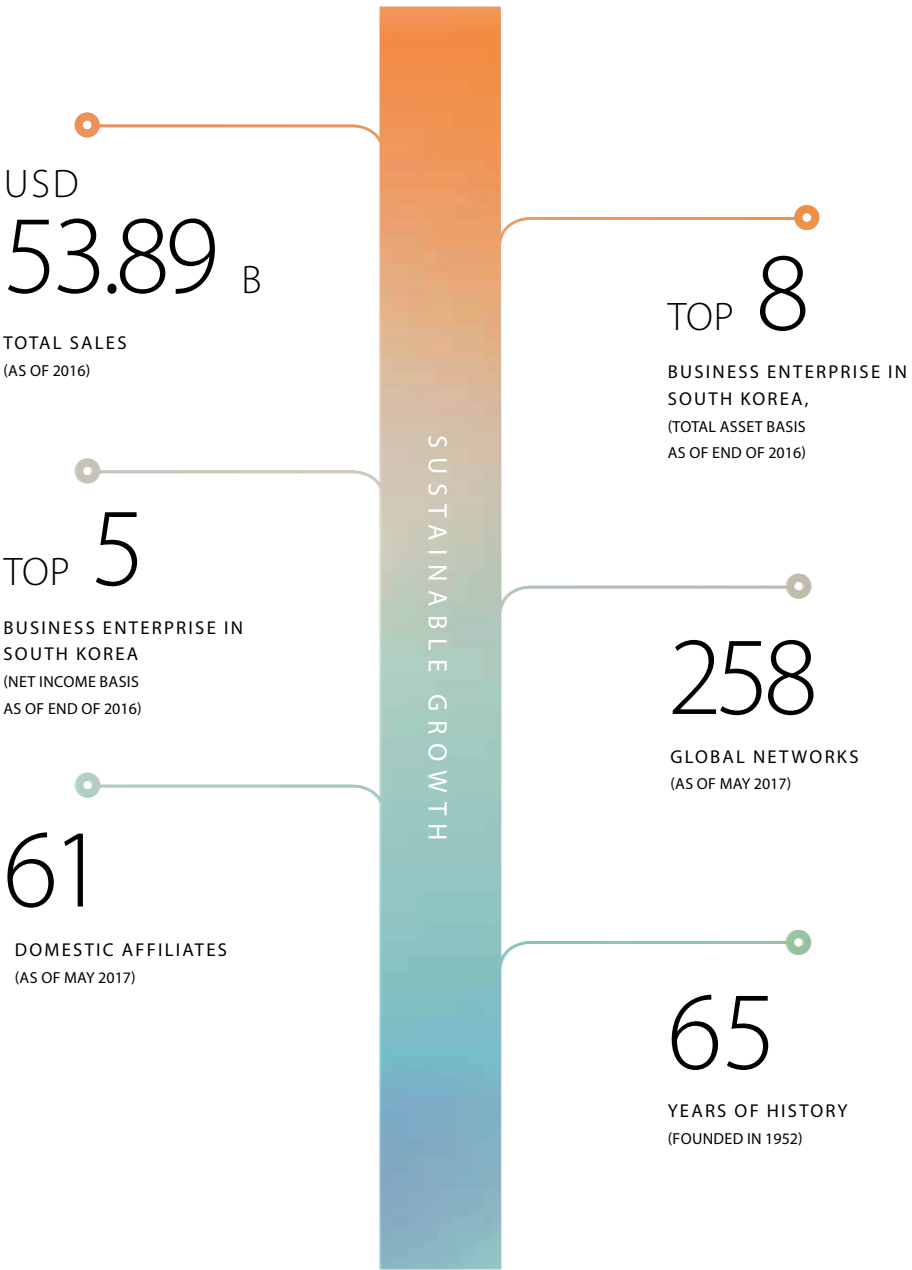
**Our Core Values**

- We believe in challenging the status quo in 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

Since 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 8<sup>th</sup> largest business enterprise in South Korea. And by quickly anticipating and responding to changing market environments, we've led the industry and demonstrated world-class capabilities in each of our businesses. **Hanwha's** focused and 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 country. In 1952, Korea Explosives Co. (now **Hanwha Corporation**) produced industrial explosives desperately needed for the construction of the nation’s new 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** as a business spans globally. One thing, however, remains the same: our belief that a business should contribute to its society.

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**’s Machinery Division). We sharpened our competitiveness in the machinery business by acquiring Shinhan Bearing Industrial. And in 1972, we continued to advance 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 it is 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 Korea’s leading leisure company. In 1986, we also acquired Hanyang Store (now **Hanwha Galleria**) and expanded into the retail industry.

Building Momentum  
**1996–2006**

RESTRUCTURING  
FOR THE NEW CENTURY

The 1997 Asian financial crisis affected South Korea severely. However, **Hanwha** met the challenges with radical innovation and restructuring. We secured liquidity by selling profitable affiliates, made employee job security our priority and moved forward with our faith in our spirit of trust and loyalty to see us through. We emerged from the financial crisis not only without a single labor dispute but were heralded as a model business for other South Korean corporations to follow. We then sought new opportunities in the crisis and acquired Korea Life Insurance in 2002, which has grown steadily to become the second largest life insurance carrier in South Korea, with assets of KRW 100 trillion in 2016.

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. Then in 2012, **Hanwha** won the Bismayah New City contract to construct an entire city in Iraq. At USD 10 billion, it was the largest overseas contract ever awarded to a Korean company. SolarFun Power Holdings and Q.CELLS were acquired in 2010 and 2012, respectively, allowing **Hanwha Q CELLS** to become the world’s No. 1 solar cell producer. In parallel, **Hanwha Life** expanded globally by establishing its

Vietnam subsidiary in 2008, and acquiring an Indonesian life insurance company in 2013. Recently, the company entered the Fintech sector to offer greater financial security to more people worldwide. Currently, **Hanwha** is securing South Korea’s top position in the chemical, aerospace, and mechatronics sectors, with the largest acquisitions and mergers in the country. We are strengthening our global competitiveness by securing preemptive technologies and readying ourselves for the fourth industrial revolution.



**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 (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

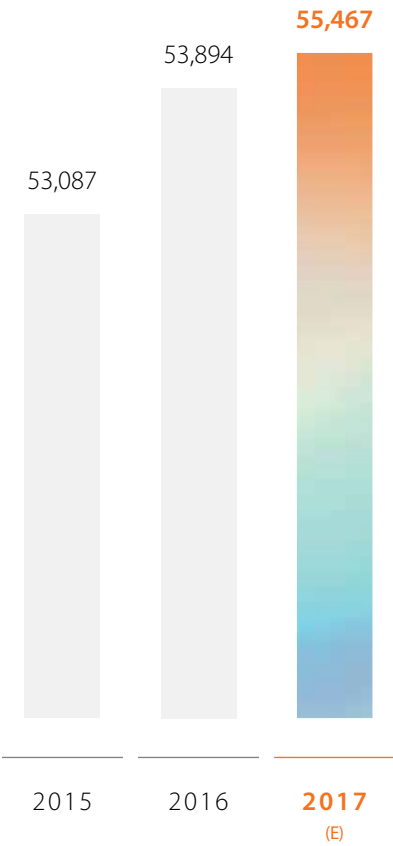
\* The financial data in the Financial Highlights shows the simple aggregate of sales, total assets, total liabilities, and total stockholder equity among the Hanuha Group's major affiliates at home and abroad. (Source: the Hanuha Group)

\* Figures for sales and total assets of individual affiliate companies published on page 73 and subsequent pages of his 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 is therefore subject to change upon settlement of accounts and accounting audit results. The outlook data also includes 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 Hanuha 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 Hanuha 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.

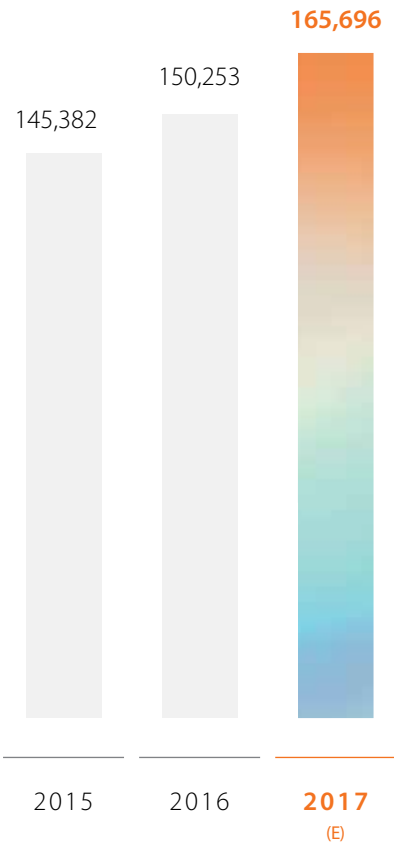
## TOTAL SALES

In USD Millions



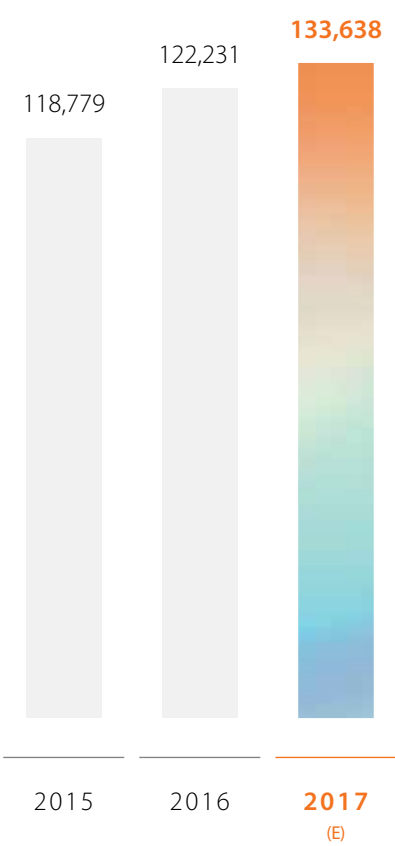
## TOTAL ASSETS

In USD Millions



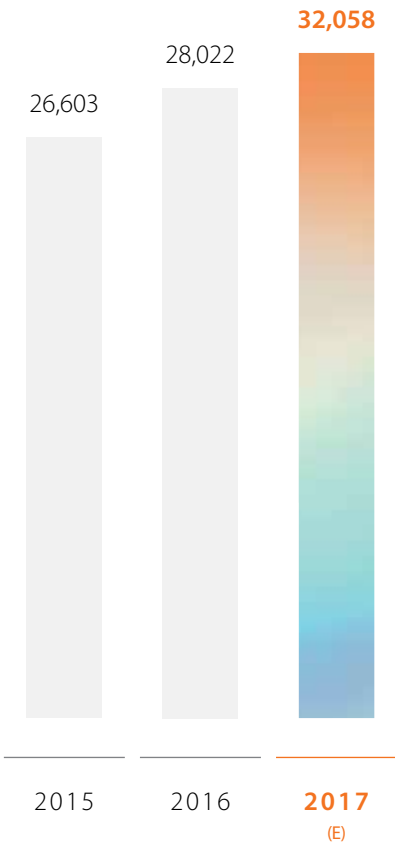
## TOTAL LIABILITIES

In USD Millions



## TOTAL STOCKHOLDERS EQUITY

In USD Millions



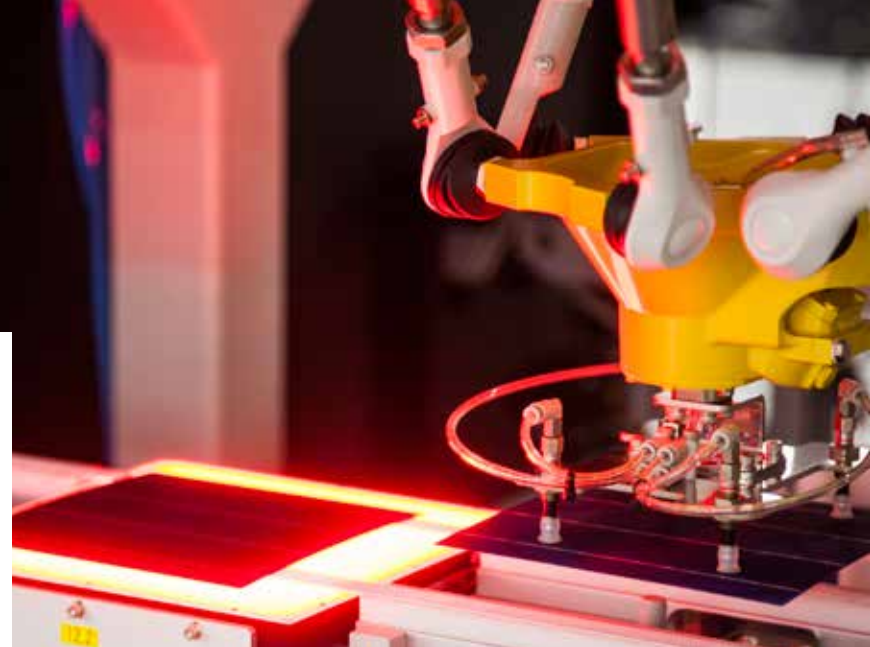
\* Sales are converted into US dollars at the average exchange rate of USD 1= KRW 1,160.50 in 2016, and KRW 1,131.49 in 2015.

\* Assets, liabilities, and shareholder equity amounts are converted into US dollars at the December 31 closing exchange rate of USD 1= KRW 1,208.50 in 2016, and KRW 1,172.00 in 2015.

\* The 2017 expectancy data was converted based on Hanuha Group's internal exchange rate of USD 1=KRW 1,160.



**Hanwha** BUSINESSES



## Manufacturing & Construction

Hanwha Corporation  
 Hanwha Techwin  
 Hanwha Land Systems  
 Hanwha Systems  
 Hanwha Defense Systems  
 Hanwha Power Systems  
 Hanwha Precision Machinery  
 Hanwha Chemical  
 Hanwha General Chemical  
 Hanwha **TOTAL** Petrochemical  
 Hanwha Advanced Materials  
**YEOCHUN NCC**  
 Hanwha Engineering & Construction  
 Hanwha Q CELLS  
 Hanwha Energy  
 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.

**Trading:** Petroleum, petrochemicals, metals, machinery, chemical products, industrial plants, coal, new and renewable energy, general merchandise, resources development.

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

2016 Total Sales

In USD millions

4,396

2016 Total Assets

In USD millions

6,429

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

In 1959, we were the first domestic manufacturer of dynamite in South Korea. After having successfully developed safe, high-quality industrial explosives and fire process products, Hanwha has 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 with proven high-

quality products and aggressive pricing. We also completed the full vertical integration of nitric acid-ammonium nitrate-industrial explosives by acquiring granular ammonium nitrate production lines. We also invested in innovations to produce high value-added technologies, such as the electronic detonator.

Hanwha Corporation's Defense Division has the largest defense capabilities in South Korea. Since entering the defense industry in 1974, this division 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, expanding our businesses that had been previously focused on ammunition and guided munitions to include self-propelled guns and engines for aircraft and fleet, as well as defense electronics such as radar and combat systems. We have been selected as the developer of the Long-Range Surface-to-Air Missile (L-SAM) system, the key to the Korea Air and Missile Defense (KAMD) system. And

while our Defense Division has recorded steady growth, we continue to invest in new technology and innovate to enhance business competitiveness.

Since being established as an international trading company in 1966, Hanwha Corporation's Trading Division has played a leading role in the globalization of the Hanwha Group. With more than 30 overseas branch offices in our worldwide network, we are leveraging synergy with Hanwha Group subsidiaries as we enter foreign markets and businesses as well as expand international markets for Korea's competitive industries. We focus on petroleum, defense, and renewable energy businesses to secure stable profit sources. We continue to maximize profit by strengthening competitiveness, particularly by developing local business opportunities and establishing local networks in strategic markets such as China, the Middle East, and Southeast Asia.

From leading its nation since its establishment in 1953, Hanwha Corporation's Machinery Division today is leading the machinery equipment industry worldwide by

leveraging its deep experience and cutting-edge technology. We produce high value-added machinery equipment, including industrial machinery and machine tools, by focusing on heat treatment, automation, and precision processing. Our customized machine tools have helped us gain the largest market share in South Korea. And in another of our growing businesses, we have successfully developed and delivered solar cell manufacturing facilities to our customers, proving the quality and safety of our technology.

Our state-of-the-art technologies in the aerospace business have allowed us to make great strides toward becoming a global leader in the aerospace auxiliary machinery and electronics fields. In 2015, we signed an agreement to export aerospace parts with UTAS, a Turkish company. Our aerospace maintenance business also signed a memorandum of understanding with GE. Agreements such as these establish ties with global companies that enhance our business competitiveness. They also take us closer to becoming a global leader, give us opportunities to explore new growth engines, and 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 Techwin**  
www.hanwhatechwin.com

**EXPERTISE**  
Engines, video surveillance cameras, collaborative robots

**2016 Total Sales**  
In USD millions

3,032

**2016 Total Assets**  
In USD millions

4,677

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

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

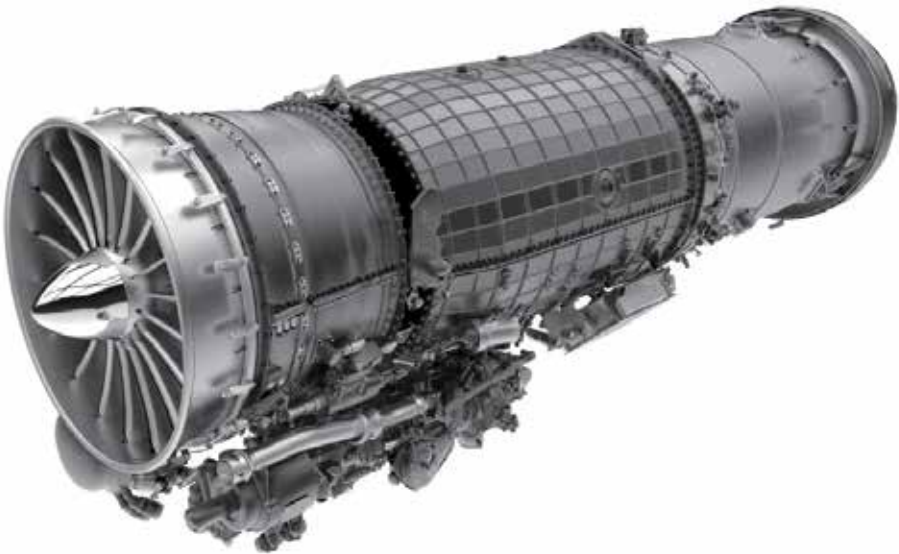
Established in 1977, Hanwha Techwin began building businesses in the aircraft engine and film camera industry. Since our founding, we’ve leveraged our technologies in optics, video, and aircraft engines to expand into aircraft /gas turbine engines and security equipment businesses. Across our businesses around the globe, we have developed top-tier original and application technologies. Combined with our growing expertise, we’re proactively meeting market demands.

As South Korea’s only producer of gas turbine engines, we have an unmatched competitive edge in the engine business. For the last 40 years, we have provided a range of gas turbine engine solutions around 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. In addition, we entered into a contract with the United States Pratt & Whitney to operate a joint venture in Singapore’s 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 the joining the ranks of other leading aircraft engine manufacturers of the world.

Our security business provides a full lineup of security solutions, from world-class CCTVs and video recorders to integrated management software. We apply more than 20 years of experience in optics and video processing technology to offer products for various customer needs. Our advances in R&D have enabled us to not only meet the ever-changing demands of the housing and construction industry but also to maintain global top-tier levels. We produce 2.6 million video surveillance devices in South Korea and China while building service networks in Europe, the Americas, China, and Southeast Asia. Currently, 75 percent of our sales come from other markets overseas. In 2017, we launched the Wisenet X series that boast its own global chipset. The Wisenet X series has already won wide praise from customers, solidifying our leadership in the industry.

Hanwha Techwin develops technology for precision machinery, control, image analysis, software, and a range of automation projects. Leveraging our technology and experience, we launched South Korea’s first collaborative robot in April 2017. Developing robots that can perform basic tasks and supplementary work enable us to maximize efficiencies in many industries, from automotive to electronics, food, and medicine.



**Hanwha Land Systems**  
www.hanwhalandsystems.co.kr

**EXPERTISE**  
Defense Land Systems (artillery systems, unmanned systems, remote controlled weapon station)

**2016 Total Sales**  
In USD millions

616

**2016 Total Assets**  
In USD millions

1,053

Hanwha Land Systems entered the defense industry in 1983, developing and producing land systems that played a pivotal role in increasing the defense power of South Korea’s military. After becoming an affiliate of Hanwha Group in 2015, we built synergy with other defense affiliates. We rebranded as the independent and specialized defense company Hanwha Land Systems in July 2017, reflecting the Group’s decision to separate commercial and defense businesses.

Along with Hanwha’s other defense affiliates, such as Hanwha Defense Systems, Hanwha Corporation’s Defense Division, and Hanwha Systems, we have achieved the top position in South Korea’s defense market. With experience in producing a more than 1,000 K55 self-propelled howitzer, 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 ammunition supply system equipped with a fully automated control system and is packaged with a K9 self-propelled howitzer. Our Evo-105 self-propelled howitzer is a new concept weapons system. It comes equipped with a 105mm towed gun on a vehicle and an automatic fire control system.

Hanwha Land Systems has been taking on large-scale projects for the national defense of South Korea for many years. As a result, we’ve accumulated both invaluable experience and technology in the defense industry. Our focus has been on developing cutting-edge products that include unmanned systems and

remote controlled weapon stations. We have also exported the K9 self-propelled howitzer—a weapon that has gained reputation for excellence in military markets including Turkey, Poland, Finland, and India.

Our expertise in performance and technology are recognized worldwide, giving us a bridgehead to enter the global defense market and develop new markets.

We intend to grow as a global top provider of land systems. We will continue to invest in advanced technology and with it, develop total convergence solutions for the artillery, armored vehicles, unmanned systems and energy storage systems. And by providing creative platform solutions and customer-focused values, 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 ground defense company with cutting-edge convergence solutions for ground systems.

**EXPERTISE**  
Command, Control, Communication, Computer and Intelligence (C4I) for ground, naval, and avionics products and systems

**2016 Total Sales**  
In USD millions

741

**2016 Total Assets**  
In USD millions

659

Hanwha Systems R&D Center develops cutting-edge technologies used in world-class radar, optronics, missile seekers, and tactical communication systems.

As a defense electronics company, **Hanwha Systems** has significantly advanced the defense capabilities of South Korea’s military since the company was founded in 1978. It became a member of the **Hanwha Group** in 2015. As the industry leader, **Hanwha Systems** offers a complete solution with ground, naval, air command, control, communication, computer, and intelligence (C4I), guided weapons, electronic warfare (EW), and future combat systems.

By combining our technical development capabilities and subject matter expertise in radar, optronic, command, and fire control system products for ground systems, we are able to offer integrated solutions to our customers. In the naval systems domain, **Hanwha Systems** is working to further enhance integrated solutions for management and control systems, system engineering technology, and sensor armament.

In 2016, we’ve been selected to develop the active electronically scanned array (AESA) radar for the next-generation Korean fighter KFX, electronic optical target tracking equipment, and infrared detection tracking equipment. To develop these solutions, we’ve focused and directed our defense R&D to secure our core competencies.

Our R&D will also contribute to other high-performance and advanced weapons systems including a tactical communication system (TCS) and integrated command & control (C2) solutions that better adapt to future warfare environments. These solutions are expected to be in demand for export.

**Hanwha Systems** provides timely customer support with seven support centers around the country, including the first field maintenance support facility in South Korea. We offer total solutions from product development of weapon systems operation to integrated logistics support (ILS).

With our globally proven technology, superior product quality, and outstanding service, we highly anticipate greater global market share and recognition worldwide.

**EXPERTISE**  
Infantry fighting vehicles, air defense weapons, guided weapons, launching systems, high-precision navigation, laser weapons

**2016 Total Sales**  
In USD millions

663

**2016 Total Assets**  
In USD millions

617

Established in 1937, **Hanwha Defense Systems** provides comprehensive defense solutions. Our superior production and technology enable us to provide infantry fighting vehicles, air defense weapons, guided weapons, launching systems, high-precision navigation, and laser weapons. We became an affiliate of the **Hanwha Group** in 2016. We are accelerating to become a global top-tier company.

We began supplying weapons systems to the South Korean military beginning 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). We have exported K200 to Malaysia in 1993, marking our first success in large-scale overseas exports by a South Korean defense company. In 2007, using our original technology, we developed K21 a vehicle that could operate on water. Recently, we developed Hybrid BIHO (an air defense weapon) and Black Fox (a wheeled armored vehicle)—marketing them worldwide including the Middle East and Southeast Asia.

Using K200 as the base, we’ve produced more than seven specialized infantry fighting vehicle models: the K277 (for command post), K281/K242 (mortar-equipped), K216 (aka CBR—Chemical, Biological, and Radiological), K288 (rescue), K221 (smoke grenade launchers),

and more. Since 2009, we have produced K21, a world-class IFV with improved firepower, survivability, and maneuverability for high-speed operation. K21 coordinates with main tanks for excellent maneuverability, supports firepower for infantry that alight from vehicles, and can suppress anti-air targets that infiltrate with low speed and altitude. It is only one of our many armored vehicles that is powered with a water-driving device.

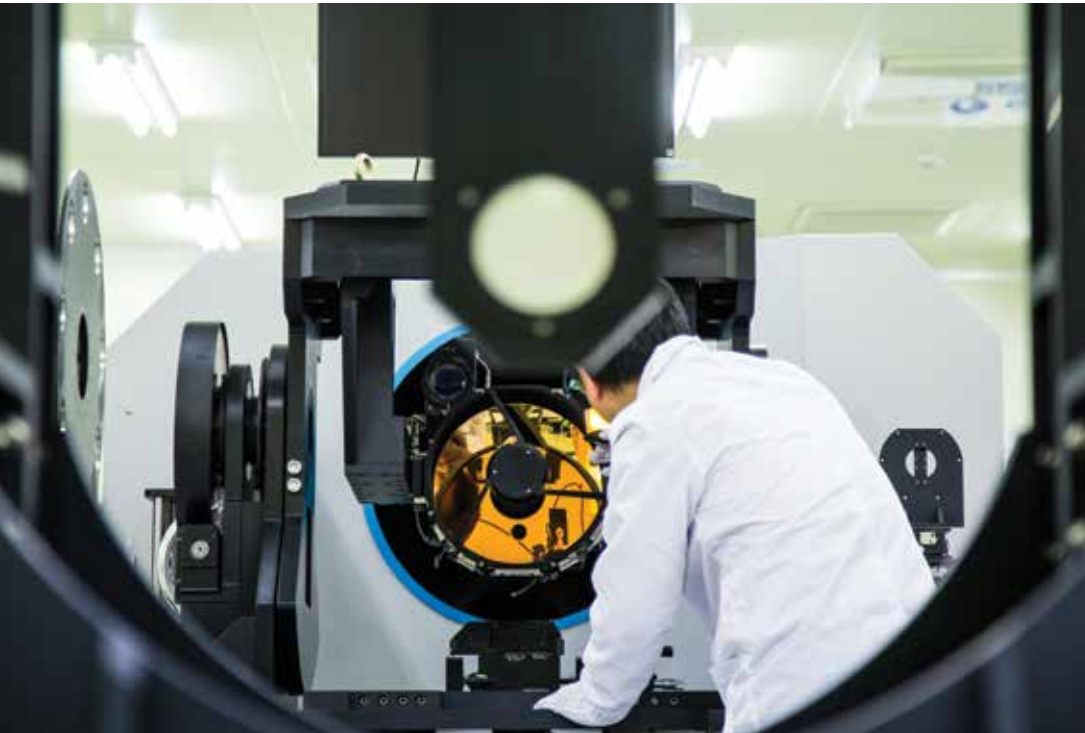
For air defense, we provide solutions with a lineup of optimized weapons, including the VULCAN (for armored vehicles, towing, and warships), the NOBONG (a warship gun), the BIHO, the CHUNMA, and the Hybrid BIHO. Our air defense weapon on the BIHO can strike closing airplanes with direct fire and be used in various air defense operations such as mechanized unit protection. CHUNMA is South Korea’s first surface-to-air guided system, an effective weapons system against low-altitude aerial threats to protect major core facilities. Mass-produced since 2015, our Hybrid BIHO can significantly improve the anti-air defense system of the South Korean armed forces by combining the strengths of the 30mm dual-throttle and guided missiles with the conventional weapons mounted on the BIHO. It also effectively provides better defense with excellent maneuver capability. Equipped with high-performance radar and electro optic tracking system, Hybrid BIHO is the latest weapons system capable of self-targeting detection and tracking.

**Hanwha Defense Systems** is exceptionally competitive at producing a

range of launching systems that require comprehensive technology and experience, including launching platforms, command and fire control systems, ammunition systems, and ammunition carrier vehicles. Our flagship system is the multiple rocket launcher CHUNMOO. Along with Hybrid BIHO, the CHUNMOO was co-developed with a partner’s R&D. It is an effective weapons system that can secure early tactical advantage by identifying attack origins and key targets quickly and accurately without damaging forces outside the enemy target range. We also produce more than 40 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 150-km 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 with reliable defense solutions. We’ve created synergy with our affiliates among **Hanwha Corporation’s** Defense Division, **Hanwha Techwin**, and **Hanwha Systems**. Together, we will develop comprehensive defense systems that transform **Hanwha** into top ten 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 advanced technology in the fields of infantry fighting vehicles, air defense weapons, guided weapons, and launching systems.



# Hanwha Power Systems

www.hanwhapowersystems.com

## EXPERTISE

Industrial air and gas compressor, gas turbine package, power generation system

### 2016 Total Sales

In USD millions

170

### 2016 Total Assets

In USD millions

176

Hanwha Power Systems launched in 1997 on the strengths of reliable technology and deep experience in gas turbine engines. We grew into a global powerhouse selling more than 4,500 units worldwide. We developed high-quality technology products to build diverse lineups and realize high added value. Our lineup includes: 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 (low duty)/HD (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 compressor and expander provide competitive advantages for our customers with competitive delivery and with competitive delivery and core components built in-house. In 2013, we launched the world's largest air-cooled

turbo compressor SA3100. In 2014, we were contracted to supply the world's first marine VRU (Vapor Recovery Unit) steam recovery turbo compressor. In addition, in 2015, we entered the LD/HD compressor market with a compressor for LNG carriers and solutions for shipbuilders.

In terms of global sales and R&D networks, Hanwha Power Systems is rapidly growing as a global energy equipment company. We are establishing long-term business relationships around the world. We currently have six international sales offices, as well as production facilities in Korea and China, and an R&D center in Houston, Texas. We are accelerating our global development cooperation in the US. Recently, we focused on building close relationships with key customers in the O&G industry, and we succeeded. In the first half of 2016, we obtained 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, our plan is to strengthen our product portfolio in the compressor business and expand into turbine-related businesses that can support petroleum gas and power generation customers. And 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 SwRI (Southwest Research Institute) 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 cooperation with KEPSCO in 2017, we began to develop a pure oxygen gas turbine, eco-friendly high-efficiency power generation equipment. We expect our collected efforts and accomplishments will propel us to leadership in the eco-friendly power generation solutions market.

# Hanwha Precision Machinery

www.hanwhaprecisionmachinery.com

## EXPERTISE

Chip mounters, screen printers, application equipment

### 2016 Total Sales

In USD millions

146

### 2016 Total Assets

In USD millions

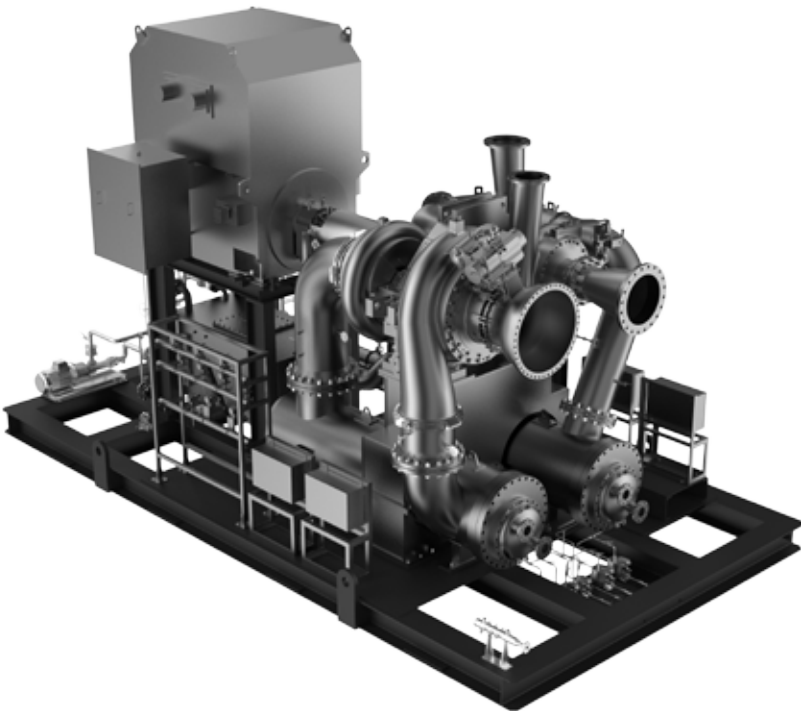
101

In 1989, Hanwha Precision Machinery developed the first chip mounter in South Korea. We have since grown into a total solutions provider, offering ultra-precision manufacturing equipment and integrated software. Our flagship product lineup, the DECAN series, is a new high-speed mounter that adopts the world's only modular conveyor feature. Since its 2013 launch, the series has steadily evolved. The SM series boasts the best performance in its class and is our bestselling product. We are expanding our portfolio to include injection molding automation, a semiconductor flip chip mounter, and a 3D inspection machine. Our product portfolio better meets our customer needs and provides the

best customer-oriented solutions that ultimately improves productivity. We are implementing a Smart Factory, a total solution for a SMT production line that boasts seamless operation, zero defects, and unmanned operation. Our Smart Factory will increase production efficiency, installation accuracy, quality, and management while lowering maintenance costs.

Our network is expanding worldwide to provide differentiated products and services to global customers. We are becoming a global leader in the industrial equipment industry, which is experiencing continuous growth and innovation.

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



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 with best-in-class performance.

Hanwha Chemical

hcc.hanwha.co.kr

EXPERTISE

PE, PVC, CA, photovoltaics, TDI

2016 Total Sales  
In USD millions

3,001

2016 Total Assets  
In USD millions

6,068

Established in 1965, **Hanwha Chemical** is a comprehensive chemical company with streamlined production systems for polyethylene (PE), polyvinyl chloride (PVC), and chlor-alkali (CA). As South Korea’s leading petrochemical company, we are highly influential in the nation’s chemical industry, producing high-quality PVC, CA, and low-density polyethylene (LDPE) 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 then 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 work 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, 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 360,000 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 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 in 2011. 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.

**Hanwha Chemical** is also expanding its global business to cover emerging future industries such as photovoltaics. We acquired global photovoltaic companies to enhance our competitive edge in this developing but exciting market. To strengthen our upstream solar businesses, we built a polysilicon plant in the Yeosu National Industrial Complex. The plant started its production in early 2014, with a capacity of 10,000 tons annually. We have been leveraging the advantages of our affiliate companies and making strategic investments to become a leader in the global solar energy market.

Hanwha General Chemical

hgc.hanwha.com

EXPERTISE

PTA

2016 Total Sales  
In USD millions

1,407

2016 Total Assets  
In USD millions

2,169

**Hanwha General Chemical** was established in 1974 and then acquired by the **Hanwha Group** in 2015. We were 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, we have an annual capacity of two million tons, helping us to be No. 1 in both production capacity and market share in South Korea. Our experience and technology have also been recognized worldwide. We leveraged our many years of expertise and our PTA processing technology in the Middle East back in 2010. Since joining the **Hanwha Group**, we have enhanced our cost competitiveness by creating synergies with chemical affiliates and diversifying our markets through management and sales innovation.

In June 2017, we established **Hanwha Solar Power** to advance mid-to long-term growth beyond the single PTA business. We plan to improve our PTA-related technologies and develop related businesses in the value chain that we have grown over the last 40 years. We will also secure greater competitiveness through strategic investment and operation of PV businesses at home and abroad.

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.



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

2016 Total Sales  
In USD millions

7,120

2016 Total Assets  
In USD millions

5,616

Since its founding in 1988, Hanwha TOTAL Petrochemical has tirelessly led South Korea’s petrochemical industry with technology innovation and global expansion. In a 2003 joint venture with the Total Group, a major French energy and chemical company, we formed a global energy and chemical company, a strong platform for growth. After becoming a Hanwha affiliate in 2015, we achieved a record-breaking business performance.

Hanwha TOTAL Petrochemical operates a large-scale energy and petrochemical facility made up of 18 separate plants in the Daesan Petrochemical Complex in South Korea. We manufacture a wide variety of petrochemical products, including base chemicals such as ethylene, propylene, styrene monomer, paraxylene, and ethylene glycol. The petrochemical facility also produces polyethylene and polypropylene—polyolefin products that are used to manufacture a wide range of consumer energy products such as gasoline, diesel, jet fuel, liquefied petroleum gas, and solvents.

As the only petrochemical company in South Korea, we are equipped with a naphtha cracking center (a core facility in our petrochemical plant), a condensate fractionation unit (a refining facility in our refinery), and an aromatics plant. These facilities have enabled us to establish solid vertical integration, from petrochemical raw material supply to end-product production. In effect, we’ve laid the foundation for stable growth by not only diversifying our product portfolio but also optimizing production efficiency for linking and managing raw materials, energy, distribution, and facilities. We registered as a refining company in 2010 and successfully completed its expansion in 2014. This added a second aromatics plant, a condensate fractionation unit, and an ethylene-vinyl acetate (EVA) plant. These additions gave us a sizable annual production capacity of in-demand products, including 1.09 million tons of ethylene, 2 million tons of paraxylene, and 1.06 million tons of styrene monomer.

Our EVA product for solar cells and HDPE product for bottle caps each achieved the world’s No. 1 market share, a testament to our commitment to quality and innovation. We’ve been selected as a World Class Product of South Korea in 2015 by the Ministry of Trade, Industry, and Energy. Our range of high-value-added products include protective film and general film, also claimed the No. 1 spot for market share in South Korea. As a major affiliate of the Hanwha Group, we expect our next recognition to come from maximizing synergy with our affiliates and enhancing our global competitiveness.

Hanwha  
Advanced  
Materials

www.hwam.co.kr

EXPERTISE

Automotive materials,  
electronics materials,  
solar materials

2016 Total Sales  
In USD millions

552

2016 Total Assets  
In USD millions

837

Founded in 1965, Hanwha Advanced Materials defines its vision as “A high-tech materials company that protects the values of humanity and the environment.” With our innovative line of products and technologies, we are operating businesses in the areas of 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 also have developed local production and R&D networks 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 diverse products in interior and exterior materials for automobiles. We now offer distinctive technologies in high-strength, super-lightweight materials for automotive parts. We also produce lightweight composite materials for automotive parts, such as GMT, LWRT, EPP, SMC, and LFT, and other automotive parts using these materials. Among the materials we produce, StrongLite (glass fiber mat-reinforced thermoplastic, GMT) and SuperLite (lightweight reinforced thermoplastic, LWRT) rank at the top of their categories in global market

share. We are a major supplier to global automakers, including Hyundai, Kia, BMW, Volkswagen, GM, Ford, and Toyota. As a global automotive parts supplier, we operate manufacturing corporations in Alabama and Virginia in the US, Beijing and Shanghai in China, and in the Czech Republic and Germany. And to proactively respond to the needs of global automakers for parts standardization and global sourcing, we plan to increase our number of overseas corporations to more than 10 by 2020. To help keep abreast of converging trends of the automotive and IT industries, we have joined the Automobile Convergence Alliance. We continue to focus on establishing a technological competitive edge by further reducing weight and simplifying automotive electronics.

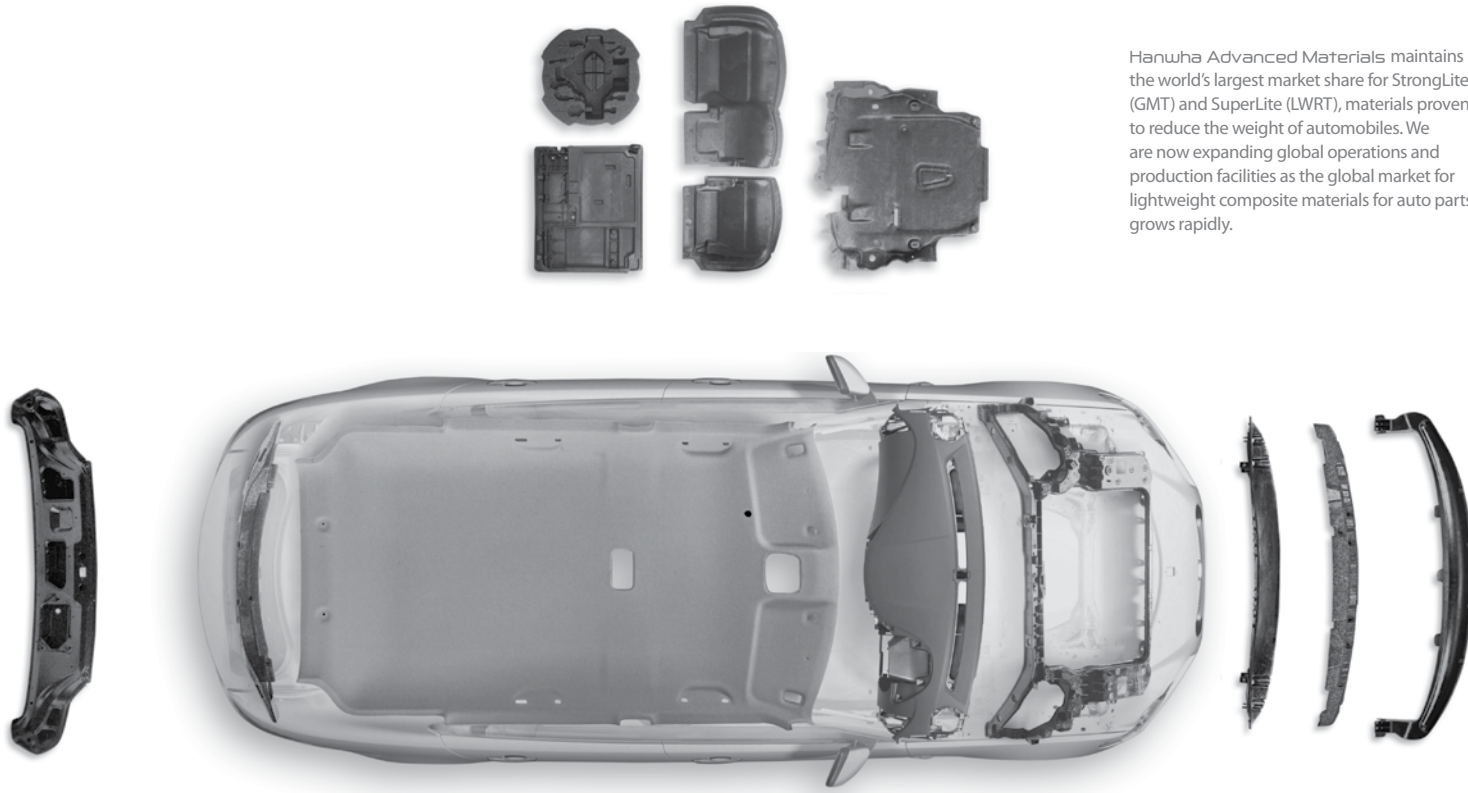
Our Lightweight Composite Materials R&D Center, which opened in 2015, leads research on thermoplasticity for automobiles, thermosetting composite materials, and on designing and developing new applications. We develop new materials offering improved functionality, including innovative hybrids of plastic and different materials. We also create new methods of construction to lead the trend toward lighter-weight materials and car electronics—important

downstream business areas for us. We are also expanding our market share by developing products for solar power and electronics, along with materials for next-generation mobile communications, the Internet of Things, and solar power efficiency.

We offer products by developing independent technologies, using sheet production technologies we have refined over the past 30 years. In 2010, we succeeded in developing and mass-producing EVA sheets and back sheets for photovoltaic modules. We operate a plant for 3.5GW EVA sheets and back sheets in South Korea but we are expanding the business to China, Europe, and Japan.

We are especially competitive in the high functional film market. Currently, we produce electronic circuits such as coverlay film (insulation film), FCCL (flexible copper clad laminate), bonding sheet (adhesive sheet), and EMI shield film (electromagnetic shielding film). Our flagship electronic circuit of LinkTron (FCCL) 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 for automotive electronics.

Hanwha TOTAL Petrochemical’s EVA for solar cells is a world-class product and the leader in global market share.



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 global operations and production facilities as the global market for lightweight composite materials for auto parts grows rapidly.

YEOCHUN  
NCC

www.yncc.co.kr

EXPERTISE

Petrochemical  
feedstock production

2016 Total Sales

In USD millions

3,769

2016 Total Assets

In USD millions

2,034

YEOCHUN NCC operates the world’s leading naphtha-cracking facility in the Yeosu National Industrial Complex, located on the southern tip of the Korean Peninsula. Established in 1999 from the merger of naphtha-cracking facilities owned by Hanwha and Daelim, their fifty-fifty joint venture annually produces 1.95 million tons of ethylene, 1.11 million tons of propylene, and 5.31 million tons of various petrochemical feedstocks, including benzene, toluene, xylene, styrene monomer, and butadiene.

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

With our forward-looking production facilities and large-scale production capacity, we continue to grow every year by relying on our advanced management system, sound financial structure, and solid partnerships with customers. 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 have become a leading Naphtha Cracking Center (NCC) company in Korea. Internationally, by building on our topnotch capabilities, we are becoming a world-class petrochemical company.

At the world’s leading naptha-cracking facility, YEOCHUN NCC produces ethylene, propylene, and other petrochemical feedstocks. This state-of-the-art facility gives our Hanwha affiliates a competitive edge in petrochemicals.



Hanwha  
Engineering &  
Construction

www.hwenc.com

EXPERTISE

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

2016 Total Sales

In USD millions

2,713

2016 Total Assets

In USD millions

5,566

Hanwha E&C has rapidly grown into a global player by leveraging its extensive experience in construction projects and by implementing its new technologies and long-term expertise in constructing a range of 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 won international recognition. We’ve been recognized as a top global contractor in *Engineering News Record* and our works often referred to as the “bible of the construction industry.”

The USD 10.1 billion Bismayah New City, the largest urban development project in Iraq’s modern history, is Hanwha E&C’s flagship project. It is the world’s largest new urban construction project that includes infrastructure facilities for 100,000 households and 300 schools. The first overseas project of its kind by a South Korean company, Bismayah New City is recognized 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 also are building power and petrochemical plants in the Middle East and North Africa, and developing largescale real estate projects in the Americas.

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 60,000 households at 84 sites. We led the industry by pioneering advances in large-scale site construction, including Daedeok Techno Valley, South Korea’s first development project 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 world-class leading-edge technology and eco-friendly green energy, we are raising the bar in the water treatment field.



Hanwha E&C’s outstanding business competencies are well recognized globally. And with our reputation for reliability and dependability, we have been able to secure a series of contracts to construct large-scale petrochemical plants in the Middle East and North Africa.

**EXPERTISE**  
Solar power solutions: ingots, wafers, cells, modules, and systems

**2016 Total Sales**  
In USD millions

2,426

**2016 Total Assets**  
In USD millions

2,209

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, to wafers, cells, and modules, to downstream solar solutions for residential, commercial buildings, and solar power plants.

Since its foray into the solar energy business in 2010, the Hanwha Group has built Hanwha Q CELLS into the world’s leading capacity. We currently have cell and module production networks in China, Malaysia, and South Korea. Despite the strong growth, we continue to invest in R&D and manufacturing innovation to stay a step ahead of the growing worldwide demand. The Jincheon Plant in South Korea, built in 2016, can produce more than 1GW of QANTUM cells—the world’s most efficient cells, annually. Our Q.ANTUM technology is based on PERC cell technology, providing mono-crystalline efficiency for even multicrystalline module cells. The latest Q.ANTUM module, Q.PLUS, won the Module Manufacturing Innovation award at Solar Industry Awards 2015 in Hamburg, Germany.

More recently in 2017, our steel frame module won the Top Innovation Award and the Array Changing Technology Award from *PV Magazine*. It also received the Intersolar Award 2017 in Germany.

Our technology infrastructure enables differentiated technology innovation. Our base solar R&D work is done in Thalheim, Germany but R&D network spans 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.

With its cutting-edge technology and economies of size, Hanwha Q CELLS is capitalizing on the growing demand for solar power around the world. In 2013, we signed a contract to deliver 82MW of modules to Marubeni, the largest solar power plant in Japan. We also completed the construction of a 5MW solar plant in Kalaeloa Renewable Energy Park in Ohau, Hawaii.

In 2014, we entered the rooftop solar power equipment market in Japan and Europe and 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 top international market share in 2016 and the status as a key worldwide player. In 2015, we partnered with US-based NextEra 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, 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.

**EXPERTISE**  
Group energy, renewable energy

**2016 Total Sales**  
In USD millions

331

**2016 Total Assets**  
In USD millions

1,296

Established in 2007, Hanwha Energy is an eco-friendly and comprehensive energy 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.

In keeping with diversifying our energy business, we are promoting solar power generation at home and abroad. We are also expanding the scope of our solar business from power generation to project development, O&M, system solutions business, and more. In Japan, we

operate several solar power plants with a combined capacity of 36MW, including a 24MW solar power plant in Oita. We are continuously increasing the scale of our business.

Looking ahead, we are constructing a 42MW in Turkey and a 152MW solar power plant in India, both of which will begin commercial production in 2017. In the US, we are developing several solar power projects through our local subsidiary in California, Texas, Las Vegas (Nevada), and other locations. To efficiently operate and systematically maintain solar power plants, we are promoting O&M business based on our Hanwha Energy Integrated System (HEIS). By ensuring stable profits for our customer’s assets through maintenance and improved performance, 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. To achieve this goal, we are servicing central control systems for distributed renewable energy power sources, establishing and operating solar/wind power-connected Energy Storage System, and setting up micro grid businesses in areas with weak power infrastructures. Recently, we have transformed Jukdo Island, Chungcheongnam-do into an energy self-reliant island by applying these latest technologies.

The outstanding quality control capabilities of Anti-PID, Hot Spot Protection, and Tra.Q demonstrate the success of Hanwha Q CELLS’ global R&D efforts into 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 City Development

## EXPERTISE

Real estate development including multifunctional industrial complexes

**2016 Total Sales**  
In USD millions

378

**2016 Total Assets**  
In USD millions

439

Numbers above include total sales and total assets of its five subsidiaries.

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

Hanwha City Development has been recognized as the leading private developer of high-tech industrial complexes since its establishment in 2001. Starting with our 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 (1,640,000m², 200 enterprises), and the Gyeonggi Hwaseong Bio Valley project (1,745,000m², 200 enterprises). Each completed project stood out as achievements and each one received high praise. The projects are

considered exemplary development models and, not surprisingly, have been benchmarked by several local governments.

Buoyed by these achievements, we’ve broken 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 other areas of technology. When completed in 2018, the industrial complex is expected to play an important role as the center of the industrial belt, south of Seoul.



## Finance

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

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

2016 Total Sales  
In USD millions

13,784

2016 Total Assets  
In USD millions

87,159

Established in 1946, **Hanwha Life** is a leading life insurance company and also the oldest in South Korea. Early on, we played a critical role in developing the insurance industry and the country's economic growth—always with our customers in mind.

In 2016, as we expanded, we made sure to remain structurally sound, reporting total assets of USD 87.15 billion. At the end of 2016 we achieved a 198.7 percent risk-based capital (RBC) ratio, which demonstrates the soundness of our asset quality. We have also received a sterling AAA credit rating from South Korea's top rating agencies for the past ten years.

**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 12 exclusive sales rights for our original insurance policies, an industry high.

We also innovate when in our customer interactions. Through our customer-centric marketing and sales, we've aligned our offerings to life stages of our customers. We then improved our call center and customer center services. Certificates and

awards from government organizations and customer satisfaction survey firms have recognized our efforts. We ranked No. 1 for seven consecutive years through 2016 and won the Korea Service Awards from the Korea Standards Association in the life insurance sector. In the 2016 Korea Service Quality Index survey, managed by Korea Management Asset Consulting, we also ranked at the top for customer service for seven years in a row and for five consecutive years for our call centers. **Hanwha Life** is further recognized for its social contributions in several arenas, including help for youth, health, community, culture, and the environment.

**Hanwha Life** is aggressively entering new markets. Recently we became the only insurance company to participate in the first Internet-only bank consortium, which earned us a bancassurance position.

Using Fintech and Big Data technology, we launched the industry's first mid-range lending programs. We also debuted DreamPlus 63, the largest Fintech nurturing center in South Korea to lead the rapidly changing financial environment and establish a steppingstone for global expansion. We also gained a contract worth USD 10 million with Anthemis, a UK-based Fintech investment company. 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 a strategy based on localization and a 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, and ranked as the largest foreign-invested insurance company in Zhejiang province. In Indonesia, our subsidiary is growing fast having diversified its sales channels and establishing bancassurance alliances. We continue to look forward and continue to increase our global market share through Fintech-based business models in Asian countries. Hong Kong, Malaysia, and Singapore are next.

In 2015, **Hanwha Life** announced a new vision to become a leading player in the global insurance industry. To realize this vision, we established three mid-to long-term strategies in 2017. First, we will provide new contract-value-based products. Second, we will improve fundamental profit and loss management of our insurance business. Lastly, we will improve return on asset operation. Our plan is to grow into a global top-tier insurance company through digitization and by fostering a culture of innovations where employees are inspired to act as youthful as a startup employees.

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

2016 Total Sales  
In USD millions

5,335

2016 Total Assets  
In USD millions

10,985

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 11 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 empowered 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 and stable overseas and alternative investments.

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

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 is a major insurer with total assets of USD 11 billion and a diversified investment portfolio.

Hanwha Investment & Securities  
www.hanwhawm.com

EXPERTISE  
Securities brokerage and underwriting, asset management

2016 Total Sales  
In USD millions  
1,351

2016 Total Assets  
In USD millions  
5,545

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. To date, we have successfully established ourselves as a reliable asset management partner in the ever-changing capital market by providing various domestic and overseas financial products and customer-oriented services.

We're guided by our company policy of "Good Communication & Plus Management"—we listen to our employees who understand our customers and continuously encourage innovation within the organization. We differentiate our services by putting customers first and working to establish customer trust.

We have secured a stable and diversified profit structure with business portfolios in investment banking, trading, wealth management, and institutional investors. As a preemptive response to the rapidly changing digital financial environment, we developed unique opportunities to ensure simpler and more convenient investment experiences for every client. Our easy-to-use application, STEPS, displays essential information to support beginners and young investors. We have improved the intuitive features of our mobile trading system and continue to upgrade based on customer feedback.

Our business vision motto is to grow together with our clients, shareholders, and employees while securing our base for sustainable profits. As a trusted financial partner with expertise in a range of business fields, we can make financial dreams come true and future happiness a reality. Hence our motto is: "Go further together with our clients as trusted financial partners for greater happiness, for life."

Focusing on the principles of customer satisfaction and protection, Hanwha Investment & Securities is valued by customers.



Hanwha Asset Management  
eng.hanwhafund.co.kr

EXPERTISE  
Asset management

2016 Total Sales  
In USD millions  
65

2016 Total Assets  
In USD millions  
147

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 2016, we were among South Korea's top two asset management companies with USD 71.49 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 put into practice our principle and management philosophy of 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 Excellence Prize in Korean bond funds at the 2016 Korea Fund Awards; Grand Prize in China Equity Funds at the 2016 Morningstar Fund Awards; Excellence

Prize in High dividend ETFs at the 2016 Korea Fund Awards by *Money Today*; and the Grand Prize in 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 assets of the US and other advanced countries. We have also established a Chinese subsidiary as a wholly foreign-owned enterprise (WFOE) to expand our overseas business footprint as we pursue a global strategy.



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.

**EXPERTISE**  
Deposits,  
commercial and personal loans

**2016 Total Sales**  
In USD millions

36

**2016 Total Assets**  
In USD millions

534

Founded in 1997, Hanwha Savings Bank joined the Hanwha Group in 2008 and has since grown into one of the most stable savings banks in the industry. Even in an unfavorable business climate, we've been able to safely pursue external growth with our experienced sales teams while maintaining a disciplined management. We also extend the fundamental roles of microfinance institutions and support profitable business for promising small and medium-sized companies.

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 as a sound financial institution, and we are committed to providing individual and business clients with top-quality financial products and services.

An experienced and stable financial institution, Hanwha Savings Bank has earned customer trust through its top-quality sales teams, financial products and disciplined management.



Business & Finance

Real Estate

Life Insurance

Health Insurance

Travel & Leisure

Services & Leisure

Education

Health & Wellness

Food & Beverage

Transportation

Media & Entertainment

Technology

Energy

Environment

Infrastructure

Construction

Manufacturing

Retail

Telecommunications

Hanwha  
Hotels & Resorts  
www.hwrc.co.kr

EXPERTISE  
Resorts, hotels, leisure, food services

2016 Total Sales  
In USD millions

912

2016 Total Assets  
In USD millions

1,896

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 envied by competition. 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 gained and technologies developed from the former 63 Sea World, the first aquarium in South Korea. We built the breathtaking Aquarium Belt, South Korea's largest network of aquariums across 4 cities: Jeju, Yeosu, Ilsan, and Seoul. Our expertise earned us a consultant contract to design and construct the Wanda Nanchang Aquarium in China, and we now operate the 17,800-ton indoor aquarium on commission. Partnering with Geoeje city government, we are creating a tourist destination, the Belvedere. The marine resort, with 465 rooms and a private marina, is expected to complete by 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 experiences 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 innovations have been recognized by the 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 Korea by *Global Traveler*, a worldwide business travel

magazine. The International Hotel Awards selected THE PLAZA as its 2017 Large Hotel & 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.

Our Food Culture Division provides comprehensive services, including food service contracts, dining business services, and food material supplies. The food service contract unit is backed by 30 years of experience and a unique operations system. Our dining business unit provides commissioned services in multi-use complex facilities, as well as elegant wedding and banquet services. The unit also runs concept restaurants such as Chinese Bistro T-won and Oreno French and Italian restaurants. 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 capability.

Hanwha  
Galleria  
www.hanwhagalleria.co.kr

EXPERTISE  
Retail, fashion

2016 Total Sales  
In USD millions

322

2016 Total Assets  
In USD millions

1,521

Since its founding in 1976, Hanwha Galleria has set the trend for premium lifestyles as the leader in the retail industry in South Korea.

Galleria Luxury Hall, which opened in 1990, was South Korea's first upscale department store and later served as the inspiration for luxury department stores throughout South Korea. With the largest number of luxury brands and distinctive services, our dining and retail destinations are attractive to both tourists and domestic shoppers. Galleria Luxury Hall features luxury brands, global fashion trends, fine dining, and premium services. It embodies the vision of a new generation of luxury malls, meeting the needs of customers who want something upscale and different.

Located in premium locations across the country, including Seoul, Suwon, Cheonan, Daejeon, and Jinju, Galleria department stores also offer customers a suite of sophisticated shopping opportunities with distinctive merchandise and localized marketing practices. In 2019, we plan to open a new store in Gwanggyo, Suwon to secure the growth momentum of the department store business. With new concepts and differentiated spaces, the Gwanggyo store will provide a new

paradigm for the retail business. We are working to become the No. 1 premium retailer in the country, providing first-class shopping experiences for the latest trends.

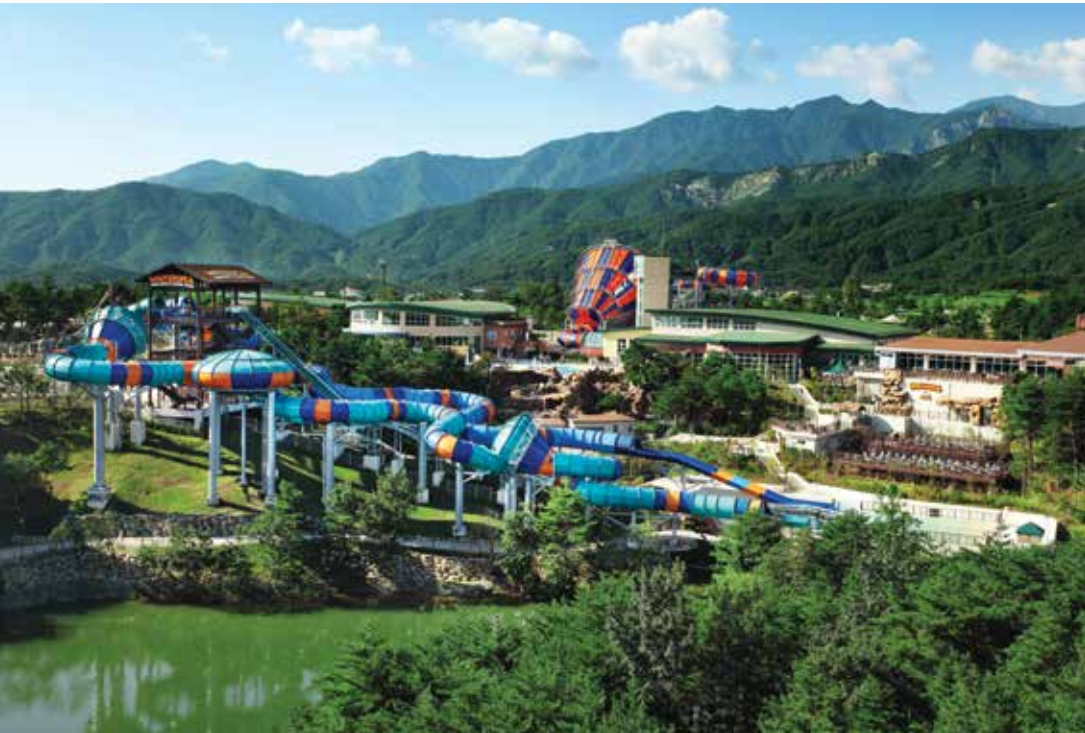
In 2015, Hanwha Galleria Timeworld won a business license for a new duty-free store in Seoul. Soon after, Galleria Duty Free 63 opened its doors in December of 2015 at our 63 Building with 10,153 square meters of selling space. With Hanwha Galleria's experience in the retail business and network of Hanwha affiliates, Galleria Duty Free 63 can create new tourist contents and and compete globally. We are committed to becoming an outstanding duty-free business operator, helping to secure and expand opportunities for small and medium-sized firms under our 63 plan.

In addition, we build and evolve our business constantly, finding success by promoting new merchandise and marketing activities. We also find hidden gems, and buy directly from suppliers to build our unique collection of goods to offer value and savings to our shoppers. We engage our customers in person, with special shopping events and through social media. We listen to our customers and developed customized

business models for online malls to cater to changing shopping practices and greater desires for convenience. We have a mid-to long-term plan to expand online distribution channels to overseas markets that include China. Our plan is to build new business opportunities, beyond department store sales to meet diverse customer needs for purchasing goods and services online.

We will continue to take creative steps to strengthen our core competencies that appeal to our customers—our best products and the best possible experience.

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.



Galleria Duty Free 63, launched by Hanwha Galleria in December 2015, is transforming Seoul into a shopping destination with four floors of high-end Korean and foreign luxury brands.

Hanwha  
Galleria  
Timeworld  
www.hanwhagalleria.co.kr

EXPERTISE  
Retail, fashion, duty-free shops

2016 Total Sales  
In USD millions

253

2016 Total Assets  
In USD millions

430

Hanwha Galleria Timeworld is the largest high-end department store in central South Korea. Specializing in luxurious fashion brands from around the world, the store is home to the area’s first Louis Vuitton, Gucci, and Prada stores. We’ve cemented our status as the premier high-end shopping destination in Daejeon. Our landmark store is easy to navigate through and provides lounges where customers can rest leisurely while they shop. It also serves as a cultural hub, housing a community center that hosts more than 400 seasonal programs during the year.

In September 2015, we launched Gourmet World on the store’s top floor. The restaurant provides the finest cafeteria services in the Chungcheong province of South Korea. Visitors also enjoy our Culture and Play Zone, a multicultural playground for families, combined with a prestigious culture center that has recently been renovated. The quality and diversity of our offerings make us the finest high-end department store in the heart of South Korea.

A Daejeon landmark, Hanwha Galleria Timeworld is the largest upscale department store in central South Korea, with world-class fashion and premium food and beverages.



Hanwha  
63 City  
www.63realty.co.kr

EXPERTISE  
Comprehensive property management

2016 Total Sales  
In USD millions

143

2016 Total Assets  
In USD millions

51

Hanwha 63 City was founded in 1986 as a property management firm, providing comprehensive services to raise the value of its client assets.

We applied expertise built over the years in management of skyscrapers to 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. By managing the landmark 63 Building, we have sharpened our skills in property management and deepened our expertise in electrical facilities, machinery, equipment, disaster prevention, firefighting, communications facilities, cleaning, and security. Our comprehensive technical services include inspection of completed construction sites, safety audits of facilities, functional checks of firefighting facilities, and interior design work.

Hanwha 63 City/SnS Division offers expertise in renewable energy solutions and integrated security systems. And after having achieved sustained growth, in 2016, Hanwha Estate was spun off. Hanwha Estate provides facilities maintenance and renewable energy solutions for buildings that use geothermal energy, photovoltaics, and fuel cells. In the coming year, we will continue to innovate and assist our customers as South Korea’s No. 1 property management experts.



Hanwha 63 City is increasing the value of client real estate asset management by offering comprehensive management that includes the provision of security, energy, machinery equipment, and the firefighting expertise we gained from building management experience of skyscrapers.

Hanwha  
S&C

www.hsnc.co.kr

EXPERTISE

Integrated IT business services

2016 Total Sales

In USD millions

314

2016 Total Assets

In USD millions

488

Founded in 2001, Hanwha S&C provides world-class IT solutions and services to a variety of industries, including manufacturing, construction, financial services, retail, service, and education. We expertly build customized systems, IT infrastructure and Cloud operation services that offer customers a high degree of stability and security competitive costs. Our open-stack HONE Cloud solution (Hanwha Number ONE Cloud) has earned ISO 27017 certification and is widely recognized.

We are becoming a convergence industry leader as we incorporate smart factories, Internet of Things, and Big Data. In recent years, we’ve been increasingly using sensing technology applications to improve retail, traffic flow, and manufacturing. For example, we applied ICT technology to factories, such as facility control, sensing, and information analysis, to realize smart factories and to increase manufacturing efficiency.

Hanwha S&C’s data center embodies state-of-the-art infrastructure integration, while providing solutions to strengthen value for our clients.



Hanwha  
Station  
Development

www.hwsd.co.kr

EXPERTISE

Commercial development, property management

2016 Total Sales

In USD millions

56

2016 Total Assets

In USD millions

360

Hanwha Station Development is our nation’s premier developer and manager of railway stations. Since its founding in 1987, we have pioneered the retail and leisure culture by combining commercial complexes with private stations. We developed the building complexes into 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

Building on our world-class solar energy business, **Hanwha** engages in a range of activities that promote and expand the use of solar energy. We strive to help people join the energy revolution with activities that counteract climate change, such as using solar energy and providing support for social welfare facilities. We also offer education and eco-friendly energy experiences for young people.



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

Installed on the 1000-square-meter roof of the Center with a total of 640 modules, we can reduce 20 tons of CO<sub>2</sub> 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** supports the use of sustainable energy in every community with expertise we've gained from vertical integration of our solar businesses. Our best-known program is Happy Sunshine, our initiative that donated solar power generation systems to community welfare centers in South Korea. We also operate **Hanwha Hope Project**, an initiative that donated solar power generation systems to elementary schools in underserved areas in China. We continue to run a solar education program for communities and children to improve awareness on the need for eco-friendly energy and

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 respond by planting 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 Korea, Mongolia, and China to combat desertification and raise awareness of climate change.

**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 CO<sub>2</sub> emissions per year. Our donation showcases the possibilities of clean, sustainable energy.

SOCIAL RESPONSIBILITY

- Culture, Arts, and Sports

**Hanwha** supports the diverse lifestyles of our customers and communities with professional and systematic organization and financial resources. We do this by backing the dreams, hopes, and enthusiasm of people. And by combining our talents with the love of people, we're driven to creative ideas and practical solutions.



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

**Seoul International Fireworks Festival**

Since 2000, **Hanwha** has held the Seoul International Fireworks Festival to showcase wondrous spectacle and optimism to the people and their communities.

- Orchestra Festival with Hanwha
- Hanwha Pop and Classic Journey
- Hanwha Classic
- Hanwha Seoul International Fireworks Festival
- Hanwha Time to Burn Campaign
- Hanwha Eagles
- Team Hanwha

**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 around the country since 2004, and the **Hanwha Classic** has presented classical music performances 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 the 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 Han 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 leisure time. 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 for fans. We also established **Team Hanwha** in 2011 and further promoted golf development in South Korea by hosting the annual **Hanwha Classic**, the nation's top 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 set up team of employees to participate in volunteer activities at each affiliate companies. We focus on supporting the dreams and talents of youth, our future leaders.



Hanwha-KAIST Science Outreach Program, Convergence Science Camp  
Hanwha with KAIST jointly hosts 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 talented people contributes to society. In 2011, we began sponsoring the **Hanwha** Science Challenge, a high school science competition that aims to identify talent in science and nurture potential Nobel Prize candidates. Since then, we have expanded our programs to develop scientists of the future and established the prestigious private school, the Bugil Foundation. Since 2016, we have also hosted a **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 provided programs

that offer the experience of art, music and dance to more than 2,000 children in welfare institutions. Since 2015, we have offered South Korean traditional culture and arts education opportunities, including gayageum, a zither-like string instrument, and samulnori, a genre of percussion music. Beginning in 2014, we began operating DreamPlus, a program to discover and nurture promising startups. We are making dreams come true for future talents by helping them to grow, create, and pursue startups.

Caring Employee Volunteers

**Hanwha** actively engages in social contributions with its employees. One flagship program is a group-wide program designed to improve educational opportunities for low-income and physically

challenged children. Since its 2003 launch, this innovative program has supported study rooms and inclusive classes for children of all abilities and challenges. We support experiential educational activities in every industry. We help those who are neglected and those whose environments have been compromised. Every October, to celebrate **Hanwha's** founding, all affiliates participate in relay volunteer services for the disadvantaged and for those who need help. Our celebration reminds us and keeps us steadfast to our philosophy to do good, for all, for always.

ENVIRONMENTAL AND SAFETY RESPONSIBILITY

**Hanwha** actively responds to the changing global energy paradigm and strives to build a global 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 at each stage of business management.



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.

- 50,000 TOE (Ton of Oil Equivalent) reduction of energy use
- USD 31 million reduction in energy costs
- More than 160,000 tons of GHG reduction
- **Hanwha TOTAL** Petrochemical received ISRS 8 grade
- **Hanwha Corporation's** Machinery Division achieved 27-fold accident-free workplace (as of 2016)

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 gas. 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 LTIR (Loss Time Injury Rates).

Responding to Climate Change and Reducing Pollutants

**Hanwha** is taking the lead in fostering a low-carbon society. We joined the Carbon Disclosure Project (CDP) in 2011, and were the first South Korean company to release carbon management information for all our affiliates. In 2014, **Hanwha SolarOne** (now **Hanwha Q CELLS**) was the first solar energy solutions provider to receive Product Carbon Footprint Certification (ISO 14067), then a new international standard, reinforcing our commitment to the world. In addition, we are reducing greenhouse gas emissions and saving energy by organizing an energy task force. Worldwide, we are building facilities to reduce energy use and waste generation. Last year, we reduced greenhouse gas emissions by

160,000 tons, an amount equivalent to the greenhouse gas reduction of 32 million pine trees.

Establishing a Culture of Safety

**Hanwha** works to gain community trust by promoting safety and creating safe workplaces as part of our corporate culture. Along with regular safety leadership training for executives, the **Hanwha** Eco-Institute, **Hanwha** headquarters, and individual facilities jointly implement our Constant Cross-Check Rule and Absolute Safety Policy. This system monitors the safety status of every plant and raises employee safety awareness. After implementing the policy, **Hanwha** achieved a LTIR of just 0.06, which meets global corporate standards.

WINNING PARTNERSHIPS

**Hanwha** strongly believes our partners are not only companions, but part of the family. For small and medium-sized business partners, we help create self-reliant environments that encourage good management. We support our partners to build a foundation for the 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
- Regular 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 help them grow their businesses by strengthening their core competencies, supporting their financial needs, and engaging 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 a private equity fund of USD 172 million that’s earmarked 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 to practice our belief in “Going Further Together” by engaging in joint businesses, exchanging technology and information and providing exemptions from the usual performance guarantees. We are expanding industry-specific programs to enhance partner competitiveness and helping them to expand their domestic and international sales networks. We are also supporting innovation consulting, equipment purchasing and management practices for

safety, process, environment and quality controls.

**Invigorating the Regional Economy**  
**Hanwha** provides opportunities for rural areas to shop in department stores and duty-free shops. For example, we find hidden high-value-added agro-fishery products that increases local income and add them to our retail content. 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, which reduced energy costs and promoted 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 talent. Young **Hanwha** is a program that fosters this effort, helping us to move forward and build on the passion 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 markets

**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 what ultimately supports a greater cause. We develop global talent with professionalism as we operate a range of training programs for specific jobs and positions.

**Cultivating Future Global Leaders**  
**Hanwha** continues to invest in talent. Our global talent program nurtures employees with interests in global business and potential we can develop. In our regional specialist program, we send associate and

junior managers to key areas, where they experience local business and culture and become company experts. We also operate a special program to select and develop core executive talent to lead **Hanwha**’s future and growth. We sponsor global top MBAs and EMBA’s as well as the Sloan Fellows Program for our top talent and potential CEO candidates. 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.

**Facilitating Work-Life Balance**  
**Hanwha**’s company-wide work-life balance policies are designed to improve employee quality of life. Our efforts have received broad recognition. We’re listed as one of Korea’s 100 best places to work, and as a family-friendly and gender-equality company. Commemorating our 64th anniversary in 2016, we announced the Young **Hanwha** program and introduced corporate culture initiatives like getting a one-month sabbatical at the time of promotion, flexible work shifts, and support for career management. These initiatives are all contributing to laying the foundation that will ultimately help **Hanwha** become a global top-tier company.

AMERICAS

- Brazil **Hanwha Techwin** (video surveillance system 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)
- USA **Hanwha Azdel** (producing auto parts)
- USA **Hanwha Advanced Materials** (producing auto 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 parts)
- France **Hanwha Q CELLS** (sales & marketing)
- Germany **Hanwha Europe** (trading)
- Germany **Hanwha TechM** (machine tools sales)
- Hanwha TOTAL Petrochemical Europe** (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 Q CELLS** (sales & marketing)
- Turkey **Hanwha Q CELLS** (sales & marketing, downstream solar)
- UK **Hanwha Techwin** (video surveillance system sales)
- UK **Hanwha Q CELLS** (sales & marketing)

CHINA

- Beijing **Hanwha** China (supporting **Hanwha** affiliates in China)
- Beijing **Hanwha Advanced Materials** (producing auto 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, wafers)
- Ningbo **Hanwha Chemical** (producing PVC)
- Qidong **Hanwha Q CELLS** (producing solar cells, modules, R&D)
- Shanghai **Hanwha International** (trading)
- Shanghai **Hanwha Chemical** (trading)
- Shanghai **Hanwha TOTAL Petrochemical Trading** (polyethylene and polypropylene sales)
- Shanghai **Hanwha Q CELLS** (sales)
- Shanghai **Hanwha Advanced Materials** (producing auto parts)
- 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)
- Cambodia **Think Biotech** (reforestation)
- Cambodia **Amru and Hanwha International** (agriculture exports)
- 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)

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 61 affiliates in South Korea alone and 258 networks around the world (as of May 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**.

- Bakersfield
  - Bremen
  - Cerritos
  - Chicago
  - Forest
  - Franklin
  - Hawaii
  - Irvine
  - Monroe
  - New York
  - Opelika
  - Pontiac
  - Saipan
  - Shelby
  - Teaneck
  - London
  - Vancouver
- Monterrey
  - Santiago
  - São Paulo

- Aix-en-Provence
  - Athens
  - Berlin
  - Bitterfeld-Wolfen
  - Bolzano
  - Budapest
  - Chertsey
  - Dietfurt
  - Eschborn
  - Frýdek-Místek
  - Istanbul
  - London
- Moscow
  - Stuttgart
  - Warsaw
  - Al Khobar
  - Almaty
  - Baghdad
  - Bismayah City
  - Doha
  - Dubai
  - Kuwait City
  - Modi'in-Maccabim-Re'ut
  - Johannesburg
  - Nairobi
- Cyberjaya
  - Ho Chi Minh
  - Jakarta
  - Kuala Lumpur
  - Manila
  - Muara Teweh
  - Mumbai
  - New Delhi
  - Phnom Penh
  - Samut Prakan
  - Singapore
  - Taipei
  - Tehran
  - Yangon
  - Bangkok
- Beijing
  - Chongqing
  - Dongguan
  - Guangzhou
  - Hangzhou
  - Hong Kong
  - Lianyungang
  - Ningbo
  - Qidong
  - Shanghai
  - Shenzhen
  - Tianjin
  - Zhangjiagang
- Seoul
  - Nagasaki
  - Tokyo
  - Perth
  - Sydney

KOREA

MANUFACTURING & CONSTRUCTION

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103, Dokgot 2-ro, Daesan-eup  
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FINANCE

**Hanwha Life Insurance Co., Ltd.**  
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**Hanwha General Insurance Co., Ltd.**  
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Fax 82.2.316.8443

**Hanwha Investment & Securities Co., Ltd.**  
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SERVICES & LEISURE

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**Hanwha 63 City Corp.**  
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Korea  
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