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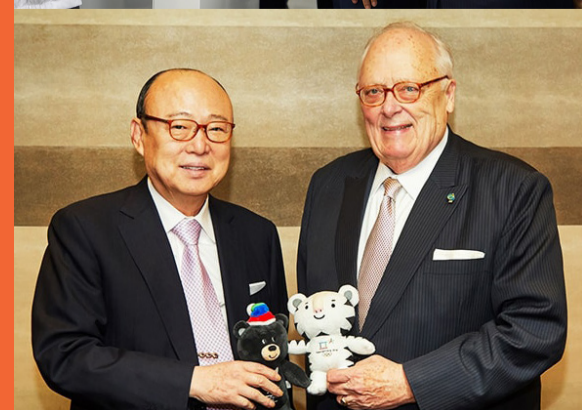
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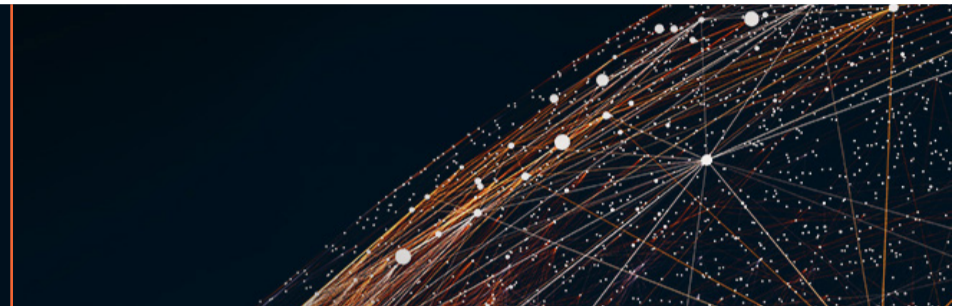


## Business Highlights

# Hanwha Embraces the Fourth Industrial Revolution



The world is undergoing a technological revolution and its advances are fundamentally changing the way we live and work.



*Hanwha Group is dedicated to change and innovation to embrace new challenges and continue to build the best possible products and services for years to come.*

### Providing the **Better Choice**

Traditional sources of electricity have damaged the environment and are no longer a good option.



*Hanwha Q CELLS offers the better option. We work tirelessly to harness sustainable and renewable energy sources to provide the world with responsible choices for a brighter future.*

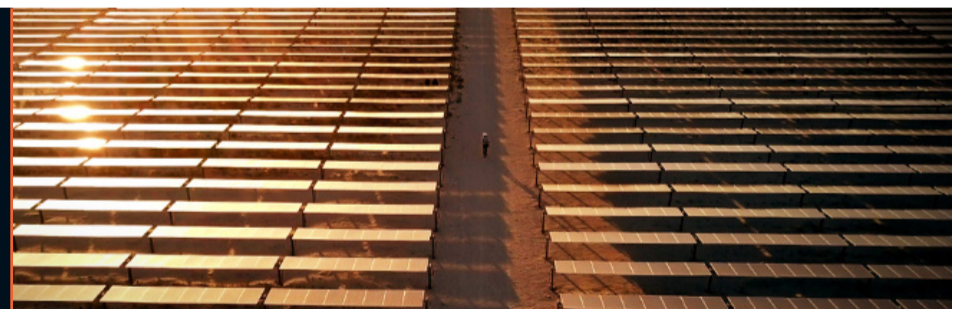
### Developing **Optimal Solutions**

Through continuous innovations, Hanwha Q CELLS has developed the award-winning **Q.ANTUM** technology which uses ultra-thin reflectors to maximize the amount of electricity that solar cells produce using the sun's rays.



### Thinking in the **Long-Term**

The company's brand-new **Anti-LID-Technology** greatly reduces solar cell degradation, providing users with the maximum amount of energy possible during the lifespan of the solar cell.



### Providing **Total Solutions**

**T-Solution system** allows Hanwha Techwin to integrate IoT solutions into aircraft engine manufacturing.



*Manufacturing plants are transformed into smart factories, as all the machineries are connected by data network and embedded with sensors. This allows administrators to oversee the production process in real-time and make adjustments to maximize efficiency.*

### Proactive Troubleshooting

T-PnP (Prediction and Prevention), a core aspect of T-Solution, enables the collection and analysis of equipment data so that human operators can make informed decisions to avoid problems, before they occur. This saves time and money.



### Monitoring the Skies

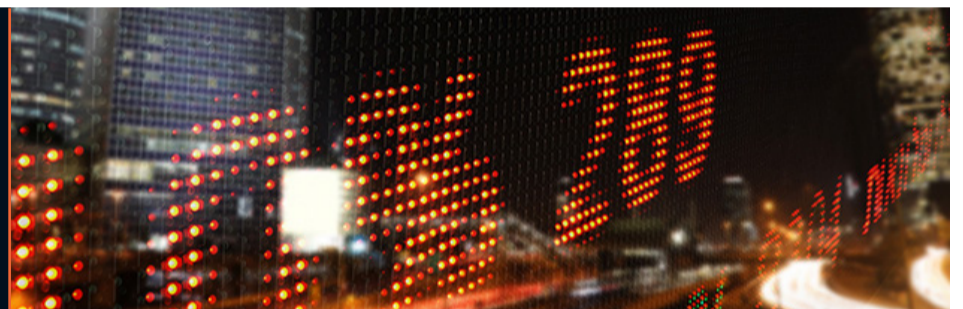
The T-Solution, using sensors, are being applied outside the factory floor to monitor the sky.



*Hanwha has manufactured and installed thousands of sensors on to engines and engine parts for customers. From these sensors, Hanwha Techwin can receive real-time telemetry and use Big Data Analysis to provide customers data intelligence and preventive and predictive maintenance services. As a result, airplanes spend less time on the ground.*

### Big Data means Big Changes

Hanwha Life is preparing for the future by leveraging Big Data Analysis, Mobile Services, and other new Financial Technologies to roll out new products like Hanwha Smart Credit Loans.



### Making a Tailored Product

Hanwha Life's People Like You program uses sophisticated search algorithms to compare new customer applications with those of similar customer profiles to customize the set of insurance products that best meet the customers' needs.



### Quickly Meeting Customers' Needs

25% of all Hanwha Life's claims applications are now reviewed and compensated immediately by an Automatic Review System.



Please visit [www.hanwha.com/en/AI-Insurance](http://www.hanwha.com/en/AI-Insurance) for more information on Artificial Intelligence in the Insurance Industry

### Ready for the Future

We're relentless in our pursuit for technological change and ready to take on the challenges of the 4th Industrial Revolution. We're dedicated go above and beyond to thrive in the new paradigm. It's in our spirit to embrace Challenge and demonstrate our Dedication; it's why...Hanwha Leads the Way. ■



# Hanwha Joins World Leaders to Explore a Shared Future at 2018 World Economic Forum



Hanwha Group's leadership participated in the annual World Economic Forum (WEF) in Davos, Switzerland from January 23rd to January 26th. The theme of this year's WEF was "Creating a Shared Future in a Fractured World" and featured dozens of meetings and lectures with global leaders in politics, academics, and industry.

In attendance were Hanwha Total Petrochemical CEO Charles Kim, Hanwha Corporation/Machinery CEO Youn-Chul Kim, Hanwha Asset Management CEO Yong-Hyun Kim, and Hanwha Q CELLS CCO Dong Kwan Kim. Together, the executives took part in more than 60 business meetings and met with more than 200 key global decision makers.

Topics explored during the 2018 WEF included the importance of maintaining a technological edge in the Fourth Industrial Revolution, changes in the oil industry due to a recent rebound in oil prices, and how technology is transforming the finance industry.

On January 25th, the Hanwha Group also attended the Korea PyeongChang Night event hosted at the Davos Intercontinental Hotel by the Korean Ministry of Foreign Affairs. At the event, hundreds of global and political leaders, including the leaders of Hanwha Group, expressed hope and support of Korea's hosting of the 2018 PyeongChang Winter Olympics and Paralympic Games.

## Hanwha Q CELLS: A Technological Edge is the Key to Success

Hanwha Q CELLS CCO Dong Kwan Kim has always been enthusiastic about exploring new technological frontiers and passionate about developments in renewable energy, telecommunications, aerospace, and defense. Upon arriving at Davos for his ninth consecutive WEF, CCO Kim wasted no time in meeting with a long list of companies including: Bain & Company, Viettel Group, Greentech Capital Advisors, and Capricorn Investment Group.

During a January 23rd meeting between himself, Youn-Chul Kim, CEO of Hanwha Corporation/Machinery, and Bain & Company's Torsten Lichtenau, CCO Kim stated: "Developments in aviation technology, triggered by the Fourth Industrial

Revolution, will affect the transportation and logistics industries and dramatically change our lives."

"Innovative technologies have a bigger impact, so keeping up with the latest technological developments should be the focus of a successful business," CCO Kim added.

CCO Kim then met with Nguyen Manh Hung of Viettel Group, Vietnam's largest communications and defense company to discuss how Hanwha and Viettel could strengthen and expand their cooperation in the defense industry.

On January 24th, CCO Kim met with Jeffrey McDermott of Greentech Capital Advisors about photovoltaic (PV) industry trends and the latest technological developments within the PV value chain. CCO Kim also met with Dr. Ion Yadigaroglu, Co-Founder of Capricorn Investment Group, and the two had a wide-ranging discussion about new high-efficiency photovoltaic modules and how the Fourth Industrial Revolution could affect diverse fields including aviation, transportation, logistics, and defense.



Hanwha Q CELLS CCO Dong Kwan Kim (second from right) meets with Nguyen Manh Hung (left) of Viettel Group, Vietnam's largest telecommunications company



*Hanwha Q CELLS CCO Dong Kwan Kim (right) speaks with Capricorn Investment Group Managing Partner Dr. Ion Yadigaroglu (left) about the effects of the Fourth Industrial Revolution*

### **Hanwha Total Petrochemical: Re-examining its Global Impact**

Hanwha Total Petrochemical CEO Charles Kim used his visit to Davos as an opportunity to gain insight into how a recent rebound in oil prices affects the global energy and petrochemical industry.

On January 23rd, CEO Kim and Alope Lohia, CEO of Indorama Ventures, met to discuss the prospects of the Asian synthetic fiber market and the possibility of Hanwha and Indorama collaborating in an aromatics venture. Shortly afterwards, CEO Kim met with Dimitri de Vreeze of Royal DSM. During the meeting, CEO Kim was able to gain insights into the high-value polymer market and related technological trends.

The next day, on January 24th, CEO Kim met with Total S.A. Chairman Patrick Pouyanné where the two discussed Hanwha and Total's investment strategies and how the two companies could strengthen their relationship and collaborate in the future.

Also on January 24th, CEO Kim met with Jeremy Weir of commodity trading firm Trafigura to discuss ways of streamlining the purchasing of petrochemicals and increasing cooperation between global economic leaders.



*Hanwha Total President Charles Kim (second from left) discusses potential partnership opportunities with Tamer Saka (right), CEO of Turkey's Kibar Holdings, at Hanwha's Davos office*

### **Hanwha Corporation/Machinery: Seeking Business Opportunities in the Fourth Industrial Revolution**

This was Hanwha Corporation/Machinery CEO Youn-Chul Kim's first visit to Davos and he immediately made up for lost time by hosting the largest number of business meetings and sessions amongst Hanwha's leaders in attendance. Throughout the course of his busy itinerary, CEO Kim spoke with other global CEOs, as well as world-renowned scholars, and learned much about many different subjects, particularly Artificial Intelligence and 3D Printing.

CEO Kim met with Truong Gia Binh, Chairman of Vietnam's FPT Corporation on January 23rd. The two men exchanged their opinions on the future of robots,

artificial intelligence and security, among other topics. The next morning, on January 24th, CEO Kim met with Richard Ambrose of Lockheed Martin to talk about the outlook on global aviation and how Hanwha and Lockheed Martin could collaborate on aerospace opportunities. Later that day, CEO Kim met with Volkswagen Group's Thomas Sedran to discuss how Hanwha could partner with the world's largest automaker.

On the afternoon of January 25th, CEO Kim met with Chunyuan Gu, President of ABB Ltd. for Asia, Middle East, and Africa. The two leaders talked about Chinese and Asian robot market trends as well as partnership opportunities regarding collaborative robots.

### **Hanwha Asset Management: Searching for Future Strategies**

This year at Davos, Hanwha Asset Management CEO Yong-Hyun Kim and Managing Director William Hahn sought ideas for new asset management strategies for the Fourth Industrial Revolution, such as AI Funds and FinTech.

CEO Kim met with Roger Crandall of Massachusetts Mutual Life Insurance Company to discuss the American insurance market forecast and this year's investment strategies. CEO Kim also had a discussion with Christopher Willcox, Global Head of Equities at JP Morgan Asset Management. ■

# Hanwha Q CELLS Powers World Economic Forum Towards ISO 20121:2012 Certification



The World Economic Forum (WEF) received ISO 20121:2012 certification from the International Organization for Standardization on the last day of its 2018 Annual Meeting in Davos, Switzerland. The certification confirms that the WEF's planning and operation of its flagship event are done in an environmentally sustainable manner.

ISO 20121 is a large event-specific variation of the many ISO sustainability certifications issued to organizations around the world. The ISO 20121:2012 designation comes from the 2012 London Olympics, which was influential in the development of the ISO 20121 standard.

In order to qualify for certification, the WEF instituted a large number of sustainability measures, including: carbon offsets for all event-related air travel, the promotion of sustainable transportation (such as walking, public transportation, and hybrid vehicles), efforts to improve energy efficiency, and waste reduction.

of the Davos Congress Center, the WEF Annual Meeting's venue, and can provide enough clean electricity to offset carbon emissions by up to 20 tons a year. ■

Please visit [www.hanwha.com/en/hanwha-davos](http://www.hanwha.com/en/hanwha-davos) to learn more about Hanwha's participation at the World Economic Forum



*Hanwha Q CELLS' solar modules on the roof of the Davos Congress Centre*

Hanwha Group would like to congratulate the WEF for earning ISO 20121:2012 certification and is proud to have contributed to the Forum's efforts to reduce carbon emissions.

Hanwha Q CELLS donated Q.PEAK 275 Wp solar modules to help provide the WEF with renewable energy. The 340 kW-capacity solar system is installed on the roof

# South Korean President Moon Jae-in Visits Hanwha Q CELLS' JinCheon Plant in Support of Clean, Renewable Energy



South Korean President Moon Jae-in and Hanwha Group Chairman Seung Youn Kim (front row, center) cheer on Hanwha Q CELLS' manufacturing operations in JinCheon, Korea

Hanwha Group Chairman Seung Youn Kim recently hosted South Korean President Moon Jae-in at Hanwha Q CELLS' solar cell manufacturing plant in JinCheon, South Korea on February 1. The President and other dignitaries toured the plant, observed its operations, and praised Hanwha Q CELLS' job creating efforts as well as its promotion of renewable energy.

"Hanwha Q CELLS is aligned with the government's '3020 Policy' aimed at producing 20% of the country's electricity from renewables by 2030," President Moon said during his visit. "This policy also designates renewable energy as the industry to lead Korea's innovative growth and I firmly believe Hanwha Q CELLS will be the company to lead that innovative growth in our nation."

The JinCheon plant is the flagship location of Hanwha Q CELLS, the world's number one solar cell manufacturer, and boasts the world's largest solar cell manufacturing facility. It is capable of annually producing up to 3.7 GW of photovoltaic cells and modules, enough to provide electricity to 4.6 million individuals. Since beginning its JinCheon operation in 2016, Hanwha Q CELLS has

added around 2,000 jobs to the Korean economy.

In total, Hanwha Q CELLS is currently able to produce up to 8 GW of photovoltaic cells and modules per year in its manufacturing plants worldwide. The company's Q.PLUS monocrystalline and polycrystalline photovoltaic modules are rated as being the most efficient in the world.

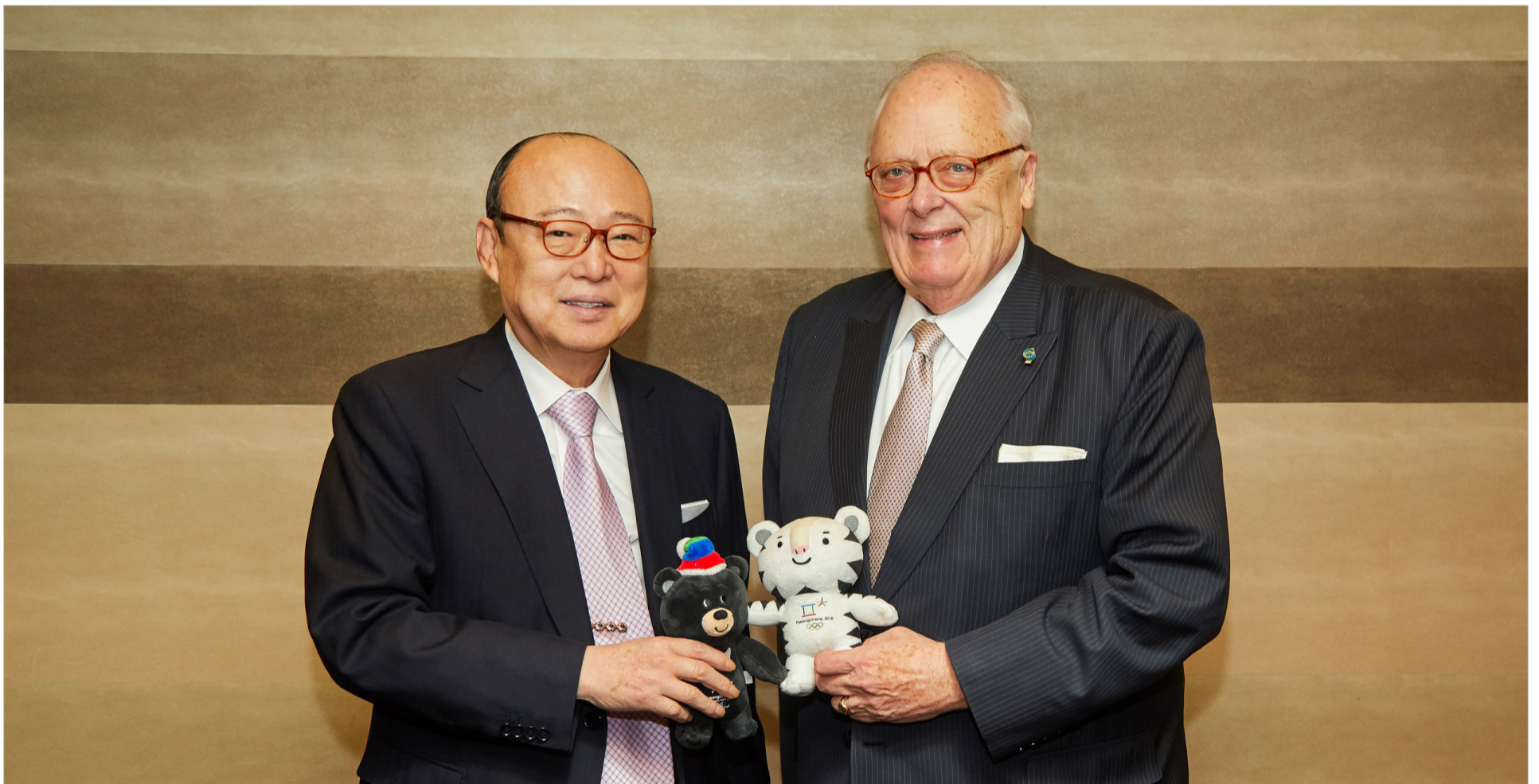
Hanwha Q CELLS intends to continue investing and innovating in the solar technology in order to maintain its status as the global leader in solar energy solutions and is currently on track to produce and sell 13.5 GW of photovoltaic cells and modules by 2020. ■



President Moon Jae-in listens intently to the explanation on production lines from one of the employees at the Hanwha Q CELLS plant in JinCheon, Korea. (Source: Hyoja Studio)

# Hanwha Group Chairman Seung Youn Kim and Heritage Foundation's Edwin Feulner Hope for Successful PyeongChang 2018 Olympic Winter Games

- The discussion emphasized the importance of the peaceful success of the PyeongChang 2018 Olympic Winter Games
- Topics discussed include the first anniversary of US President Donald Trump's inauguration among other current events



*Hanwha Group Chairman Seung Youn Kim and Dr. Edwin J. Feulner, Jr., Chairman of the Heritage Foundation's Asian Studies Center, show their support for the PyeongChang 2018 Olympic Winter Games*

Hanwha Group Chairman Seung Youn Kim met with Dr. Edwin J. Feulner, Jr., Chairman of the Heritage Foundation's Asian Studies Center, at THE PLAZA in Seoul on Friday, January 26.

On this occasion, Chairman Kim and Dr. Feulner spoke about recent changes in US economic and foreign policy on the first anniversary of US President Donald Trump's inauguration. In addition, the two men exchanged their views on inter-Korean relations and the diplomatic efforts needed for South Korea to successfully host the 2018 PyeongChang Winter Olympics.

"The PyeongChang Winter Olympics is a national event driven by Korean people's passion. It will be successful, of course, but it will also be an opportunity for meaningful exchange between the two Koreas," Chairman Kim told Dr. Feulner. "In this regard, Hanwha Group is offering its full-fledged support for the Games' success," Chairman Kim added.

"The successful and peaceful execution of the PyeongChang Winter Olympics can greatly contribute towards the easing of North-South tensions," Dr. Feulner replied.

Chairman Kim and Dr. Feulner also exchanged their opinions about recently-announced American trade policies. As a Korean business leader, Chairman Kim expressed his concerns and spoke about how he thought Korea and the US can work together on trade and the economy in order to bring about a

mutually beneficial relationship. He also listened to Dr. Feulner present the Trump Administration's positions on these issues. Dr. Feulner emphasized that 'America First' does not mean 'America Only'. While the Trump administration wants to take care of America first, it does not want the prosperity of America only, but that of other countries around the world as well.

Chairman Kim and Dr. Feulner have known each other for more than 30 years. In that time, they have spoken extensively about issues such as Korea-US relations, the global economy, and international politics.

Dr. Feulner originally served as President of the Heritage Foundation, a conservative American think tank, from 1973 to 2013 and also served on US President Donald Trump's transition team. Now chairing the foundation's Asian Studies Center, Dr. Feulner is considered to be a leading voice in the American conservative movement. ■



# AI Is Transforming the Insurance Industry



The insurance industry has been gradually evolving with the advent of new technologies. However, with the coming of the Fourth Industrial Revolution and the rise of tech-savvy insurance startups, the change is moving at a much faster pace. InsurTech is now one of the fastest growing segments of FinTech as traditional insurance providers are taking notice of the new tools available to them and are quickly changing the way they operate.

## New and Better Data Analysis

Insurance providers traditionally rely on a relatively small customer sample to build predictive models and set pricing plans. By using AI-based analysis tools, augmented by higher computing performance with cloud computing, insurers today can examine exponentially larger data samples at a fraction of the time required in the past. And when other tools, such as Big Data Analysis, are thrown into the mix, insurers are able to discover patterns and predict trends that would otherwise be unnoticeable or harder to spot.

Information gathering methods will also change thanks to new technology. The auto insurance industry already uses telematics and data collection with remote sensors - both are used to track driving habits as well as traffic and road conditions to create customer profiles. The health insurance industry has picked up on this practice, using data from customers' fitness trackers to see how active or inactive they are, they use the data to determine what premiums to charge.

Even the insurance application process can be fundamentally changed by AI. Customers would no longer have to fill out long forms. Instead, they could give insurers permission to access their online profiles. Web-crawling algorithms can then go through social media posts, photos, and videos to track exercise habits and vices. Image recognition tools can even use photos to track how fast a customer is aging as a way to gauge their health.

## Streamlining the Customer Experience

Artificial Intelligence's impact, though, will be mainly felt in how much time humans can save on applications and claims.

Robotic Process Automation can take over most administrative functions currently performed by the insurance providers. Humans will no longer be required to handle dull and repetitive tasks like customer applications and data entry. Instead, they would be able to focus their time and effort on dealing with more complex issues like customer appeals and fraud investigations.

AI can even take over the entire claims process, making it simpler and faster. AI-based claims systems are already dealing with simple damage claims from start to finish without human intervention. Before-and-after photos can easily be taken and sent with a smartphone with only a simple press of a button. This can allow their insurance provider's machine learning and image recognition algorithms to engage and do the work that previously adjusters had to do. The technology is so efficient that claims can be processed and approved within minutes, even seconds, of submission. The current record for the fastest claims approval stands at just three seconds.

Thanks to AI, customers will no longer have to wait to have their inquiries addressed over the phone or through email. Instead, sophisticated chatbots can immediately provide quick answers to most customer questions through smartphone apps. These chatbots are also able to use these conversations to flag more urgent requests to be handled by human employees and make sure that everyone's time is used most efficiently.

## Moving into the Future

As AI grows more sophisticated, the insurance industry will better understand customers' needs and figure out how to address them. Newly-streamlined service models will greatly help existing customer retentions and build positive word-of-mouth advertisement to attract new customers. At the same time, insurance providers who continue adapting and improving how they do business, will continue to see success. ■

Please visit [www.hanwha.com/en/AI-hanwhalife](http://www.hanwha.com/en/AI-hanwhalife) to learn about how Hanwha is adopting AI

# Osama Ayad Participates in the 2018 PyeongChang Winter Olympics Torch Relay



Osama Ayad cheers on Olympic athletes before participating in his leg of the 2018 PyeongChang Winter Olympics Torch Relay

Osama Ayid Ayad, an assistant supervisor with Hanwha Engineering & Construction in Iraq, is currently working on the Bismayah New City Project, a major urban development project that is expected to provide homes for up to 600 thousand people.

He joined Hanwha immediately after graduating from the University of Baghdad in 2014 and was excited by the opportunity to work for a Korean engineering firm. The work proved challenging initially and while it took some time to adapt to the Korean work culture, Osama carefully studied everything going on around him and acclimated quickly.

He considers himself very lucky for the opportunity to work for Hanwha and for the chance to work with senior Korean engineers and to receive their professional guidance in his career.

Inspired by his experience, Ayad took part in a Hanwha essay contest. In his submission, he spoke at length about the challenges his team faced in bringing together their vastly different backgrounds and learning about Hanwha's philosophy of trust and loyalty.

Having won first prize in this essay contest, Ayad got the opportunity to come to Korea and act as a torch bearer as part of the 2018 PyeongChang Winter Olympics Torch Relay.

### What are your first impressions of Korea?

This is my first time visiting Korea and I think that it is very modern and developed, much more than I could have ever imagined. The weather is a little cold, but it is easy to withstand the coldness through the warmth of the Korean people. A friend of mine, who's visited Korea before, told me that my first visit will be very special because Korea has a sort of charm and its culture is unique. I realize, now, that it's completely true. Korea is unbelievable and I wish that it will continue to grow and attract foreign visitors from all over the world.

### How does it feel to be taking part in the Olympic Torch relay?

It(The Olympic Torch Relay) tries to create a better world by the cooperation

and friendship of all country nations all over the world. So I am very honored to participate and deliver this message of peace and global unity.

### What did your family think about your coming to Korea to carry the Olympic Torch?

My family was very happy, excited, and proud that I am getting to participate in this event. They were also very happy for me to visit Korea because Korean culture is very popular in Iraq. The Iraqi people are learning a lot about Korean culture by watching Korean dramas and I learned a lot by working with Korean people, so it is exciting for me to come here to see this great culture first-hand.



Osama Ayad on the honor of carrying the Olympic Torch

### Is it challenging to work as a professional engineer?

Working in the engineering profession can sometimes be really challenging and very stressful but we always try to face the challenge and get through it. It can take a lot of hard work and study. It helps to work with senior engineers with a lot of experience. I actually feel very lucky to be working for a Korean company because I have learned a lot from my Korean managers and I have managed to solve many problems with their help and guidance.

**What are your goals for 2018?**

My first goal is to improve my English skills and also to learn Korean, since I am working for a Korean company. Learning the language will make it easier to communicate on site and in the office. I also want to gain more practical field experience because it will be good for my career in the future.



*Osama Ayad (right) happily hands off the Olympic Flame after completing his leg of the Olympic Torch Relay*

**Do you have any words of encouragement for this year's Olympic athletes?**

I would like to say to all the athletes participating in these Olympics that they are very lucky to be participating in this great global event and that it is not important to get first place. It is important to participate and to deliver a message of peace as well as for you to enjoy every second of your life. So I wish for you all to enjoy participating in these Olympic Games and I wish you the best of luck. ■

Hanwha in PyeongChang 2018

## *Hanwha's Videos for the 2018 PyeongChang Winter Olympic Games*

Hanwha produced a TV spot and a music video to show support for the 2018 PyeongChang Winter Olympic Games.



*The TV spot was made in support of all those who worked in behind the scenes to make the 2018 PyeongChang Winter Olympic Games possible. Hanwha is proud to announce that the video has already garnered 5 million views on YouTube.*



*"Let Everyone Shine" is a music video produced using the illustrations from a children's drawing contest that was co-hosted by Hanwha and Junior Naver, called "My Illustration of the 2018 PyeongChang Winter Olympics". Junior Naver is a web portal for children that provides a variety of entertaining content including: fairytales, educational and interactive videos, and music. ■*

Please visit [www.hanwha.com/en/2018olympicvideo](http://www.hanwha.com/en/2018olympicvideo) to watch above videos

# Explore This Month's News of Hanwha and Its Affiliates, Taking the Initiative in All Corners of the World



## China

 Hanwha TOTAL Petrochemical

### Hanwha Total Petrochemical Trading (Shanghai)

#### Hanwha Total Petrochemical Trading(Shanghai) Hosts 2017 Strategy Conference

Hanwha Total Petrochemical Trading (Shanghai) hosted Hanwha Total Petrochemical China's annual strategy conference on December 16, 2017. Representatives from Hong Kong, Shenzhen, Shanghai, and Beijing were all in attendance. This conference was an opportunity for the affiliates to review their performance in 2017 and to plan for 2018. It was also a chance for each office to present their views on the petrochemical industry as well as to encourage team-building between various departments. Jin-Soo Park, Hanwha Total Petrochemical's Managing Director and Head of China Trade Corporation, was on hand to congratulate the conference attendees for achieving their 2017 performance goals and encourage them to work even harder in 2018.

Director Park also presented a certificate to Hanwha Total Petrochemicals' best performing employee in China, recognizing the recipient's hard work and encouraged others to do well.



## Czech Republic

 Hanwha Advanced Materials

### Hanwha Advanced Materials Europe, s.r.o.

#### President Seung Heon Lee of Hanwha Advanced Materials Europe s.r.o. Shares 2018 Plans

In January, President Seung Heon Lee made a visit to Hanwha Advanced Materials Europe s.r.o. and met with everyone on every shift. In his New Year's speech to all the employees, he shared the company's plans for the year. And when he wished them the best for the new year in the Czech language, the employees erupted in applause. At the same time, he introduced a beautiful slogan that we all should consider and then improve upon: "Be Cooperative, Speedy, Responsible, Professional, Motivated. Remember C.S.R.P.M."





# Korea

## Hanwha Advanced Materials

### Hanwha Advanced Materials Opens Third Chinese Plant, Making Further Inroads into Chinese Automotive Market

With the opening of its third Chinese plant, Hanwha Advanced Materials (CEO Sun Suk Lee) is promising to make further inroads into the Chinese automotive market.

The latest plant, located in the city of Chongqing, began supplying light-weight automobile parts to Hyundai Motor Company earlier this year. The 8,620 square-meter plant completed construction in August of 2017 and began full productions after four months of testing.

The 45,000 square-meter plant mainly produces automotive bumper beams, undercovers, stiffeners, and EPP (Expanded Polypropylene) parts. The plant supply up 400,000 components per year. Major clients include Hyundai Motor, Ford, and top Chinese firms including Changan Automobile and Geely Automobile.

"The Chongqing plant, together with the Beijing and Shanghai plants, represent a strategic foothold in the Chinese automotive market," said Hanwha Advanced Materials. "As stressed by Chairman Seung Young Kim, we are ensuring our future global competitiveness by expanding into new applications, diversifying our molding business, and actively responding to customer needs for parts standardization and purchasing requirements."



Hanwha Advanced Materials previously constructed a manufacturing plant in Beijing in 2004, followed by a plant in Shanghai in 2006 to gain access to China, the world's largest automobile market. The three Chinese plants manufacture and supply various light-weight parts to both global and local Chinese automakers.

With the expected growth of the Chinese electric vehicle market, Hanwha Advanced Materials is actively pursuing opportunities to supply battery cases to global partners such as GM and BMW. Hanwha Group Chairman Seung Young Kim visited Hanwha Advanced Materials' Beijing plant last month to encourage executives and employees saying: "Everyone at Hanwha Advanced Materials China must work tirelessly for the world-class Hanwha Group."

## Hanwha TOTAL Petrochemical

### Hanwha Total Petrochemical Completes Construction of the Big Tower at Daesan Petrochemical Complex

On January 16, Hanwha Total Petrochemical successfully completed the construction of the Big Tower within its Daesan Petrochemical Complex in South Korea. Measuring 99 meters or 30 stories in height, the Big Tower is an NCC side cracker that will refine propylene.

Before building this massive structure, Hanwha Total Petrochemical had to first use one of only two 2,300-ton cranes in the world. The company also had to conduct thorough ground surveys and install special reinforcements to ensure



the site could support the building's weight. As an added precaution, outside experts were brought in and computer simulations were used. Once operational, this NCC side cracker will be able to produce up to 1.4 million tons of ethylene and 1.06 million tons of propylene.

## Hanwha Q CELLS

### Hanwha Q CELLS Presents New Pro Golf Team

In a press conference at THE PLAZA in Seoul, Hanwha Q CELLS announced that it has taken over sponsorship of Hanwha Group's female professional golf team and presented the team's lineup for 2018. Now known as Team Hanwha Q CELLS, the team is made of nine professional golfers from Asia and USA who have a combined total of 22 international tournament victories.

As the world's leading solar cell and module manufacturer, Hanwha Q CELLS sees this sponsorship as an opportunity to further promote the company's products and services in regions where the team will compete on the world ladies golf tour, including Korea, Japan, Europe, and the US.



"Hanwha Q CELLS considers sports as a marketing platform for strengthening our market position," said Seong-woo Nam, CEO of Hanwha Q CELLS, adding: "We will actively practice sports marketing, targeting main markets of our business."



## United States of America



### Hanwha Q CELLS USA

#### Hanwha Q CELLS USA Participates in the Midway Solar Project

Hanwha Q CELLS USA participated in a groundbreaking ceremony alongside 174 Power Global (174PG) for the Midway Solar Project. The Midway Solar facility occupies about 1500 acres of land and is planned to be fully operational in late 2018. 174PG announced that it has begun construction on the 236MW project in Pecos County, Texas. 174PG will build, own, and operate the power plant for 25 years and sell 100% of the electricity output generated by the facility to Austin Energy, a leading Texas renewable energy purchaser.

More than 680,000 modules for the project will be provided by Hanwha Q CELLS while engineering, procurement, and construction will be performed by Hanwha



Q CELLS USA. Once completed, the power plant will generate enough clean, renewable electricity to power more than 50,000 homes annually. Midway Solar will be the largest installed PV project in Texas to date.



## Vietnam



### Hanwha Life Vietnam

#### Hanwha Life Vietnam Among Vietnam's Top 10 Sustainable Businesses

On December 6, Hanwha Life Vietnam was named among 2017's Top 10 Sustainable Businesses in Vietnam by the Vietnam Chamber of Commerce and Industry (VCCI).

This achievement is a testament to our commitment to sustainable development in Vietnam, not only through business practices but also through community-improvement initiatives.

The sustainability review and business rating report is a prestigious annual initiative commissioned by VCCI and the Vietnam Business Council for Sustainable Development (VBCSD). The report along with award events give recognition to the 100 businesses with the best track record of sustainable development practices.

To make it to the list of top 10 sustainable businesses in Vietnam, Hanwha Life Vietnam had to go through a series of tough and rigorous assessments. The company was measured against the corporate sustainability index (CSI), designed to evaluate businesses in terms of three key criteria—economic, social, and environmental influence.

In a span of 8 years, Hanwha Life Vietnam has quickly established itself as one of the industry's fastest growing businesses in Vietnam. And in just the last five, new policy revenue growth grew at a record 41 percent, 10 percent higher than the industry average.

Second-year policy retention consistently remains over 70 percent. Hanwha Life Vietnam has completed installing 100 customer service outlets in mid-August of 2017, four months ahead of plan.

By mid-October, the company reached another milestone by surpassing its target revenue of VND500 billion (\$22.01 million) by VND150 billion (\$6.6 million) higher than the same period in 2016. In the first nine months of this year alone, the company recruited 19,000 new financial consultants. Hanwha Life Vietnam



has been investing heavily in systems, technology, and applications to upgrade its service quality. One such investment has been Hanwha Life's improved call center that has helped make the life insurance provider become identified as the company that offers the best customer care.

The company has also diversified its product lines, unveiling the new "Hanwha Life - Health is Gold," a full-coverage health insurance and product with coverage anywhere in the world.

Hanwha Life Vietnam has not only been contributing to the local economy but the company has also been a close companion to the people of Vietnam through its charitable contributions and active involvement in community activities. On November 28, in co-operation with Child Fund from Korea and Child Fund Vietnam, the company donated over VND2 billion (\$88,000) to the health center of Lang Ngam commune, Ngan Son district, Bac Kan province. This is the third health center to receive a Hanwha Life Vietnam gift dedicated to northern mountainous provinces. The company previously presented similar gifts to two other communal health centers in Hoa Binh province.

And in 2017, in co-operation with the Ho Chi Minh City Association for Protection of Impoverished Patients, Hanwha Life Vietnam gave away more than 9,500 health insurance cards worth nearly VND2 billion (\$88,000) in total.

Between 2014 - 2016, in just three years, underprivileged people across 14 provinces and cities all over the country received more than 27,260 health

insurance cards worth an estimated VND6.3 billion (\$277,423) from the firm.

Hanwha Life is involved in various projects building “homes of love,” schools, and health centers, providing nearly VND22 billion (\$968,779) in sponsorship funds. “I hope that Hanwha Life Vietnam's efforts will improve the daily lives of

the Vietnamese people. Looking ahead, we will continue to work on many more projects that benefit local communities as a way of saying we are here to stay with the people in Vietnam,” said Back Jong Kook, chairman cum CEO of Hanwha Life Vietnam.



## Hanwha Life Vietnam

### Hanwha Life Vietnam Donates Medical Centre to Bac Kan Province

Hanwha Life Vietnam in partnership with Child Fund (Korea) and Child Fund Vietnam on November 28 built a new medical center that was built at a cost of US\$100,000 (approximately VND 2 billion) to Lang Ngam Commune in Bac Kan Province's Ngan Son District. The purpose of the donation was to improve healthcare and living standards in the remote area. This is the third such medical center that Hanwha has built in the northern mountains, where residents were finding it difficult to access healthcare services. The other two are in the Hoa Binh Province: the Bac Phong Commune built in 2015 and the Kim Truy Commune of the Kim Boi District built in 2016.

Representatives of Hanwha in Korea, Hanwha Life Vietnam and the local government and community representatives attended the inauguration. As a life insurance provider, Hanwha Life values the importance of providing public health care and building facilities to meet the needs of people. Together with Child Fund, the company is committed to improving the quality of life and creating lasting values for the people of Bac Kan.

In the future, Hanwha will be involved in many community-based activities across other localities as part of the company's long-term commitment to friendship with the people and the country of Vietnam. In the past 8+ years of operations in Vietnam, Hanwha has sponsored many community projects as part of its mission to contribute to the community and its people of Vietnam. Hanwha Life Vietnam's plan is to make their future part of our dreams come true.

Between 2014 and 2016 Hanwha gifted health insurance cards to more than 27,260 poverty-stricken people in 14 provinces and cities around the country, helping ease the burden of medical expenses and giving them access to better health care.



This year Hanwha has continued to collaborate with the HCM City Sponsoring Association for Impoverished Patients, donating more than 9,500 health insurance cards worth nearly VND2 billion to poor people in HCM City, Thanh Hoa, Nghe An, Ha Tinh, Dac Nong, Kon Tum, Quang Tri, and Ca Mau. Education and development of future generations are also among the missions of Hanwha Life Vietnam. The company financed a new primary school in Xom Ong village, Nam Phong Commune, Cao Phong District (2013), and Daycare Center A in Cui Ha Commune, Kim Boi District (2014), both in Hoa Binh Province.

Besides making great contributions to healthcare and improving education, Hanwha works with the Korean Cultural Exchange Organization to make the dream of a decent home come true for many low-income households. Hanwha Life gifted 133 houses to the Vietnam-Korea Friendship Village in 2013-14 and 30 Houses of Love in the provinces of Khanh Hoa, Nghe An, Ca Mau, Ben Tre, Da Nang, Thanh Hoa, and Dac Lac in 2015-16. The homes cost an estimated VND22 billion to build. In recognition of the company's contributions to the community, in December 2015, Hanwha Life Vietnam was given the Social Responsibility award by the Vietnamese Ministry of Planning, the Korean consulate & Investment, and the Korean Ministry of Commerce, Industry & Energy. ■