

# Hanwha Newsletter

## 01 Smart Living Through Smart Solutions

- Seeing Smarter: AI-Based Surveillance Cameras Boost Security and Work Efficiency
- Hanwha Advanced Materials' Hidden Gem Celebrates Diamond Anniversary

## 02 Hanwha Column

- 2019 Hanwha's Year in Review

## 03 Press Release

- Hanwha Investment & Securities Launches Pinetree Securities in Vietnam
- Hanwha Systems Gearing Up to Enter Air Taxi
- Hanwha Total Petrochemical Awarded World Class Product of Korea for the 5th Consecutive Year
- Hanwha Aerospace Signs USD 300 Million Contract to Supply GE with Cutting-Edge Aircraft Engine Components

## 04 Hanwha Worldwide News

Explore this month's news of Hanwha and its affiliates, taking the initiative in all corners of the world.

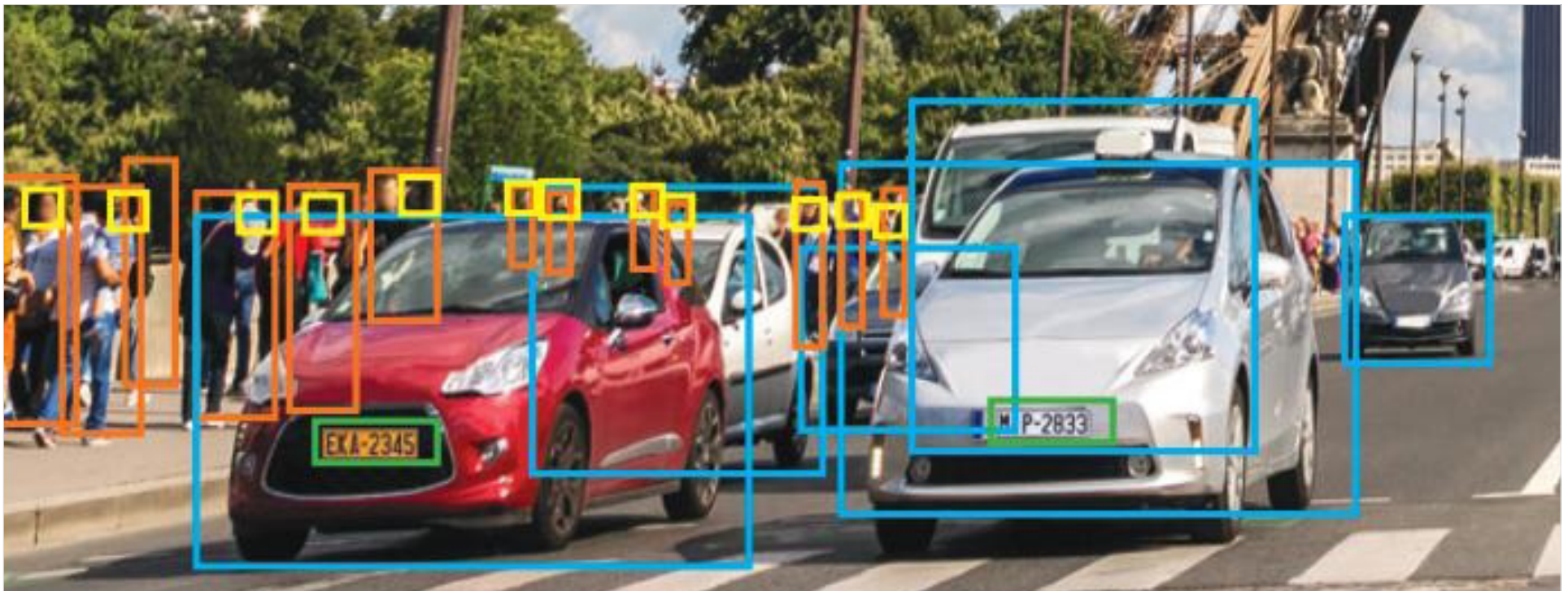


**Woman celebrates 60 years at one company**





# Seeing Smarter: AI-Based Surveillance Cameras Boost Security and Work Efficiency



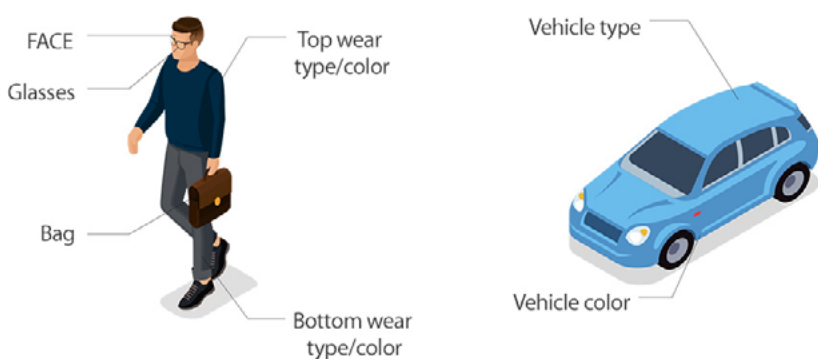
AI-enabled surveillance cameras can track individual objects and each of their attributes even in extremely busy locations

The never-ending rush of urban living translates into constant waves of people and vehicles surging through city streets at all hours. It is an exhilarating study in motion. As urban populations continue growing, this activity will only become more intense and complex.

How to make sense of it all?

The answer lies in artificial intelligence (AI).

## Keeping track of all the action



AI-enabled surveillance cameras can distinguish between many different objects and attributes

Many city streets are covered by arrays of surveillance cameras. These monitor traffic patterns, scan for accidents, and help keep the streets safe overall.

However, as surveillance camera networks grow along with the cities they cover, they begin taking in too much information for human operators to handle. Now, AI algorithms built into surveillance camera operating systems are allowing for more effective city management.

At the most basic level, an AI-enabled surveillance camera will use image recognition to distinguish what it sees into broad categories such as "Person," "Face," "Vehicle," and "License Plate."



Hanwha Techwin Wisenet P series AI cameras utilize an AI algorithm to analyze the attributes of the subjects

Diving a bit deeper, a camera's AI algorithms are quickly and accurately able to identify the different attributes of what the camera sees. For example, Hanwha Techwin's latest Wisenet P series AI cameras utilize an AI algorithm to see a person and immediately detect the color of her clothing. These cameras are also intelligent enough to distinguish whether she is wearing glasses or holding a bag. These attributes are then saved as metadata alongside the footage.

The efficiency of this image-recognition capability and storage of metadata is apparent when footage needs to be examined. Rather than manually parsing hours of footage to try and spot a person in a crowd, human operators may input the attributes they are looking for and time frame they are interested in. Using video management software such as Wisenet SSM, the security system will then filter through the metadata from the cameras to find the results that best match operators' search queries more quickly.

## Helping with store management, not just security

The benefits of AI-enabled surveillance cameras can also be felt within retail spaces.

The venerable in-store security camera has long-been used to catch and deter theft. Now, store operators may combine AI-enabled surveillance cameras with



solution like Hanwha Techwin's Wisenet Retail Insight to gain a granular look at what is happening within their stores.

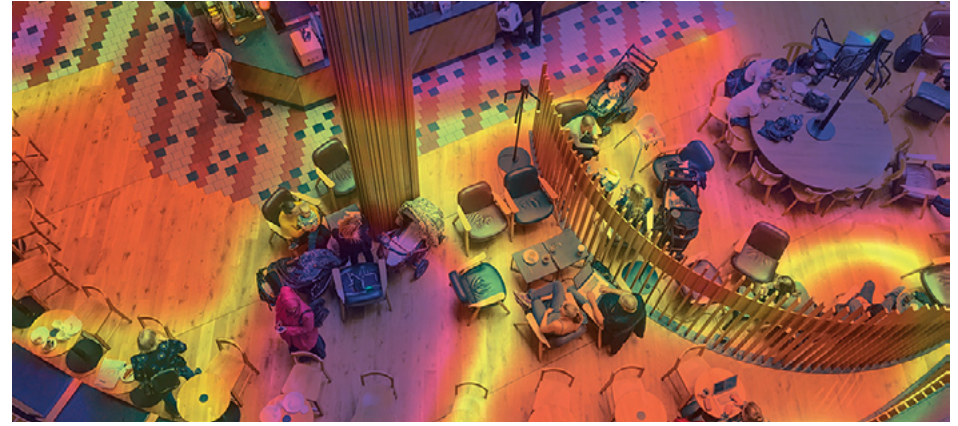
Similar to smart city management, AI-enabled surveillance cameras use attribution identification to help operators track customer demographics. The cameras' AI algorithms are trained to identify people's attributes as accurately as people by analyzing millions of photos. These trained algorithms can show store operators when different gender and age groups frequent an establishment and which products these groups are most drawn to. This gathered intelligence can then be used to make informed decisions and adjust their stores to best match shopping trends and maximize sales.



Wisenet Retail Insight analyzes what AI-enabled surveillance cameras see and delivers valuable business intelligence



This can be done in a number of ways. A clothing retailer may position surveillance cameras at store entrances to track how many customers pass through during operating hours. This information can be analyzed in real-time to inform operators of when the store is attracting the optimum number of customers. It can also help determine when there are too many or too few customers and why those situations are occurring.



Within the clothing store, the camera-recorded footage can be used to create customer heatmaps to show which departments and racks are the most frequented. Diving deeper, the heatmaps can even identify which demographics prefer certain products and if a sale is more likely if a rack is placed in a specific location. Store operators may use this information to strategize store layouts so that merchandise may best appeal to their target consumers.



AI-enabled surveillance cameras can also assist store managers efficiently station employees. The cameras and management software will help managers identify which sections require the most assistance. This allows them to reposition workers and make sure customers are adequately serviced during their shopping experience.

Hanwha Techwin is currently developing a new chipset that will give its Wisenet cameras deep learning capabilities.

Already, the insights made possible by AI are transforming how video surveillance systems operate. Whether in a store or on the street, AI-enabled surveillance cameras watch over busy environments and quickly identify incidents requiring human intervention, speeding up response times. With its cutting-edge technology and focus on R&D, Hanwha Techwin will continue ushering in future refinements in AI-enabled surveillance cameras to make cities safer and improve work operations. ■



# Hanwha Advanced Materials' *Hidden Gem* Celebrates Diamond Anniversary



*Dessie Smith displays the glass plaque she was presented with to mark her 60th anniversary working at Hanwha Advanced Materials' Shelby plant. In recognition of her long tenure, the plaque features the logos of the three operators the plant has had in that time*

There isn't much that causes work to halt at Hanwha Advanced Materials' plant in Shelby, North Carolina, USA. However, in October of 2019, the plant marked an occasion so momentous that the entire production line was shut down so everyone could celebrate.

All staff gathered in the employee lunchroom, which was decked from floor to ceiling just for that day. Amidst the tablecloths, confetti, sumptuous barbecue, and an exquisite cupcake tower, employees old and new waited patiently to hug and thank the star of the hour: Dessie Smith.

"Miss Dessie," as she's known, was celebrating her 60th anniversary working at the plant, which produces glass mat thermoplastics. She began working at the plant in 1959 at the age of 19, fresh out of high school. Smith saw many changes in her time, including several ownership changes before the plant was acquired by Hanwha Advanced Materials in 2007.

As a trainer for the past 27 years, Smith is credited with helping many colleagues learn the ropes and starting them on their own journeys at the plant.

Now at 79 and planning to retire in 2020, Smith sat down to share her story with the Hanwha Newsroom.

## **People usually retire by the age of 60-65, or sometimes even earlier than that. What has kept you going and not retiring until now?**

This job gives me something to do. Something that I can be proud of. It allows me to be a part of society and socially active.

## **What brought you to work here at the Shelby plant?**

When I graduated high school, my parents wanted me to go to college, but I wanted to go and start earning money. I started out making USD 1.05 per hour. I was taking home USD 65 per week.



*Smith's colleagues presented her with a tiara in celebration of her 60th work anniversary*



## What was your first job at the Shelby plant?

I began in the End-Finding Department. We picked the tubes of fiberglass off the conveyor as they came around. We had to find the ends and put the tubes on a truck so they could be put in an oven to dry before being taken to the Twisting Department.

## That sounds like very hard work.

My parents taught me to work on a farm—which is hard work—and to be efficient and productive. This was expected.



In this photo from a past employee newsletter, Smith drives an electric towmotor through the Shelby plant

## What is your current role?

I am currently a trainer and have been for 27 years. I help new people operate the machinery safely. I also teach the entry level positions to know the difference between quality material and nonconforming material.

An average day, for me, consists of working beside a new employee to make sure they know what they are doing.

The thing I like best about this job is meeting new people.

## What major changes have you seen in all your time working at this plant?

Technology has really changed. Cell phones and the Internet are the most profound. Productivity has increased with the automated and computerized systems. However, it's always nice to speak with a person.

## Can you tell us what it was like when Hanwha Advanced Materials acquired the plant in 2007?

Before we were bought by Hanwha, the plant was only running three days a month. People were temporarily laid off between production runs. Once we were bought, the plant started to operate on a normal schedule and sales increased.

If Hanwha had not bought us, our plant doors would have been closed.

Thank you, Hanwha!

## You've seen the company in so many different stages. How do you see the company growing or changing in the years to come?

I believe that Hanwha will continue to grow and prosper.

## What are your plans for your upcoming retirement?

I'm going to stay involved in church, spend time with friends and family, and go work on the farm where I was raised.

## What will you miss the most about working here?

I will miss the people.

And everyone at Hanwha Advanced Materials' Shelby plant will miss you, Miss Dessie.



Smith's 60th anniversary was such big news that it was covered in the local paper

>> More stories on people at Hanwha ■



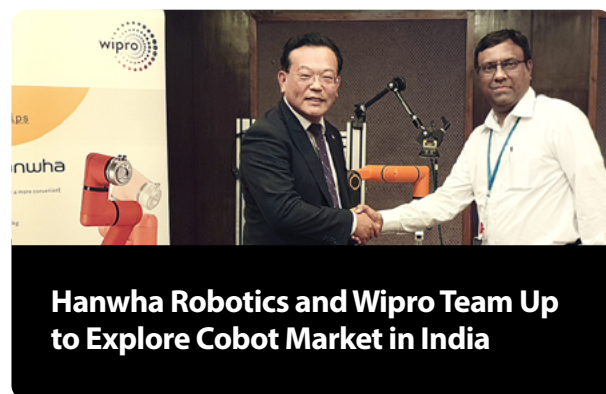
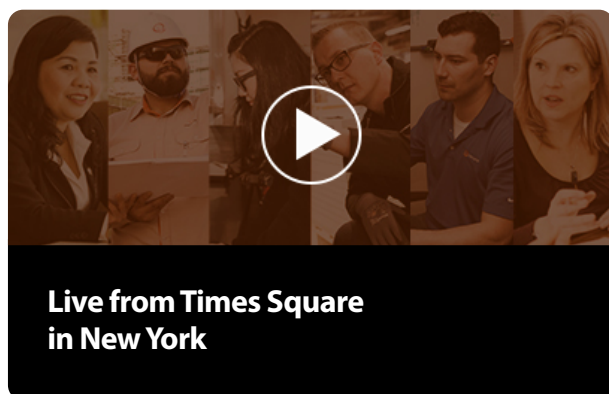
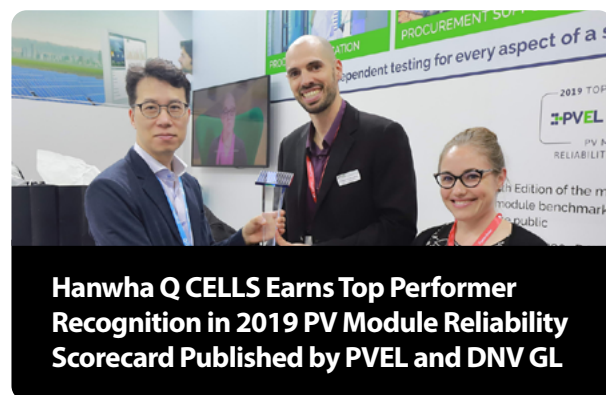
# 2019 Hanwha's Year in Review



Take a look back at 2019's most popular Hanwha Newsletter articles.  
Revisit the stories that got you engaged: [www.hanwha.com/en/bestof2019](http://www.hanwha.com/en/bestof2019)

## Best of the 2019 Newsletter

Revisit 2019's most-read stories on the Hanwha Newsletter





## Editor's Picks

Learn more through Hanwha's can't-miss stories from 2019



Hanwha Robotics and Wipro Team Up to Explore Cobot Market in India



Bringing Solar Power Close to Home



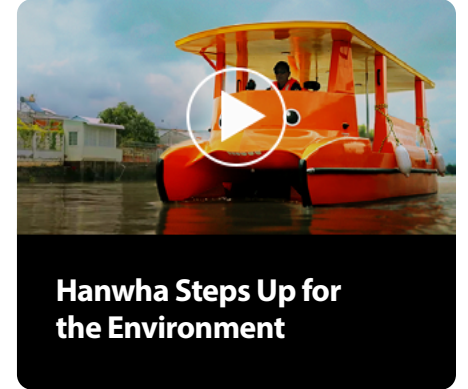
Rethinking Plastics & Sustainability



Hanwha Eyes Vietnam, ASEAN's Rising Star



Hanwha Aerospace Acquires American Aircraft Engine Component Manufacturer



Hanwha Steps Up for the Environment

## Press Release

# Hanwha Investment & Securities *Launches Pinetree Securities in Vietnam*

- On December 4, an opening ceremony was held to celebrate the official launch of Pinetree Securities (formerly HFT Securities)
- Pinetree Securities will develop a digital financial platform as part of its strategy to become the top digital financial company in Southeast Asia by 2025



Hanwha Investment & Securities CEO Hee-Baek Kwon (center) alongside other dignitaries at the ribbon cutting ceremony during the launch of Pinetree Securities in Hanoi, Vietnam



Earlier this month, Hanwha Investment & Securities CEO Hee-Baek Kwon announced the official launch of its subsidiary in Vietnam: Pinetree Securities Corporation.

In April, after the acquisition, Hanwha renamed the Hanoi-based HFT Securities company to Pinetree Securities and then reorganized the business so that it will become Southeast Asia's top digital financial company by 2025. The new name was chosen for what pine trees symbolize. Pine trees can grow almost anywhere and are among the first to take root in a new forest and grow into green, upright trees that symbolize trust and robustness.

Pinetree Securities will help its clients to build wealth and secure their future by helping them take advantage of digital investment opportunities in the Vietnamese financial market. The company plans to develop a digital financial platform to provide customers with personalized services that will maximize their investments, enabling them to realize their dreams of better outcomes and brighter futures. The company is also planning to go beyond simply operating as a securities brokerage firm. Through acquisitions of more operating licenses, Pinetree Securities will be into investment banking.



Hanwha Investment & Securities CEO Hee-Baek Kwon (left) unveils the Pinetree Securities logo at the entrance of the company's office in Hanoi, Vietnam

Pinetree Securities will focus on expanding across Southeast Asia and providing easy access to financial services and products. The company plans to actively partner with fintech firms and startups to further strengthen its business capabilities.

Approximately 100 dignitaries gathered to celebrate the official launch of Pinetree Securities, including representatives from the Embassy of the Republic of Korea in Vietnam, State Securities Commission of Vietnam, Ho Chi Minh City Stock Exchange, Hanoi Stock Exchange, Vietnamese government, and other Vietnamese financial companies.

CEO Hee-Baek Kwon of Hanwha Investment & Securities said, "By leveraging Hanwha Investment & Securities' experience and know-how, Pinetree Securities will quickly become preeminent in the Vietnamese digital financial market." He continued, "And with the full support of our technology and capital, it will Pinetree Securities will become Vietnam's leading financial company." ■

## Press Release

# Hanwha Systems Gearing Up to Enter Air Taxi Market

- The Committee on Foreign Investment in the United States approved a USD 25 million investment by Hanwha Systems in Overair, an American air-taxi developer
- Hanwha Systems and Overair R&D to co-develop and bring the "Butterfly" to the US air-taxi market by the year 2025



The Butterfly is an air-taxi concept that will be jointly developed by Hanwha Systems and Overair



In early December of 2019, Youn-Chul Kim, CEO of Hanwha Systems Co., Ltd., announced that the Committee on Foreign Investment in the United States (CFIUS) approved Hanwha Systems' USD 25 million investment in Overair (previously K4 Aeronautics), a leading US air-taxi startup. This closely follows Hanwha Systems' announcement of its plans to invest in, and partner with, Overair at a time when air taxis are drawing significant attention as the future of transportation.

Overair was spun-off from Karem Aircraft, an aerospace-development firm that specializes in aircraft capable of vertical take-off and landing (VTOL). Overair is a pioneer in the development of air taxis and one of the key partners of Uber Elevate. Uber is a global ride-sharing service and Uber Elevate is its project to commercialize air taxis.

The US government's approval for Hanwha to invest in Overair will accelerate the development of the "Butterfly" personal-air-vehicle (PAV) project. Hanwha Systems will contribute to the Butterfly's development to maximize the synergy between technology and business.

The Butterfly is an all-electric VTOL (eVTOL) air-transport vehicle that leverages low-noise and high-efficiency Optimum Speed Tiltrotor technology. This means, the Butterfly can be employed as an eco-friendly urban air taxi that can travel quietly, safely, and efficiently. Under its current specifications, the Butterfly will be able to seat four passengers and one pilot while its battery capacity will allow it to achieve airspeeds of up to 240 km/h and a range exceeding 100 km.

Abe Karem is Chief Designer and Cofounder of Overair and Founder of Karem Aircraft. He is a renowned aerospace engineer who designed the Predator A—a medium-altitude long-endurance unmanned aerial vehicle (UAV)—and 14 other types of aircraft. Ben Tigner is CEO of Overair and President at Karem Aircraft. He was formerly VP of Engineering at Frontier Systems and Chief Engineer for the A160 Program at Boeing.



The Butterfly will be used to transport passengers over and across urban environments

Overair and Hanwha Systems are working together to get the Butterfly approved as a civilian all-electric air-transport vehicle by the US Federal Aviation Administration. Hanwha Systems is also looking to increase its investment in Overair and explore opportunities in Korea's domestic market at the same time. In addition, Hanwha Systems is currently working on optionally-piloted personal-air vehicles (OPPAV) and a Korean multi-governmental agency development project involving the Ministry of Land, Infrastructure and Transport and Ministry of Trade, Industry and Energy.

Hanwha Systems CEO Youn-Chul Kim said, "Hanwha Systems secured the funds to invest in Overair through our recent IPO. We've fully completed preparations to enter the air taxi market in earnest." He added, "We're strengthening our competitiveness in information and communications technology division and avionics. We're also investing in air taxis—our company's future growth engine—by aggressively seeking investment and partnership opportunities worldwide."

Air taxis are emerging technologies that may change the face of modern transportation. They have the potential to overcome serious issues such as traffic congestion, physical infrastructure limits, noise pollution, and air pollution among other environmental problems. Government agencies and private companies around the world are actively pursuing air-taxi development thanks to recent progress in battery and motor technologies, collision avoidance, autonomous flight, and other advanced technologies. In the US, the first air taxis are forecasted to launch pilot services in 2023, with commercialization expected to begin in 2025. Morgan Stanley anticipates that the urban air-taxi transport market will grow to USD 1.5 trillion by 2040. ■

## Press Release

# Hanwha Aerospace Signs USD 300 Million Contract to Supply GE with Cutting-Edge Aircraft Engine Components

- Hanwha Aerospace will now supply advanced aircraft engine components to another of the world's top three aircraft engine manufacturers, GE. It was only earlier this month, the USD 1 billion deal with Rolls-Royce was sealed
- The partnership with GE further strengthens Hanwha Aerospace's standing among the top aircraft engine component manufacturers in the world

Hanwha Aerospace announced that it signed a USD 300 million contract to supply cutting-edge aircraft engine components to General Electric (GE), a world-renowned aircraft engine manufacturer.

GE Aviation was established in 1917. Alongside Pratt & Whitney and Rolls-Royce, GE is one of the world's top three aircraft engine manufacturers.





The Boeing 777X, like the 777-8 variant pictured above, will use GE's cutting-edge GE9X engine. The engine will be constructed using components produced by Hanwha Aerospace (Photo Credit: Boeing)

Hanwha Aerospace will supply GE with 46 types of engine components for GE's GE9X and LEAP engine. The GE9X is GE's most advanced engine and expected to enter commercial production in 2020 while the LEAP is the world's best-selling aircraft engine. Hanwha Aerospace will begin delivering six types of engine components specifically for the GE9X, including high-pressure compressors and turbines in 2024. And for the LEAP engine, Hanwha Aerospace has promised 40 types of components in 2025.

A Hanwha Aerospace spokesperson said that Hanwha is being recognized for its global manufacturing capabilities. The company's flagship plant in Changwon is South Korea's only smart factory that can build aircraft engine components but it also has a production plant in Vietnam that began operations last year.

The Hanwha Aerospace spokesperson noted that the company has long been a partner of GE because of Hanwha's quality and technology.

The Hanwha Aerospace spokesperson also said with the latest supply contract, Hanwha raised its global status as an aircraft engine component company.

Hanwha Aerospace has been steadily growing its aircraft engine business to become a globally recognized aircraft engine component manufacturer by strengthening its partnerships with all of the top three aircraft engine manufacturers in the world: GE, Pratt & Whitney, and Rolls-Royce. In 2015, Hanwha Aerospace entered into a revenue-sharing partnership with Pratt & Whitney to supply components for the GTF engine.

Recently, Hanwha Aerospace sign a USD 1 billion contract with Rolls-Royce. The supply contracts with these three companies, in just the last five years, are worth more than USD 20.1 billion. And with the recent acquisition of EDAC Technologies, an American aircraft engine component manufacturer, now operating as Hanwha Aerospace USA, the company is poised to become the leading aircraft engine manufacturer and the revenue-sharing partner of choice, globally.

See the appendix for more details on the GE9X and LEAP engines



The GE9X, the world's largest turbofan engine, is being developed for the Boeing 777X (Photo Credit: GE)

The large GE contract for the GE9X components is vital for Hanwha Aerospace's strategy. It will allow Hanwha Aerospace to secure its long-term business expansion plans and pursue other avenues of growth for the future.

## Appendix

### 1. GE9X Engine

Development on the GE9X began in 2012. It is the world's largest turbofan engine designed specifically for the Boeing 777X. The GE9X's fan blades and fan case are made of carbon fiber composites to minimize weight. 3D printing is used to produce the engine's fuel nozzles. Other parts are made using lightweight, high-resistance ceramic composites.

### 2. LEAP Engine

The LEAP engine is the world's best-selling aircraft engine. It is the successor to the CFM56 engine and primarily installed on single-aisle airliners like the Airbus 320neo.

### 3. Boeing 777X

The Boeing 777X is currently under development. It will have the capacity for 400 passengers but will use as much as 12% less fuel. The 777X's wings are longer than those of the current 777s, but the wingtips can fold, allowing the 777X to fit into existing airport infrastructure. The aircraft will be fitted with two GE9X engines.

### 4. General Electric (GE)

GE's aviation division was established in 1917. Alongside Pratt & Whitney and Rolls-Royce, it is one of the world's top three aircraft engine manufacturers. GE Aviation produces primarily aircraft engines for civil aviation but also gas turbines for military, industrial, shipping, and power-generation uses. In 2018, GE recorded sales of USD 30.6 billion and operating profits of USD 6.5 billion. GE Aviation is headquartered in Cincinnati, Ohio, and has 48,000 employees as of 2018. ■



# Hanwha Total Petrochemical Awarded World Class Product of Korea for the 5th Consecutive Year

- Hanwha Total Petrochemical's protective PP film, named Polypropylene of Protective Film for Display Material, has been selected as a 2019 World Class Product of Korea
- While Japanese companies have dominated the global protective PP film market, Hanwha Total Petrochemical's PP film has been able to capture the largest global market share, with 34%
- The market adoption for Hanwha Total Petrochemical's products is being driven Hanwha Total Petrochemical's protective PP film – the best in the world
- Beginning with its ethylene vinyl acetate (EVA) film for solar cells in 2015, Hanwha Total Petrochemical products have been recognized as World Class Products of Korea five years straight, with six awards in total, and leaving no doubt of Hanwha Petrochemical's technology prowess



Vice President Ji Yong Park (right) and Principal Researcher Bong Seok Kim (left) of Hanwha Total Petrochemical hold up World Class Product of Korea certificates that were given to the company for its Polypropylene Protective Film

For the fifth consecutive year, Hanwha Total Petrochemical has been recognized for its innovation – this year, by applying its industry-leading technology to produce the highest quality PP film in the world.

On November 21, 2019, Hanwha Total Petrochemical announced that its Polypropylene of Protective Film for Display Material (protective PP film) was named a 2019 World Class Product of Korea by the Korean Ministry of Trade, Industry and Energy and certified by the Korea Trade and Investment Promotion Agency (KOTRA).

To be awarded a World Class Product of Korea, the product itself must be ranked among the top 5 in its industry worldwide or hold at least 5% of the global market share with either at least USD 50 million in sales or USD 5 million in exports annually.



Protective PP film is a vital part of the display manufacturing process, protecting displays from dust and dirt during production and transportation

Protective PP film is the raw material used to produce protective films. These films provide a protective layer over electronic displays such as TVs and computer monitors to protect them from dust and other contaminants during manufacturing, and transportation. Protective films that are not smooth and have many surface defects can make the items they're intended to protect vulnerable to serious damage. Because of this, the technical and product-quality standards for protective films measure how well manufacturers can minimize such defects.

Hanwha Total Petrochemical has reduced surface defects during production of its protective PP film down to 1/20th the frequency of other protective PP film products, giving the company the world's best product quality. Moreover, with its PP film, Hanwha Total Petrochemical can more accurately and easily meet customer requirements in terms of transparency and surface texture than any other competitor.



Hanwha Total Petrochemical is the world's leading producer of protective PP film, with 34% market share

By using its proprietary technology, Hanwha Total Petrochemical has taken the lead away from the Japanese companies that make up the majority of protective PP film manufacturers worldwide. As of 2018, Hanwha Total Petrochemical is number one in the global market with 34% market share. Its success demonstrates the superiority of Korean technology and Hanwha Total Petrochemical's ability to localize material development and production in Korea.

Hanwha Total Petrochemical's protective PP film technology is increasingly important in the growing display market. The protective film is becoming thinner while the displays themselves are becoming more technically and functionally advanced. Globally, 28,000 tons of protective PP film are produced each year and the market for protective PP film is expected to grow by at least 7% every year.

Protective PP film is the sixth Hanwha Total Petrochemical product designated as a World Class Product of Korea for the past five consecutive years. Hanwha Total Petrochemical previously received World Class Product of Korea certificates



for its Ethyl Vinyl Acetate (EVA) Copolymers used in solar cells back in 2015, High Density Polyethylene (HDPE) for beverage bottle caps in 2016, EVA for extruded coatings and Flow Mark Free Polypropylene for Auto Compounds in 2017, and High Isotactic Polypropylene (HIPP) for Electronic Applications in 2018.

A Hanwha Total Petrochemical spokesperson said that the company will continue its efforts to lead the market with high-value-added plastics that employ Hanwha's technology to create world-class products. ■

## Hanwha Worldwide News

*Explore this month's news of Hanwha and its affiliates, taking the initiative in all corners of the world.*



## China

### Hanwha Life

#### Sino-Korea Life Insurance



##### Sino-Korea Life Insurance Wins Prestigious Industry Award

Sino-Korea Life Insurance came up a winner at the 14th annual China Insurance Innovation Awards held in Guilin, Guangxi Province. The company's "Fu Duo Duo" package (combining pension and health insurance) won the "Best Value for Investment Insurance Product Award" at the ceremony.

The Fu Duo Duo package was created by Sino-Korea Life Insurance because the company wanted to give customers better opportunities to live healthy and fulfilling lives. The package combines asset management and risk-guarantee functions into a single convenient product. This helps customers better protect their wealth from asset management difficulties and mixed investment channel risks.

Everyone at Sino-Korea Life Insurance is thrilled by the company winning such



a prestigious award. The company will continue creating more products like Fu Duo Duo so that customers may lead healthy and productive lives.





## Iraq



### Hanwha E&C Iraq Representative Office

#### Bismayah New City Project Welcomes a VIP

On November 20, 2019, Hanwha Engineering & Construction Iraq Representative Office (BNCP) welcomed Bankin Al Rikany, the Iraq Minister of Construction and Housing to the Bismayah New City Project (BNCP), the largest residential construction project in Iraqi history. Mr. Al Rikany was welcomed by Chang Sung Kim, Vice President of Project Management on the BNCP, and given a tour of the growing city.

The official visit comes as the BNCP nears completion. Construction and development are ramping up to finish the residential units that will house Iraqi families seeking to rebuild their lives after years of war.

Vice President Kim showed Mr. Al Rikany around the BNCP, explaining all the latest construction technologies being used on-site. Mr. Al Rikany also toured a model residential unit to get a firsthand glimpse at the future lives of Iraqi citizens.

After touring the sample unit, Mr. Al Rikany exclaimed, "The design, quality, and price are all perfect!"



Before he left the BNCP site, Mr. Al Rikany spoke to a group of employees and praised their efforts in constructing an entirely new city in the desert. He compared the BNCP to a blooming flower and asked that everyone continue giving their all until the project is completed.



## Korea



#### Hanwha Total Petrochemical Begins Digital Transformation

On November 7, Hanwha Total Petrochemical President Hyek Woong Kwon and 300 employees gathered inside the Daesan Industrial Complex's main auditorium to hear about the company's "Declaration of Digital Transformation (DT)." During the ceremony, each department head received a certificate empowering them to lead the company's new DT culture.

DT uses digital technology and innovation to maximize value by efficiently transforming the existing value chain. Through DT, Hanwha Total Petrochemical will develop new smart plants and systems.

The company also unveiled a new slogan: "Digital DnA HTC (Hanwha Total Company)." "DnA" stands for "Do New Action" and "Data & Analytics," encompassing how DT will revolutionize the way Hanwha Total Petrochemical works.



"Digital Transformation is important because it introduces new IT technologies and gives employees new digital capabilities," said President Kwon. ■