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Hanwha Explores Future Growth Engines and Accelerates Drive to Enhance Its Global Competitiveness



Hanwha has attended the WEF for the past seven years as the strategic partner in solar, insurance and chemicals and a strategic partner in aviation beginning this year.

The Hanwha Group (Chairman Seung Youn Kim) participated in the World Economic Forum (WEF) Annual Meeting 2017 held in Davos, Switzerland, to spur the Group's efforts to strengthen its global competitiveness.

This year's forum was held over four days from January 17th through the 20th and the attendees included the President and CEO of Hanwha Life Nam-Gyu Cha, the CEO of Hanwha Techwin's Aerospace & Defense Business Group Hyun-Woo Shin, the CEO of Hanwha Total Petrochemical Hee Cheul Kim, the CEO of Hanwha Asset Management Yong-Hyun Kim, the CCO of Hanwha Q CELLS Dong Kwan Kim, and the Head of both Hanwha Life's FinTech and the Innovation Center Dong Won Kim. The Hanwha executives took part in a series of meetings and collaborative activities with over two hundred other global leaders.

Hanwha Life and Hanwha Asset Management seek new opportunities in overseas markets and expand their asset management portfolios



The Head of both Hanwha Life's FinTech and the Innovation Center Dong Won Kim (first from right), the President and CEO of Hanwha Life Nam-Gyu Cha (second from right), the Chairman of FPT Truong Gia Binh (left)

The CEO of Hanwha Life Nam-Gyu Cha has attended the WEF for 5 years in a row. This year he focused his efforts on exploring new strategies to expand the company's financial business overseas.

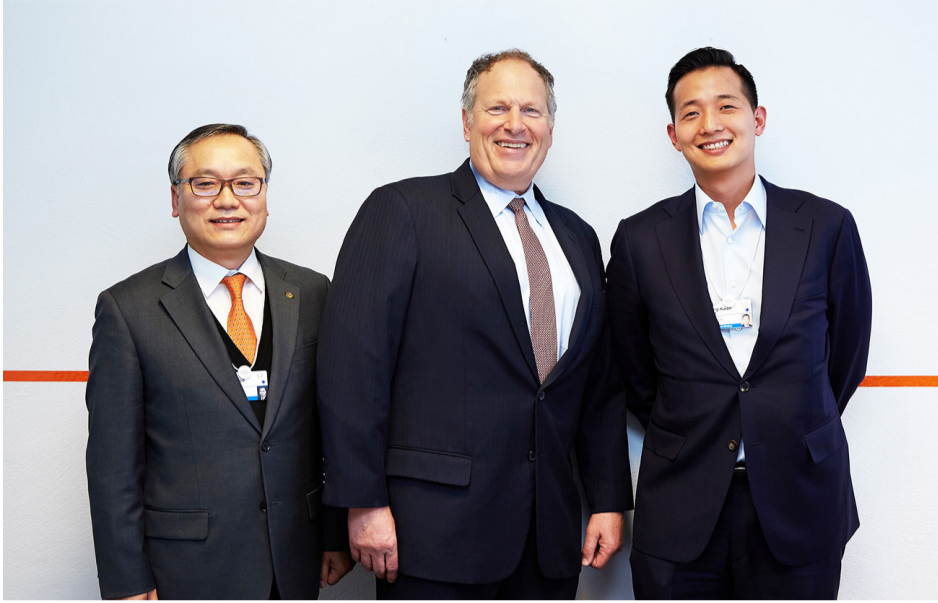
On January 17th, the Head of both FinTech and the Innovation Center, Dong Won Kim met with the Chairman of Vietnam's No. 1 software company FPT, Mr. Truong Gia Binh, to discuss the development of a customer support software for FPT's Vietnamese subsidiary. Mr. Cha met with the CEO Michał Krupiński of PZU SA, the biggest insurer in Poland and Eastern Europe. They talked about the current landscape and prospects in the insurance market in the region.

The next day on January 18th, Mr. Cha and the CEO of Hanwha Asset Management Yong-Hyun Kim met with Thomas M. Finke, the Chairman and CEO of Barings, the American investment management firm. They talked about global trends in asset management and shared insights on emerging investment markets against the backdrop of revenue growth in whole life insurance that had lasted for nine consecutive years (ending in 2015). They also engaged in strategic discussions on bancassurance, brokerage, and direct insurance. The meeting was later joined by Roger W. Crandall, President and CEO of Massachusetts Mutual Life Insurance Company, the parent company of Barings.

On the 19th, Mr. Cha and Mr. Kim met with the Carlyle Group Co-Founder David M. Rubenstein and TPG Co-CEO Jim Coulter to talk about strategies and opportunities in the global economy, the private fund market, and evolving investment markets. In another meeting with Jayne Plunkett, the CEO of Reinsurance Asia of Swiss Re, the world's second largest reinsurer, Mr. Cha discussed the ways in which to preempt the protracted low interest rate environment as well as the ever-changing financial market.

Hanwha Techwin has its sights on becoming the new leader in aerospace and energy equipment

Hanwha Techwin CEO Hyun-Woo Shin set up a platform to meet with world



(From left to right) Hanwha Techwin CEO Shin Hyun-Woo, Honeywell Chairman David Cote, and Hanwha Q CELLS CCO Dong Kwan Kim

business leaders and discuss opportunities created by global megatrends and also propose the cooperation necessary to address the fundamental shifts in the global business world.

Mr. Shin and Hanwha Q CELLS CCO Dong Kwan Kim met with Lorenzo Simonelli, President and CEO of GE Oil & Gas, a global leader in energy equipment, to talk about how GE Oil & Gas and Hanwha could boost collaborations to take advantage of changing opportunities in the market. He also met with David M. Cote, Chairman and CEO of the global technology giant Honeywell, to share M&A strategies, insights into the Fourth Industrial Revolution, and to discuss how Honeywell and Hanwha Techwin could further work together on aviation projects.

At the banquet hosted by Saudi Arabia's state-run oil company Saudi Aramco, Mr. Shin proposed various ways in which to collaborate in energy equipment as part of a larger effort to lay the foundation for working with more global industry leaders.



Hanwha Q CELLS CCO Dong Kwan Kim (first from right), Hanwha Total Petrochemical CEO Hee Cheul Kim (second from right), Lanxess Chairman of the Board of Management Matthias Zachert (left)

Hanwha Total Petrochemical sets out on examining prospects for global petrochemical market

Visiting Davos for the World Economic Forum for the second time since 2011, Hanwha Total Petrochemical CEO Hee Cheul Kim increased his efforts to expand the company's global petrochemical business.

On January 17th, Mr. Kim met with Dmitry Konov, Chairman of the Management Board of Russia's SIBUR Holding, to discuss Russia's growth potential in the petrochemical market and the outlook for global energy industry, focusing on gas and natural gas liquids. At another meeting, Total Chairman and CEO Patrick Pouyanné discussed strategies and how Hanwha could support Total's goals in petrochemical and new & renewable energy.

Following the meeting, Mr. Kim met with Sri Prakash Lohia, Chairman of

Indorama Ventures, a synthetic textile company in Thailand, and Supattanapong Punmeechaow, President and CEO of Thailand's PTTGC, to discuss the petrochemical market trends in Southeast Asia and the potential business opportunities.

Mr. Kim also attended a meeting with representatives of Lanxess, one of Germany's top five chemicals companies, and other manufacturers of high-value-added specialty chemicals. The meetings focused on sharing outlooks for the industry and plans through which companies could mutually benefit from collaborating with various Hanwha businesses.

Hanwha is looking to leverage brand marketing and global management strategies gained at this year's World Economic Forum and proactively respond to the changes in the market. Through "Responsive and Responsible Leadership," the Group will address growing neo-isolationism while embracing the Fourth Industrial Revolution with both an integrative and comprehensive approach. ■

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



China



Hanwha Hotels & Resorts

Foodist Food Culture (Shanghai) Co., Ltd

Foodist Food Culture Continues to Soar in 2017

2016 was an excellent year for the Foodist. The company posted its best results in five years since it began its operations. After implementing a new management policy based on a Chinese phrase 'Keep the essence of things and throw the scraps away,' the Foodist achieved its highest profit on a year-end sales revenue of \$1.3 million.

In 2017, the Foodist will face both bigger challenges and new opportunities as it seeks to solidify its position in the Chinese market. To this end, the company will cultivate a corporate culture that emphasizes diligence, teamwork and rejuvenation. At the same time, the Foodist will also help its employees foster a stable and harmonious work environment.



Mexico



Hanwha Advanced Materials

Hanwha Advanced Materials Mexico

Hanwha Advanced Materials Mexico Is Set for Banner Year in 2017

2016 was a momentous year for Hanwha Advanced Materials Mexico with the company marking the official grand opening of its plant in Monterrey and the start of production line operations in December. The Monterrey plant began productions on reinforced and lightweight auto parts including glass fiber reinforced thermoplastics (StrongLite GMT), lightweight reinforced thermoplastics (SuperLite LWRT) and expandable polypropylene (BuffLite EPP).

The company's location in Monterrey Mexico is expected to be the key to its future success. Mexico is home to some of the world's biggest producers of auto parts and there's a simple explanation why. Its unique and strategic location allows companies with easy access and ability to facilitate trade with markets in both North America and South America. Now, with its newly built Monterrey plant in Mexico, Hanwha Advanced Materials, will also be able to extend its reach into two continents.

Hanwha Advanced Materials Mexico is already making meaningful impact in the local community with its new facility, creating 200 new jobs for the state's automotive sector. And its business accomplishment in 2016 included closing the year with \$12 million in sales.



Hanwha Advanced Materials Mexico has high expectations for 2017 as it will open a second facility with an investment of \$25 million and creating 150 new jobs. It also expects to accelerate its growth while improving production efficiency and reducing costs. The yield from these efforts should translate to roughly \$32 million in revenues that will contribute to the Hanwha Group's bottom line.



United States of America



Hanwha Techwin America

On January 16th, 2017, to accommodate its recent growth and to better serve its customers, Hanwha Techwin America has expanded its operations to a new state-of-the-art facility in Teaneck, New Jersey.

The new location features a dedicated lab area and a large space for hosting corporate meetings. In addition, Hanwha will be showcasing its Wisenet series cameras at the facility to allow visitors to see and evaluate their performance in real-world situations. The facility will also be used for security products and solutions training sessions for installers and technology partners.

“We have built this new facility to grow, develop our capabilities and to further advance our cutting-edge video surveillance technologies to meet the needs of our stakeholders. And so, we’re confident this new facility will provide the best possible experience for our valued customers, installers and technology partners,” said the President of Hanwha Techwin America Soon Hong Ahn.



Hanwha Advanced Materials America

Hanwha Advanced Materials America has been selected as the official supplier of the instrument panel on the next generation Hyundai Santa Fe. The instrument panel is located in front of the driver and is also called the dash board, control panel, and from a safety standpoint, even a crash pad. It displays instrument gauges and dials designed to show the driver, the vehicle’s operation and performance.

The new business contract with Hyundai for the instrument panels is expected to generate an annual sales revenue of nearly \$11.3MM. Production of the

panels will begin in Opelika, Alabama on August 15th, 2018 and for the next 5 years, they will be placed in 691,000 new Santa Fe’s.

Hanwha Advanced Materials America will continue its business expansion to become a top tier global original equipment manufacturer and supplier for automotive industry.



Vietnam



Hanwha Life Vietnam

On February 2nd, all sales offices of Hanwha Life Vietnam opened after the conclusion of Vietnamese ‘Tet’, the Lunar New Year Holiday. This presented an opportunity for the Board of Directors and sales force to meet and share the company’s vision and plans for the new year. In addition, the offices also organized many exciting activities for employees such as: picking flowers, donating money, celebrating visits from the god of wealth, Vietnamese lion dances and more. The activities were all held with the desire to bring good luck and success in the new year. ■



Hanwha Revs up Its Growth Engine to Advance the Aerospace Technology

Space launch vehicles make it possible to launch satellites into orbit. In 2013, after the culmination of years of hard work, innovation, and the contribution of Hanwha's advanced technology - the 'Naro-1 (KSLV-I) - Korea's first space launch vehicle, successfully launched a satellite into space.



Hanwha is Behind the Success of Naro-1

On January 30th, 2013, the Naro-1 took to the skies, as the people of South Korea held their breaths, waiting for their dreams to come true. Despite the excitement, there was also anxiety because Naro-1 had failed twice before. The most recent disappointment occurred back in 2010, when the space launch vehicle failed to enter its target orbit and instead, exploded midair, leading many observers to be skeptical of success. However, after four more years, the 3rd launch proved to be successful, marking a huge technological breakthrough and an unforgettable dream come-true for the Korean people.

With the success of Naro-1, South Korea became only the eleventh country in the world to join the Space Club. The Space Club is an elite club of nations who have both built and successfully launched satellites into orbit. The Soviet Union (present day Russia) was the first member of the Space Club in 1957. Other countries followed including the United States, France, Japan, China, and Great Britain. In 2013, South Korea became an official member of this prestigious club.

Behind the scenes, Hanwha played a major role in the success of the Naro-1. Since 2003, Hanwha Corporation/Defense and Hanwha Corporation/Machinery have been engaged in the development and the manufacture of the Naro-1's

upper propulsion unit, consisting primarily of a kick motor and a thrust vector control system. The propulsion unit Hanwha crafted helped the Naro-1 reach its target orbit.

The patented kick motor was developed single-handedly by Hanwha. It was the first rocket engine made in South Korea that could position the satellite in orbit 300 kilometers above the Earth. The development team had to build the unit to operate with very high precision and their success was considered a great achievement.

The advanced thrust vector control system was another one of the core components of the space launch vehicle designed by Hanwha. This critical component enables a projectile to maneuver to a target while withstanding high stress that could be experienced at high altitudes or in a vacuum environment like that of space. Testing of these components as well as the turbopump components at high altitude were also ensured by Hanwha.

The hard work, ingenuity, and the technical prowess of Hanwha Corporation/Defense and Hanwha Corporation/Machinery were exemplified by the success of Naro-1.



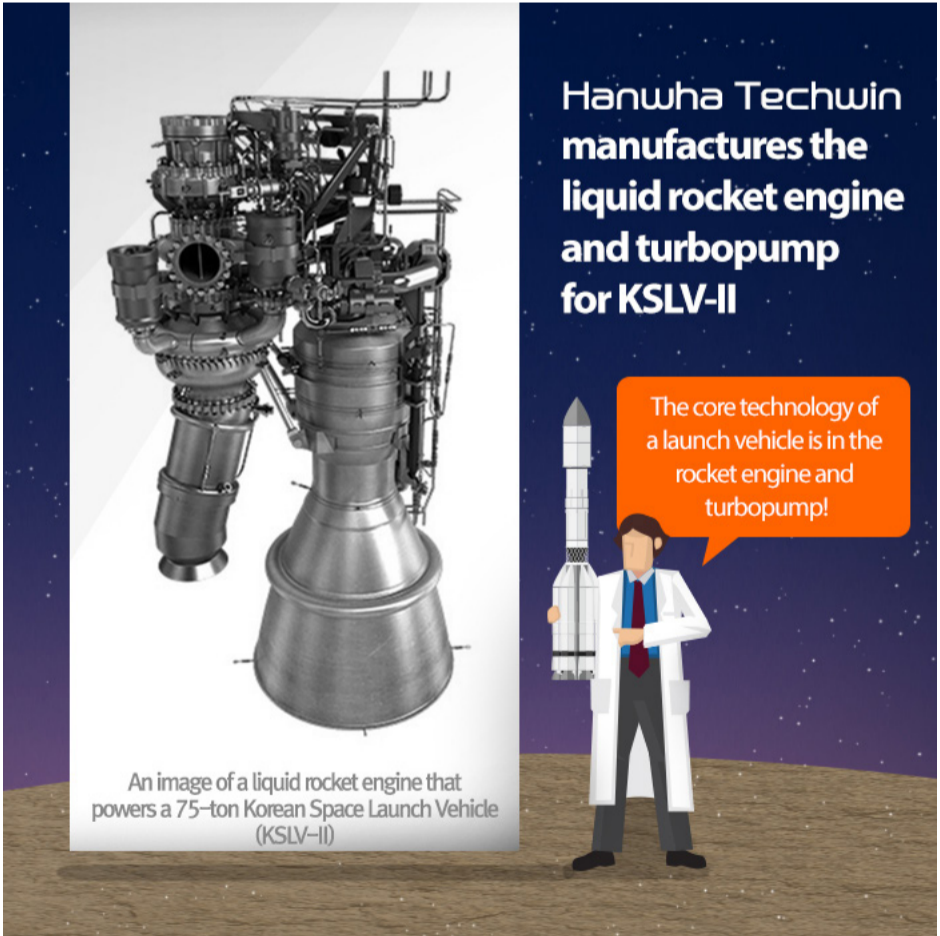
focused on the construction of the rockets for the Naro-1. The company has been building turbopumps and testing them from the beginning of the project. And over the years, Hanwha Techwin has steadily improved its aerospace technology, demonstrating its progress consistently along the way. Now, after the success of Naro-1 and with the latest contract for the liquid rocket engine project, Hanwha can stand tall to join the ranks of other global tech leaders in rocket engine development.



Hanwha Techwin Writes a New Chapter in S. Korea's Annals of History in Aerospace

Now a recognized world space power, South Korea's aerospace program has entered a new era. And Hanwha Techwin is not only ready with business savvy and the technical know-how but it's also making a statement about it, literally... On January 25, 2016 Hanwha Techwin signed a contract worth \$12 million to produce a liquid rocket engine in cooperation with the Korea Aerospace Research Institute. In addition, Hanwha Techwin is likely to manufacture the turbopump, a crucial rocket component. The turbopump is known as the heart of the rocket because it powers the liquid rocket engine.

Hanwha believes the success of the Naro-1 will be the key for S. Korea's next push into the Global 7 group of aerospace leaders. And as Hanwha continues to reach for the stars, its cutting-edge technology will not only be the driving force behind S. Korea's aerospace program but also for the global aerospace industry in the future. Hanwha will continue to meet the challenges head-on so that it can take the possibilities of today and make them the realities of tomorrow. ■



The liquid rocket engine must be built with a durability that can endure extreme conditions including high and low temperatures under high pressure. Due to its complicated structure and its difficulty to build, the engine is regarded as the holy grail of aerospace technologies. And only a few leading companies in the world have the ability to build such engines.

Hanwha Techwin has been developing its own proprietary technology and has

Global Business Culture – India

What Does Head Shaking Mean in India?

A supervisor of a global sales department took a business trip to India for a meeting with his local client. He thought that his presentation went smoothly but was shocked to see his Indian client bobbing his head left to right. The supervisor immediately assumed that this gesture was a negative response.

Gestures imply many things according to each country, and most people believe that shaking one's head from left to right has a negative connotation. But in India, one can often see people bobbing their heads from side to side or even rapidly tracing the number 8 with their heads. Many foreigners often take this gesture negatively, but in India shaking one's head is actually used to communicate understanding.



Business in India DOs & DON'Ts

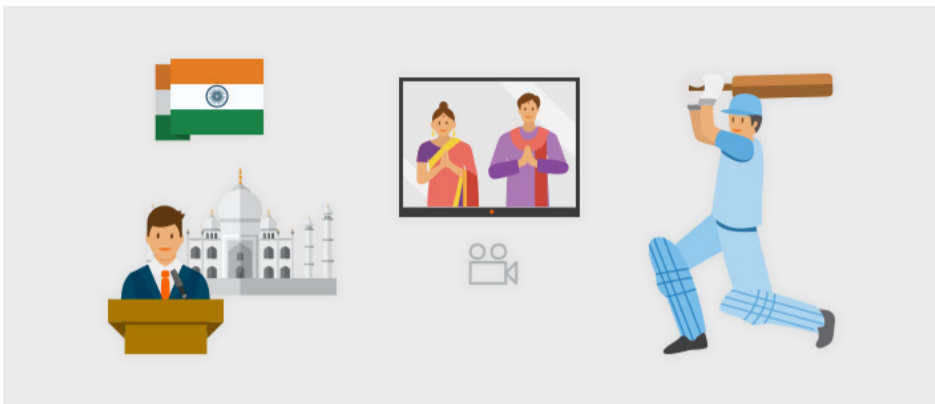
DOs



Personal questions in India are considered a way to show friendliness. Indians may ask questions about your family, marital status, political disposition, and salary as a way to break the ice.



If your counterpart is older or has a higher rank, it is recommended to address them as Sir or Madam. When addressing high-ranking government officials, make sure to put 'Shri' in front of the name and 'Ji' after the name.



Popular subjects in India are politics, cricket, and movies (Bollywood). Studying these elements prior to seeing Indian business partners is a plus in building a relationship with them.



Wash your hands before having a meal. In India, people eat with their right hands and cleaning yourself is seen as a considerate gesture towards others.

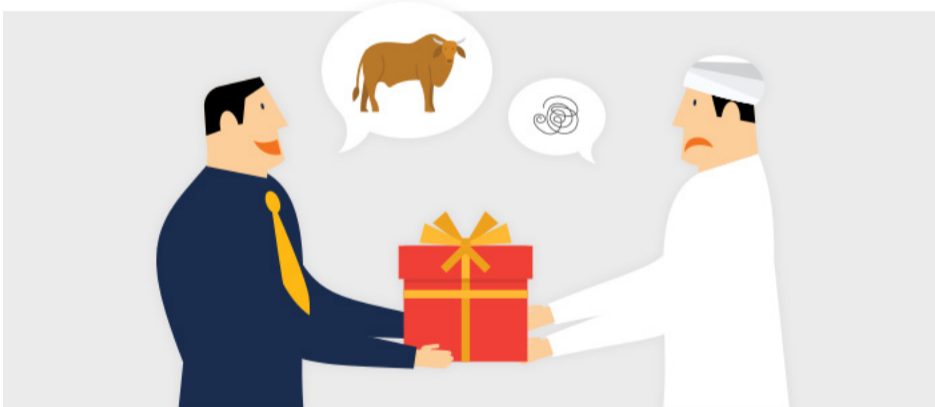
DON'Ts



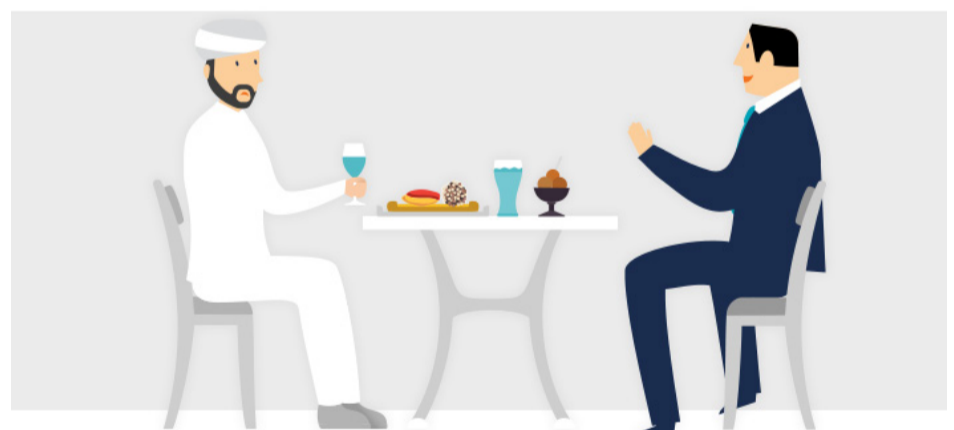
Do not mention Mahatma Gandhi negatively. He is considered to be the 'Father of the nation' in India and Indians are proud of their rich cultural heritage.



Do not show your palm to anyone else when pointing at someone. Indians take this as an insulting gesture.



Do not give any products made out of cow as Hindus believe these animals are sacred.



Rejecting food or beverages in India is perceived as rude since they see food as a gift from the gods.

Hanwha Affiliates in India



Hanwha Group companies in India include **Hanwha Corporation**, **Hanwha Q CELLS**, and **Hanwha Chemical**. These companies operate a total of 3 offices across the country located in the **cities of Mumbai and New Delhi**. ■